

SOME OBSERVATIONS ON THE THERAPEUTIC VALUE
OF ANTIBACTERIAL SERUM IN THE TREATMENT OF
THE SEVERE TYPE OF DIPHThERIA.

T H E S I S

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For

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Surveying the mortality rates from ... prior to the introduction of Antibiotic, it is ... a rapid decline by nearly a half, prior to 1936.

The following table gives the case mortality of ... in the hospitals of the Metropolitan Asylums Board, London.

(a) DISCOVERY OF THE ORGANISM OF DIPHTHERIA.

To the epidemiologist, the bacteriologist, and the clinician, Diphtheria has presented many problems since the time of Bretonneau, 1826. Towards the solution of these, great advance was made, when in 1875 Klebs discovered the causative organism, the specificity of which was established by Loeffler in 1884.

(b) ADVENT OF DIPHTHERIA ANTITOXIN.

Treatment of this disease was entirely symptomatic until therapeutic antitoxin was prepared by Von-Behring in 1890. The use of his antitoxic sera extended rapidly in all civilised countries, and became the routine method of treatment by the middle nineties. Its acceptance was universal, and its efficiency established by the classical experiment of Fibiger, 1898. Since that time it has been the sheet anchor in the treatment of the disease. In recent years, its efficiency has been disputed by a few of the more critical pyretologists, and its value rather doubted.

(c) THE BEHAVIOUR OF MORTALITY RATES OF DIPHTHERIA.

Surveying the mortality rates from Diphtheria, prior to the introduction of Antitoxin, it is obvious that there was a rapid decline by nearly a half, prior to 1895.

The following table gives the case mortality of Diphtheria in the hospitals of the Metropolitan Asylums Board, London.

YEAR	CASE MORTALITY %	YEAR	CASE MORTALITY %
	Prior to the Introduction of Serum.		After the Introduction of Serum.
1889	40.7	1896	21.2
1890	33.5	1897	17.7
1891	30.6	1898	15.4
1892	29.3	1899	13.9
1893	30.4	1900	12.3
1894	29.3	1901	11.1
1895	22.8	1902	11.0

Since 1895 the decrease in mortality rate continued and to-day, if reports of Medical Officers of Health are consulted, death rates from Diphtheria vary from about 2% to 8%. This figure may be upset by many factors, such as:-

- (a) Improved methods of diagnosis.
- (b) By increase in the number of carriers detected, which are notified as cases.
- (c) By medical Superintendents of fever hospitals aiming at procuring a low death rate by including carriers in their estimation of fatality rate.

If a group of the more serious cases of Diphtheria, that is, the type requiring intravenous therapy, or those corresponding to Grade I and Grade II, according to Bie's Classification, treated in fever hospitals be analysed, it is found that the death rate may be between 20% and 30%. Surely this is a high figure, considering that there is alleged to be at the disposal

of clinicians a specific remedy.

The complacency which existed regarding specific therapy in Diphtheria was disturbed when Deicher and Agulnik, 1927, working in Berlin, recorded a steady rise in the mortality of Diphtheria in the Virchow Krankrankenhaus, from 5% in 1924 to 26.7% in the first five months of 1927, and a corresponding, though less marked rise, for the Alt Berlin as a whole. These observers held the view that this severe type of Diphtheria seemed to be intractable to the usual antitoxic therapy, and that the mortality rates were higher in the over 5 years of age, than in the under 5 years of age.

In 1928 and 1929, epidemics of Diphtheria of a grave type were reported from all parts of Europe. Lisle (Minet 1929), Prague (Feierbend and Schubert 1929), Italy (Cayrel 1930), Rumania (Simie 1931).

(d) DIFFERENTIATION OF C. DIPHTHERIA INTO ITS DIFFERENT TYPES.

In this country in 1931, Anderson, Happold, McLeod and Thomson contributed handsomely to our knowledge of the Diphtheria organism. Working in Leeds, they discovered that there were two principal forms of the Diphtheria bacillus. To one they assigned the name Gravis, to the other Mitis. They correlated their clinical significance, and found the former associated with severe, and the latter with mild types of clinical infection. Culturally, these types are distinguishable. The Gravis organism grows with a granular deposit and pellicle in broth; it has a flattened, lustreless colony of irregular outline, and actively ferments polysaccharides. The Mitis

organism grows with uniform turbidity in broth, has a convex and partly translucent light reflecting colony. It does not ferment, starch or glycogen, but is haemolytic. A proportion of strains, non-fermentors of starch and glycogen, and non-haemolytic, are described as an Intermediate form.

As far back as 1900, Klein had demonstrated that there were two strains of Diphtheria bacillus, one which was haemolytic, and the other which was not.

(e) SURVEY OF TYPES IN THIS COUNTRY.

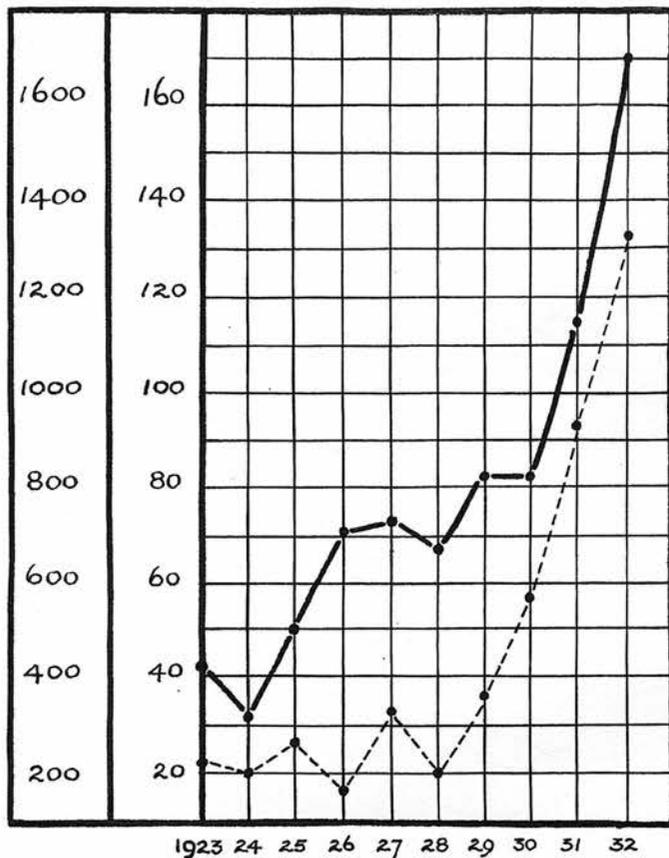
The work of McLeod and his co-workers extended to other parts of this country, and typing of the organism was carried out in Hull, London, Staffordshire, Manchester and Edinburgh. Divergent results were obtained, but to a fair degree there was corroboration of the cultural classification of the Leeds workers. Allison, 1931, working in London, held the view that there was no satisfactory evidence that the severest types of Diphtheria were associated solely or even mainly with the Gravis strains, but more recently it has been considered that coincident with an increase in the severity of the disease in London, starch fermenting strains (Gravis) are showing a greater incidence, and typing has been more easily effected.

Menton, 1933, working in Staffordshire, found great difficulty in forming a clear cut classification, owing to the prevalence of Atypical strains.

In Edinburgh, Rankin and Wright, 1932, investigating this problem, came to the conclusion that no hard and fast bacteriological classification or clinical correlation could be

Number of Diphtheria cases and deaths notified in Hull during the years 1923 to 1932

CASES. DEATHS.



NOTIFIED CASES. —

DEATHS. - - -

arrived at. The number of cases they investigated was small, and they suggested that the Gravis organism did not occur in Edinburgh at that time.

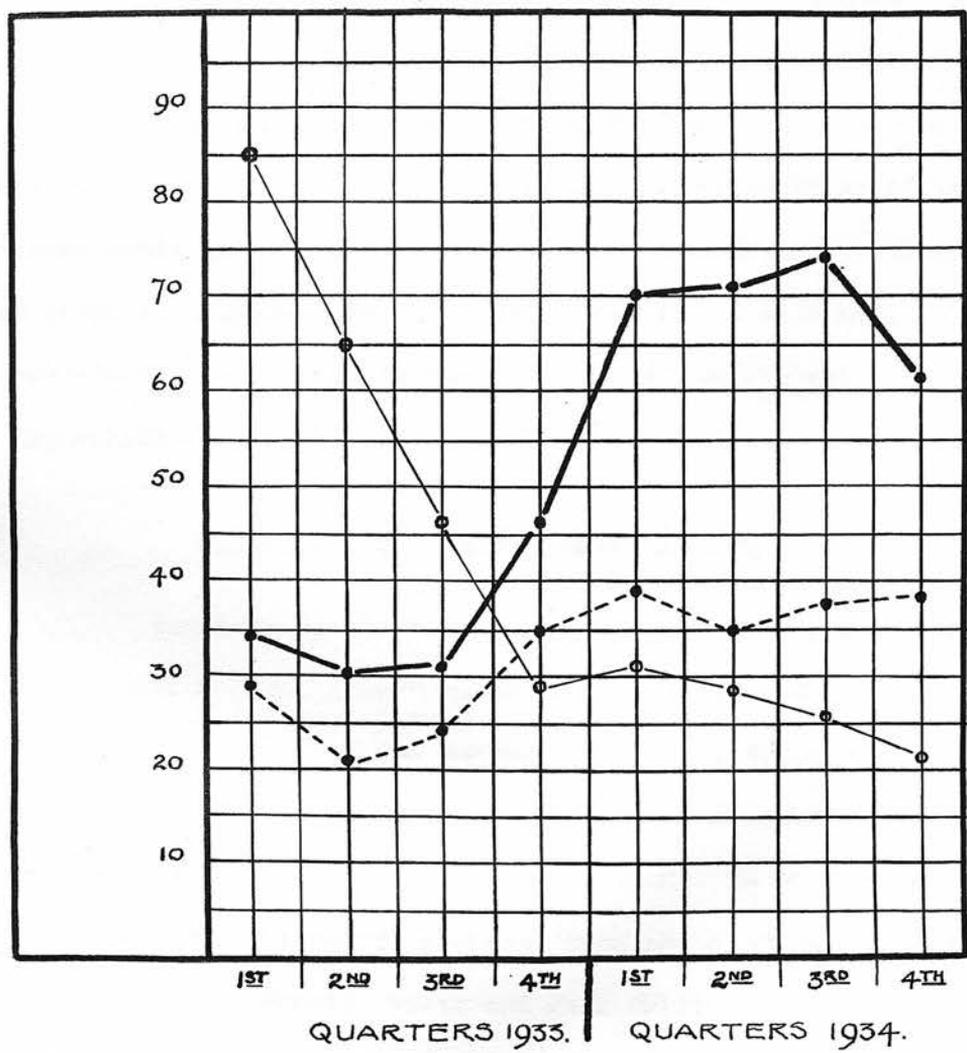
Leete and Morrison, 1933, working in Hull, confirmed the findings of the Leeds workers, and suggested that the high incidence of Gravis infections probably accounted for the increase of (notifications) cases, and high fatality rate, that occurred towards 1931. (See graph).

H. S. Carter, 1933, surveying the behaviour of C. Diphtheria in Glasgow, found it possible to divide 99% of the strains into 3 types. He found that the Intermediate strain was the epidemic type and that Gravis only occurred in a less degree. He also observed that the severe infection, due to the Intermediate strain, responded well to antitoxic therapy.

Robinson and Marshall, 1934, applying the work of McLeod and his co-workers in the Manchester area, reached the conclusion that, apart from 1.5% of Atypical strains, the strains of C. Diphtheria in Manchester offered little difficulty in classification into three types, and they endorsed the contention of the Leeds workers that the Gravis type is a more potent cause of severe and fatal infection than the Mitis. In Manchester the Intermediate types were at least equal to the Gravis types, as regards the production of virulent infections, differing from the Intermediate types of Hull and Leeds, where the infection associated with them was definitely Intermediate. They observed that severe Mitis infections were readily controlled by antitoxin therapy, and that many Gravis and Intermediate cases were resistant to serum, even in very large doses.

Manchester.
Number of cases of Diphtheria attributable
to each of the 3 types.

NO: OF CASES.



GRAVIS. —
INTERMEDIATE. —
MITIS. ---

These workers deduced from animal experiments that Gravis and Intermediate strains appeared to possess greater virulence than the Mitis, as judged by their power to invade and persist in the tissues of the animal body.

Robinson and Marshall, 1935, continuing their investigations, established that the epidemic type of C. Diphtheria had changed from an Intermediate to a Gravis strain (See graphs). They also established that antitoxin, even when given in large quantities on the 2nd and 3rd day of disease to the Gravis infections, sometimes failed to save life, whereas Mitis infections responded better even when the serum was given at a later date. They observed that Gravis and Intermediate cases were admitted to hospital on the average, a day earlier than the Mitis cases.

(f) EVALUATION OF DIPHTHERIA ANTITOXIN.

Considering the recognition of the various types of C. Diphtheria and the fact that Gravis infections did not seem to respond quickly to antitoxic therapy, Povitski, Eisner and Jackson, 1933, writing on the effectiveness of standard Diphtheria antitoxin, clarified the position. These workers established that the toxins prepared from the different cultures of B. Diphtheria, Gravis, Mitis and Park Williams 8, were neutralised unit per unit. They demonstrated this fact by Guinea Pig inoculation, and by the Ramon Flocculation Test. Their results indicated that no matter from what cultures they are derived, the Diphtheria toxins are identical in their response to the Standard Diphtheria Antitoxin. They found that

B. Diphtheria Gravis caused death in Guinea Pigs, with a much smaller number of organisms than did B. Diphtheria Mitis. It seems from these findings, that the Gravis organism, possesses a greater invading power and ability to produce toxins in vivo more rapidly than the other strains. The results of their animal experiments indicated that the time factor was of enormous importance. They found that, after a fatal dose of a culture of B. Diphtheria Gravis, all infected Guinea Pigs were saved, when antitoxin was administered in 6 hours. When antitoxin was administered after 10 hours, some of the Gravis infected Guinea Pigs lived 3, 4 and 5 days, while the controls died the next day. When the antitoxin was administered after 14 hours, all the Gravis infected Guinea Pigs died in the same time as the controls. The majority of Guinea Pigs infected with Mitis and other cultures survived when the antitoxin was administered after 6 and after 10 hours, and a few when it was administered after 15 hours, but none survived when it was administered later than this. The inference to be drawn from this work is that the Gravis organism produces toxin more rapidly in vivo than do the other strains. The difference is, however, only in degree and not in kind. The two outstanding factors are the invasiveness of the C. Diphtheria Gravis and the time factor in the administration of the Diphtheria antitoxin.

Parish Whatley and O'Brien, 1932, carried out a series of investigations with both the Gravis and Mitis strains, and they found that serum prepared by the injection of Park Williams number 8 strain had the same protective power in

animals on infection with either strain.

These observers found that, not only were Mitis strains as virulent to animals as were Gravis strains, but they produced toxins having a greater potency. They suggested that the divergent results represented real local differences and might be related with the regional variations of Diphtheria.

(g) STABILITY OF TYPE OF THE GRAVIS DIPHTHERIA ORGANISM.

Considering the possibility that the difference in type of Diphtheria organism might be due to transmutation of the organism, the following work, which has been done on type stability, is quoted below:-

Christison in 1933, working on the stability of Mitis, Intermediate, and Gravis types of B. Diphtheria, contended that the 3 main types of B. Diphtheria undergo variation in colony structure, in vitro particularly, after growth in bouillon, and the rough variants derived from Mitis strains would, at sight, be classified as Gravis, and the derivatives of the Gravis colonies as Mitis. She observed changes in the colony structure in the strains obtained from Leeds, as well as the strains isolated in Edinburgh. She concluded from these findings, and the fact that Atypical strains are isolated from time to time, that disassociation occurs in vivo as well as in vitro. She also found starch fermentation as a reliable criterion of type.

Robinson, 1934, showed that the Manchester types of C. Diphtheria revealed a high degree of type stability. He observed that it was possible to produce alteration in type in the Atypical

strains, both in vivo and in vitro. He explained the alteration in type from cultures of convalescent patients in hospital, as being due not to variation, but to cross infection.

(h) GEOGRAPHICAL SURVEY AND SEROLOGICAL GROUPING OF THE GRAVIS STRAIN OF DIPHTHERIA ORGANISM.

Having a Gravis strain as the predominant type of infection in Manchester, Robinson and Marshall undertook a serological classification of the Gravis organism. They completed an extensive survey of over 600 strains of the Gravis type from various parts of the world. This investigation was undertaken to determine the practicability of antibacterial serum therapy, as the existence of a large number of different serological types would constitute a serious bar to the efficient use of an antibacterial serum. These observers thought that from this point of view, the number of serological types did not militate greatly against the employment of antibacterial serum therapy. They discovered 5 well defined types of Gravis organisms and their distribution may be briefly tabulated as follows:-

Place	Type 1	Type 2	Type 3	Type 4	Type 5
Manchester		+			
Liverpool		+			
Burnley		+			
Lancaster		+			
Warrington		+			
Leeds		+			
Hull			+		
Huddersfield		+			
Sheffield		+	+		
Derby			+		
Newcastle	+	+			
Durham		+	+		
Staffordshire	+	+			
London			+		
Glasgow	+	+			
Cork		+			
Germany (6 towns)	+				
France (3 towns)	+				
Poland (3 towns)	+				
Sweden (Stockholm)	+				
Hungary (2 towns)	+				
Austria (1 town)	+				
Czechoslovakia (4 towns)	+		+		
Egypt (2 towns)					+
Canada (Toronto)	+				
New York State	+				
Chicago	+				
New Brunswick	+				
Massachusetts				+	

A serological grouping of the starch fermenting strains of *C. Diphtheria* was carried out on 106 strains (Ewing, 1933). There were five distinct serological groups. The members of type A, B and D conformed to the original Gravis description. Type C had an Atypical colony form by which they were distinguishable. The fifth type X did not conform culturally to the description of the Gravis organism.

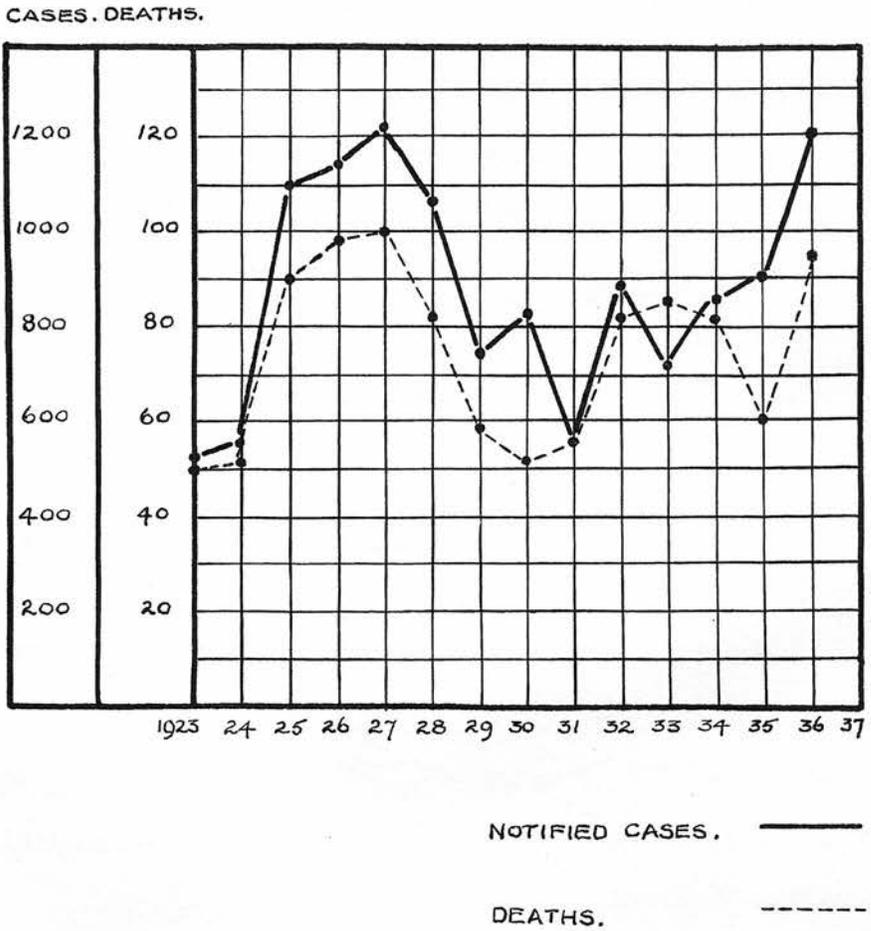
(i) VARIATIONS OF THE ANCILLARY TREATMENT OF DIPHTHERIA.

Much work has been done on the ancillary treatment of Diphtheria. Benn, Hughes and Alstead, February 1932, investigated a series of 89 cases of severe Diphtheria, treating them with combined antitoxin and dextrose insulin therapy. Their observations were controlled with a reasonable number of similar cases. The outcome of this investigation was encouraging, though not entirely satisfactory. The dextrose insulin treated group seemed to gain several insignificant advantages over the controls.

McLean, 1936, of Glasgow, carried out the sodium chloride ancillary treatment of Diphtheria, combined with antitoxin, and he came to the conclusion that the administration of extra sodium chloride to a series of cases of Diphtheria is associated with an improvement, as compared with a series that does not receive extra sodium chloride.

M. A. Peters, 1932, writing on the ancillary treatment of Diphtheria in Bristol, employed glucose and insulin and colloidal iodine. He reviewed a series of cases, comparing his old and new treatment. The type of Diphtheria present in Bristol has been severe since 1921. The following table summarises his experiments-

Notifications of Diphtheria. City of Manchester.
Deaths occurring in this series.



	Total Cases	Deaths	Case Mortality %
Orthodox Treatment. 1928-1929.	1235	67	5.4
New Treatment. 1930-1932.	2312	68	2.9

A series of figures concerned with cases of the grave type of Diphtheria, where intravenous therapy was employed, is appended.

	Dangerously Ill Cases.	% of total Admissions	Deaths	Case Mortality %
Orthodox Treatment. 1928-1929	243	19	67	27.5
New Treatment. 1930-1932.	463	20	68	14.7

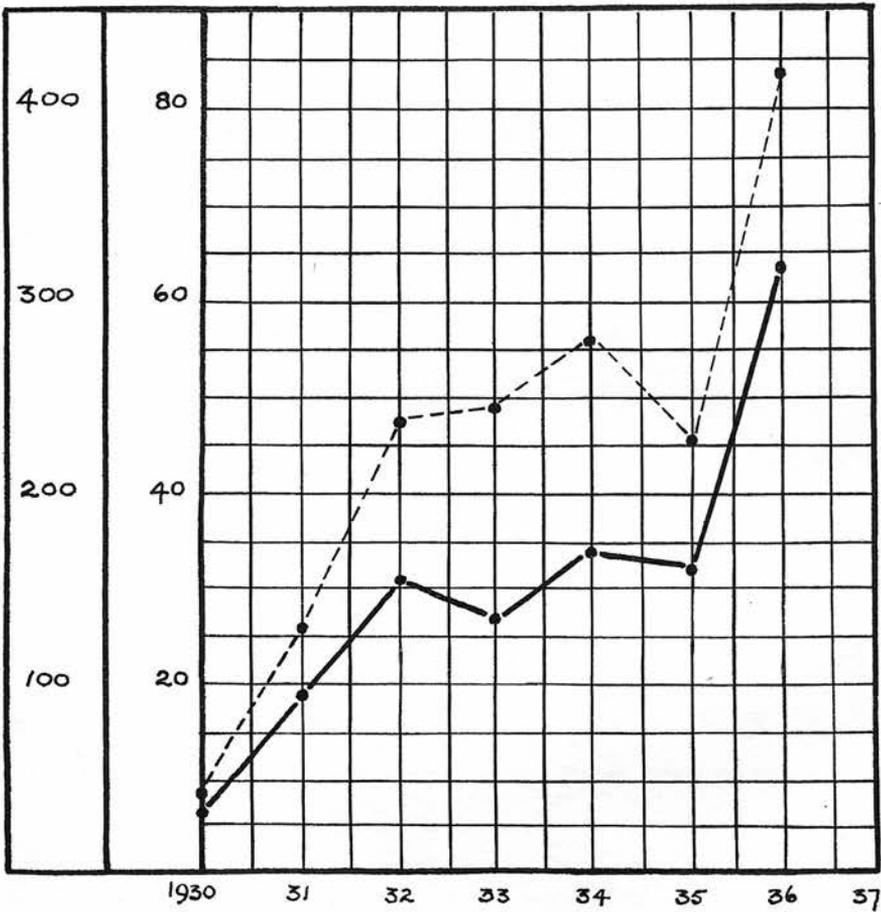
There is an obvious improvement in case mortality in the cases having the New Treatment, but unfortunately this is not controlled by a directly parallel control series. The New Treatment consisted of 90-120 cc of 20% glucose and colloidal iodine, given on admission, with intravenous antitoxin, with or without insulin.

(j) BEHAVIOUR OF DIPHTHERIA INFECTION IN MANCHESTER.

The cases of Diphtheria since 1933, in Manchester, showed a very steady rise. This increase in incidence was accompanied by an increase in severity, which is shown by the fact that the number of cases requiring intravenous therapy in 1930 rose from 31 to 317 in 1936. The fatality rate of cases occurring in this group average out at 28% (Graph appended).

Cases having Intravenous Antitoxin in
Monsall Fever Hospital.

CASES. DEATHS.



No. of CASES. —

DEATHS. ----

PREPARATION OF ANTI-BACTERIAL SERUM.

Dr. Petrie of the Lister Institute was consulted regarding the preparation of a suitable serum, and the following outline described the lines that were adopted.

The following method of production of Gravis Anti-bacterial Serum, which was prepared at the Lister Institute, Elstree in 1934-1935, was undertaken by Dr. Petrie. Bacillary suspensions of a Gravis strain were prepared as follows:-

Loeffler Serum in Roux bottles was sown with saline suspensions after the condensation water had been removed. After 18 hours incubation, at 37° Centigrade, the growth was suspended in saline, containing .4% Phenol. The suspension was washed by centrifuging it three times, and was then stored in the ice chest for a week, when it was found to be sterile. The final density was $2,000 \times 10^6$ bacilli per cc. The doses were, without exception, given to the horses intravenously. The horse which produced the Serum for the clinical trial, received a total of 1411 ccs of the suspension in 49 doses. During the period 22nd October, 1934, to 3rd June, 1935, the first dose was .1 cc. The doses were gradually increased to a maximum of 50 ccs. The horse appeared to become more sensitive to the doses as time went on, but the immediate allergic reactions were never severe. The material used in the trial was a concentrated preparation from a pool of Serum, obtained from four bleedings, taken between the 25th March, 1935, and the 14th July, 1935. The concentration was affected by adding 28% of solid ammonium sulphate to the Serum. The albumen fraction

was removed from the resulting globulin precipitate, by filtration through chain-cloth. The precipitate was dialysed against tap water, at room temperature for 3 days. 1% sodium chloride, .35% Trikrisol and .35% ether was added to the dialysed residue. This was then filtered through a Berkfeld candle. The degree of concentration of the original Serum, in terms of the volume of the dialysis residue, was about four times. The only method of titration available was the estimation of the agglutinin titre; the titre of the natural Serum, before concentration, was 1/6400.

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EVALUATION OF ANTI-BACTERIAL SERUM BY ANIMAL EXPERIMENT.

Before subjecting the Anti-bacterial Serum to clinical trial, it was considered advisable to assess its effect when administered to animals. This work was undertaken by Dr. D. T. Robinson. In each experiment, 3 batches of Guinea Pigs were taken. The first received 1% body weight of serum intracardially or intravenously; the second 1% body weight of normal serum by the same route, and the third received no serum of any kind. The amount of antitoxin in the Anti-bacterial Serum was controlled by adding an equivalent amount to the normal serum. One hour later, all pigs received 10 M.L.D. of washed Gravis bacilli subcutaneously, into the shaved anterior abdominal wall. The results may be summarised by the following table.

Summary of Animal Experiment.

EXPERIMENT.		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
GRAYIS ANTIBACTERIAL SERUM. 0.2 A.U. PER CC.	ROUTE OF INJECTION OF SERUM.	I.C.	I.C.	I.C.	I.V.	I.V.	I.V.	I.P.	I.P.	I.P.	I.P.	
	AGGLUTININ TITRE.	$\frac{1}{3200}$	$\frac{1}{3200}$	$\frac{1}{3200}$	$\frac{1}{3200}$	$\frac{1}{3200}$	$\frac{1}{3200}$	$\frac{1}{6400}$	$\frac{1}{6400}$	$\frac{1}{6400}$	$\frac{1}{6400}$	
	NO: OF GUINEA PIGS INJECTED.	8	10	10	10	10	6	10	10	10	10	
	NO: DIED.	1	2	3	1	0	3	4	4	2	3	
	AVERAGE TIME TO DEATH (HOURS).	140	96	120	120	0	108	120	100	96	112	
	NO: OF TIMES IN WHICH ORGANISMS WERE RECOVERED P.M. FROM:-	LOCAL LESION.	1	2	2	1	0	3	3	4	2	2
		LIVER.	0	0	1	0	0	1	0	1	0	0
		HEART BLOOD.	0	0	0	0	0	0	0	0	0	0
	CONTROLS NORMAL SERUM. 0.2 A.U. PER CC.	ROUTE OF INJECTION OF SERUM.	I.C.	I.C.	I.C.	I.V.	I.V.	I.V.	I.P.	I.P.	I.P.	I.P.
		AGGLUTININ TITRE.	0	0	0	0	0	0	0	0	0	0
NO: OF GUINEA PIGS INJECTED.		8	10	10	10	10	6	10	10	10	10	
NO: DIED.		7	7	10	9	10	6	9	9	6	9	
AVERAGE TIME TO DEATH (HOURS).		72	63	68	60	58	62	65	70	70	64	
NO: OF TIMES IN WHICH ORGANISMS WERE RECOVERED P.M. FROM:-		LOCAL LESION.	7	7	10	9	10	6	9	9	6	9
		LIVER.	7	7	9	9	10	6	8	8	6	9
		HEART BLOOD.	2	3	4	3	5	2	3	4	2	3
CONTROLS NO SERUM. 10 M.L.D. OF WASHED BACILLI SUBCUTANEOUSLY.		NO: OF GUINEA PIGS INJECTED WITH 10M.L.D.	8	10	10	10	10	6	10	10	10	10
		NO: DIED.	8	10	10	10	10	6	10	10	10	10
	AVERAGE TIME TO DEATH (HOURS).	44	42	48	40	30	40	44	46	48	42	
	NO: OF TIMES IN WHICH ORGANISMS WERE RECOVERED P.M. FROM:-	LOCAL LESION.	8	10	10	10	10	6	10	10	10	10
		LIVER.	8	9	10	9	10	6	10	9	9	10
		HEART BLOOD.	3	3	3	4	6	3	4	3	3	4

Expt.	Gravis Anti-Bacterial Serum		Controls Normal Serum.		Controls No Serum.	
	No.of Pigs Injected.	No.Died	No.of Pigs Injected	No.Died	No.of Pigs Injected.	No.Died.
1	8	1	8	7	8	8
2	10	2	10	7	10	10
3	10	3	10	10	10	10
4	10	1	10	9	10	10
5	10	0	10	10	10	10
6	6	3	6	6	6	6
7	10	4	10	9	10	10
TOTAL	64	14	64	58	64	64

The above results indicate that the Gravis Anti-bacterial Serum has a definite protective effect when given before the infecting organism.

Gundell and Erzin, 1936, writing on the specific therapy of Diphtheria, in relation to the different types of Diphtheria bacilli, the summary of their investigations is as follows:-

Guinea Pigs were infected with the 3 types of Diphtheria bacillus - Gravis, Mitis and Intermediate. Serum was only successful in arresting Gravis infections if given not later than 8-24 hours after infection. In contrast, with Mitis infections, it is possible to save the animal, even if serum administration is delayed for a considerable time. In some cases, for instance, till long after the animals infected with Gravis organisms have died, despite Serum therapy. In Intermediate infections, as in Gravis, it was only possible to save animals infected if the serum was given not later than 24 hours after infection. Regarding protection against

infection, after prophylactic administration of Serum, it lasted about 10 days in Gravis and Intermediate infections, but at least 20 days in Mitis infections.

The details of this Therapeutic Serum were not described, it was referred to as a "curative" Diphtheria Serum.

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CLINICAL INVESTIGATION.

A Gravis Anti-bacterial Serum having been prepared, which was definitely efficient in the protection of Guinea Pigs, when given prior to infection, and no untoward results accruing from its administration, it was decided to apply it clinically, as a therapeutic agent.

The clinical experiment was undertaken at Monsall Hospital, Manchester, and occupied the greater part of a year. It was started in November, 1935, and the last case to receive Serum was not discharged until October 17th, 1936. It must be indicated, at the outset, the nature of the cases which are being reviewed, and in order to convey the impression of these as accurately as possible to the reader, clinical records are available. The type of severity of these cases corresponds to Grade I and Grade II of Bie's Classification, which are cases where pseudo membrane completely covers the tonsils and adjacent mucous membrane, involving the greater part of the soft palate and uvula. As well as the local lesion, the systemic factor was also assessed, attention being paid to:-

- (a) Degree of prostration.
- (b) Cardiac involvement.
- (c) Severity of lymph-adenitis of neck.
- (d) Nasal discharge.
- (e) Foetor of breath.

Having determined that cases fell into this category, consideration was given to control the experiment by employing, as far as possible, cases of similar severity, age and sex, in order to arrive at a sound evaluation of the Anti-bacterial Serum.

It was decided to administer Serum to all severe cases of Diphtheria. These cases to form two series (a) Control,

(b) Treated, the cases to be designated as belonging to series (a) or (b) at the time of clinical assessment. Attempt was made to keep age distribution in each series as nearly as possible alike. The Control series received antitoxin and the usual ancillary treatment that was employed in the hospital. The Treated series received antitoxin and the usual ancillary treatment, but, in addition, Gravis Anti-bacterial Serum. It was thought that a useful initial dose would be 10 ccs intramuscularly, to be followed later by a second dose of 10 or 15 ccs, if the type of infecting organism was proved to be Gravis.

Keeping both series running entirely parallel was found to be difficult, as cases which were considered suitable, from the point of view of clinical severity, were often unsatisfactory from the bacteriological standpoint, the infecting organism proving to be Intermediate or Atypical Gravis in type. Having collected several of that type of case, i.e. clinically Gravis in type, but Intermediate or Atypical Gravis bacteriologically, it was felt that their inclusion, though remote from the immediate point of discussion, was too interesting to be ignored. Before going further, the question of the treatment of the Anti-bacterial Serum group requires explanation. It was considered inadvisable to withhold antitoxin from these cases, firstly on humanitarian grounds, and secondly from the point of view of public opinion, since antitoxin is the only known remedy of avail with a reputation that has been established during the past 50 years. The position regarding the assessment of a therapeutic agent is not the simple matter it

might have been, at the time of Fibiger's classical experiment, who, because the reputation of antitoxin was not established at that time, was able to withhold it in his Control group, during his investigation. However, even though he seemed to prove conclusively the efficiency of antitoxin, his standard of judgment perhaps fell short of that of the more critical observers of to-day. (Pijper, C. 1937).

Regarding typing of the infecting organism, it was considered of primary importance, in an investigation such as this, that it was done accurately, efficiently and rapidly. In every case this was done by Dr. D. T. Robinson, who received throat swabs appropriately numbered from the hospital. He typed the organism in the Public Health Laboratory, Manchester, and communicated the results to the hospital immediately he was satisfied with the typing. This investigation of organism in all cases of Diphtheria was a routine procedure, as it formed part of an epidemiological study which was being done at that time.

The selection of cases was kept alternate, as far as possible, and the routine hospital treatment of both groups was common.

The following pages summarise the series of case notes which represent the clinical trial:-

Lab No.	NAME	SEX	AGE	Day of Disease on Adm:	Day of Disease on which Death Occurred	A.D.S. and Route	A.B.S. and Route	Paralysis.	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any.)	Type	
347	P. Kerfoot	F	3	2		40,000 IM 60,000 IV	2 No.1 IV 20 No.1 IP	Palatal 40		Albuminuria 8	6	Discharged 102nd Day	G	
55	A.M. Bickerton	F	2 1/2	4	8	60,000 IM 40,000 IV	15 No.1 IM 10 No.1 IP				2	Cardiac Failure	G	
652	D. Barnes	F	4	3		52,000 IM 40,000 IV	10 No.1 IM	Palatal 38		Serum Rash 9	5	Discharged 69th Day	G	
558	M. Peattie	F	4	3	7	40,000 IM 60,000 IV	35 No.1 IM			Petechiae		Died before Throat clean	Cardiac Failure	G
476	M. Machin	F	5	2		40,000 IM 60,000 IV	20 No.1 IM	Nasal phonation 42 Strabismus 24		Albuminuria 11	5	Discharged 65th Day	G	
461	J. Manning	F	5	5		40,000 IM 40,000 IV	20 No.1 IM	Strabismus			4	Discharged 54th Day	G	
459	M. Ridgeway	F	4	3		40,000 IM 60,000 IV	35 No.1 IM	Eyes, Palatal and Pharyngeal.		Albuminuria 5 Otorrhoea 13 Serum Rash 10	5	Discharged 69th Day	G	
455	D. Haines	M	6	2		40,000 IM 50,000 IV	13 No.1 IM 12 No.1 IP			Serum Rash 14	5	Discharged 56th Day	G	
454	J. Hammond	M	4	5	11	40,000 IM 60,000 IV	10 No.1 IM 10 No.1 IP		Bradycardia 10		5	Cardiac Failure	G	
428	J. Chadwick	F	5	2		40,000 IM 60,000 IV	10 No.1 IM	Palatal 28			5	Discharged 81st Day	G	
345	W. Small	M	5	4		8,000 pre.ad 40,000 IM 60,000 IV	1 No.1 IV 10 No.1 IM 10 No.1 IP	Palatal 38 Pharyngeal 39 Facial 36			6	Discharged 81st Day	G	
317	E. Crewe	F	5	4	45	40,000 IM 50,000 IV	20 No.1 IP	Palatal 19 Pharyngeal 37 Diaphragmatic 46		Albuminuria 10	6	Cardiac Failure	G	
70	H.F. Hepple	M	5	2		40,000 IM 60,000 IV	20 No.1 IP			Septic Gland	4	Discharged 65th Day	G	
600	M. Carney	M	4	2		40,000 IM 60,000 IV	10 No.1 IM 15 No.1 IM			Serum Rash	4	Discharged 54th Day	G	
655	N. Metcalfe	M	5	3	15	40,000 IM 60,000 IV	25 No.1 IM		Gallop Rhythm 12	Petechiae 7	6	Cardiac Failure	G	
758	R. Prestage	M	4	2		40,000 IM 60,000 IV	25 No.1 IM			Serum Rash 11	6	Discharged 53rd Day	G	
460	P. Brooks	F	6	4	7	38,000 IM 60,000 IV	15 No.1 IM			Petechiae 6		Died before Throat clean	Cardiac Failure	G
381	R. Dolman	M	6	3	7	40,000 IM 60,000 IV	10 No.1 IM 10 No.1 IP					Died before Throat clean	Cardiac Failure	G
295	A. Sullivan	M	6	3		40,000 IM 40,000 IV	10 No.1 IM				6	Discharged 54th Day	G	
569	K. Carney	F	7	2		40,000 IM 60,000 IV	25 No.1 IM 10 No.1 IM				5	Discharged 58th Day	G	
568	J. Cooper	F	6	3		40,000 IM 60,000 IV	10 No.1 IM 25 No.1 IM			Albuminuria 7 Serum Rash 10	5	Discharged 52nd Day	G	
772	J. Slater	M	9	6		40,000 IM 60,000 IV	25 No.1 IM	Palatal 16 & 35			6	Discharged 69th Day	G	
532	B. Walton	F	8	2		40,000 IM 60,000 IV	25 No.1 IM		Cardiac Irregularity 40	Albuminuria 17	4	Discharged 67th Day	G	
711	C. Brettelle	M	9	2		8,000 pre.ad 30,000 IM 60,000 IV	25 No.1 IM			Serum Rash 11	6	Discharged 57th Day	G	
713	S. Cummings	F	8	3		40,000 IM 60,000 IV	10 No.1 IM	Sluggish Palate 21		Albuminuria ad. Serum Rash 17	5	Discharged 67th Day	G	

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(25b)
S E R U M - Continued.

Lab. No.	NAME	SEX	AGE	Day of Disease on Adm:	Day of Disease on which Death Occurred.	A.D.S. and Route	A.B.S. and Route	Paralysis	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any)	Type.
742	P. Joynson	M	8	1		40,000 IM 60,000 IV	25 No.1 IM			Serum Rash 9	6	Discharged 56th Day	G
321	G. Edwards	M	11	3		40,000 IM 60,000 IV	10 No.1 IM 10 No.1 IV	Palatal 27			7	Discharged 75th Day	G
220	E. Derbyshire	F	11	2		40,000 IM 60,000 IV	25 No.1 IM			Enteritis 26	6	Discharged 62nd Day	G
209	E. Simonite	F	10	4		40,000 IM 40,000 IV	10 No.1 IM	Palatal 40			5	Discharged 69th Day	G
76	E. Brindley	M	10	2		40,000 IM 60,000 IV	25 No.1 IM	Palatal 28		Serum Rash 10	5	Discharged 75th Day	G
762	V. Maloney	F	10	6	15	40,000 IM 60,000 IV	25 No.1 IM		Triple Rhythm		6	Cardiac Failure	G
314	A. Bigham	M	12	3		40,000 IM 40,000 IV	10 No.1 IM 1 No.1 IV			Enteritis 16	5	Discharged 55th Day	G
208	E. Armstrong	F	13	3	15	16,000 IM 40,000 IM 60,000 IV	25 No.1 IM		Cardiac Restlessness	Serum Rash 12 Petechiae	8	Cardiac Failure	G
752	M. Buchanan	F	12	4	15	40,000 IM 60,000 IV	25 No.1 IM 10 No.1 IV		Triple Rhythm 14	Petechiae 8	Died before Throat clean	Cardiac Failure	G
42	M. Russell	F	12	5		40,000 IM 60,000 IV	9 No.1 IM 11 No.1 IV	Palatal 33 Pharyngeal		Albuminuria ad. Otorrhoea 25	3	Discharged 66th Day	G

(25c)
CONTROLS.

Lab. No.	NAME	SEX	AGE	Day of Disease on Adm:	Day of Disease on which Death Occurred	A.D.S. and Route Units	A.B.S. and Route ccs.	Paralysis	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any)	Type
490	H. Morris	F	3	4	10	40,000 IM 60,000 IV					5	Cardiac Failure	G
411	B. Huckle	F	3	3	10	40,000 IM 40,000 IV					Died before Throat clean	Cardiac Failure	G
361	D. Stewart	M	3	5		40,000 IM 40,000 IV			Cardiac Irregularity 43	Albuminuria ad.	5	Discharged 70th Day	G
230	J.R. Steadman	M	3	3		40,000 IM 60,000 IV			Cardiac Irregularity		6	Discharged 58th Day	G
785	G. Williamson	M	5	5	8	40,000 IM 60,000 IV				Petechiae 6	Died before Throat clean	Cardiac Failure	G
660	R. Glover	F	5	3		40,000 IM 60,000 IV				Serum Rash 16	4	Discharged 66th Day	G
620	I. Denton	F	4	4		40,000 IM 60,000 IV		Palatal & Eyes		Serum Rash	5	Discharged 81st Day	G
609	S. Walker	F	4	4	14	80,000 IM 40,000 IV					5	Cardiac Failure	G
533	J. Waldron	M	4	3		40,000 IM 60,000 IV			Cardiac Collapse 7		7	Discharged 67th Day	G
523	E. Kelly	F	4	3		40,000 IM 40,000 IV		Palatal 42			5	Discharged 77th Day	G
512	M. O'Grady	F	4	3	8	40,000 IM 60,000 IV					Died before Throat clean	Cardiac Failure	G
491	J. Broadbent	F	4	3		40,000 IM 60,000 IV		Palatal 35		Albuminuria 9	5	Discharged 58th Day	G
470	G. Norris	M	4	5	10	40,000 IM 80,000 IV					Died before Throat clean	Cardiac Failure	G
456	W. Hammond	M	5	3		40,000 IM 40,000 IV					6	Discharged 73rd Day	G
453	W. Grafton	M	5	4	9	40,000 IM 40,000 IP				Petechiae 6	Died before Throat clean	Cardiac Failure	G
281	J. Leigh	F	5	2		48,000 IM 60,000 IV				Serum Rash 9	6	Discharged 58th Day	G
219	D. Moore	F	5	3		40,000 IM 60,000 IV		Palatal - Eyes Pharyngeal.		Serum Rash	6	Discharged 76th Day	G
149	R. E. Ellis	M	5	3	34	40,000 IM 60,000 IV		Palatal, Pharyngeal, Diaphragmatic.		Albuminuria 12	5	Diaphragmatic Paresis.	G
789	A. Potter	F	7	4	7	40,000 IM 60,000 IV			Triple Rhythm 6	Petechiae 5	Died before Throat clean	Cardiac Failure	G
608	E. Denton	F	6	3		40,000 IM 60,000 IV				Albuminuria 12	5	Discharged 62nd Day	G
562	R. Burns	M	6	2		40,000 IM 50,000 IV		Facial 48 Palatal 46			5	Discharged 59th Day	G
521	A. Chappelle	M	6	3		40,000 IM 60,000 IV		Palatal 31		Petechiae on ad.	8	Discharged 103rd Day	G
479	T. Collins	M	6	3		40,000 IM 60,000 IV			Triple Rhythm 15		6	Discharged 51st Day	G
471	J. Cowley	M	6	3		40,000 IM 50,000 IV					4	Discharged 61st Day	G
434	B. McCabe	M	6	4		40,000 IM 60,000 IV		Palatal 37		Petechiae	6	Discharged 69th Day	G
238	E. Brook	M	6	3	28	40,000 IM 60,000 IV		Palatal	Cardiac Restlessness	Albuminuria 18 Oedema Eyelids 24	6	Cardiac Failure	G

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(25d)
 CONTROLS - Continued.

Lab. No.	NAME	SEX	AGE	Day of Disease on Adm.	Day of Disease on which Death Occurred	A.D.S. and Route	A.B.S. and Route.	Paralysis	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any)	Type
171	G. Hall	F	7	4	15	42,000 IM 60,000 IV			Triple Rhythm 10	Petechiae 7 Albuminuria.	6	Cardiac Failure	G
128	M. Riley	F	6	4		40,000 IM 40,000 IV					5	Discharged 65th Day	G
56	C. Shorter	F	6	3		40,000 IM 60,000 IV					6	Discharged 63rd Day	G
726	E. Hunt	F	9	3		40,000 IM 60,000 IV			Cardiac Irregularity	Albuminuria ad	4	Discharged 91st Day	G
424	R. Hickson	F	9	4		40,000 IM 60,000 IV		Peroneal 56 Nasal phonation Palatal 33	Gallop 32 Rhythm 19	Albuminuria ad	6	Discharged 59th Day	G
408	H. Sneath	F	9	2		40,000 IM 60,000 IV				Serum Rash	7	Discharged 88th Day	G
359	M. Lord	F	9	3		40,000 IM 60,000 IV		Palatal Nasal phonation 18 Facial		Albuminuria 33	6	Discharged 60th Day	G
241	F. Bradshaw	M	9	3		40,000 IM 60,000 IV					7	Discharged 69th Day	G
331	R. Bradbury	M	10	2		40,000 IM 60,000 IV				Serum Rash 11	7	Discharged 54th Day	G
243	R. Leigh	M	11	4		40,000 IM 60,000 IV				Otorrhoea 14	5	Discharged 55th Day	G
36	H. Downs	M	10	3		40,000 IM 60,000 IV				Serum Rash 10	5	Discharged 60th Day	G
218	G. Derbyshire	M	14	4		40,000 IM 60,000 IV			Cardiac Irregularity		5	Discharged 57th Day	G
194	J. Bell	F	14	2		44,000 IM 60,000 IV		Slight Palatal		Albuminuria	6	Discharged 55th Day	G
65	G. Cohen.	F	14	3		40,000 IM 60,000 IV				Serum Rash 11	4	Discharged 57th Day	G

(25e)
MISCELLANEOUS GROUP.

Lab. No.	NAME	SEX	AGE	Day of Disease on Adm:	Day of Disease on which Death Occurred.	A.D.S. and Route Units	A.B.S. and Route ccs.	Paralysis	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any).	Type
<u>INTERMEDIATE SERIES.</u>													
247	R. Cauldwell	M	3	3	12	40,000 IM 60,000 IV			Complete Heart Block 8		5	Cardiac Failure	I
118	F. Hand	M	7	3	12	20,000 IM 120,000 IV				Serum Rash 9 Albuminuria 5	Died before Throat clean	Cardiac Failure	I
110	F. Harris	M	7	2	$\frac{3}{4}$ hr. after adm:	No serum					Died before Throat clean	Cardiac Failure	I
117	E. Wheeldon	M	10	5		40,000 IM 30,000 IV			Cardiac Irregularity 8		3	Discharged 59th Day	I
100	J. Wood	M	11	3	Within 12 hrs	40,000 IM 60,000 IV				Moribund on admission.	Died before Throat clean	Cardiac Failure	I
<u>SERUM.</u>													
271	A.N. Jones	M	6	3		40,000 IM 40,000 IV	10 IM 10 IM			T.B. Spine in plaster	6	Discharged 93rd Day	I
313	K. Leigh	M	6	5	10	40,000 IM 60,000 IV	10 IM No.1 1 IV No.1 9 IP No.1			Albuminuria ad Petechiae 8	Died before Throat clean	Cardiac Failure	I
260	E. Dillon	M	7	3		40,000 IM 40,000 IV	25 IM				7	Discharged 40th Day	I
162	H. Bailey	M	8	4	7	40,000 IM 60,000 IV	25 IM			Petechiae 6	Died before Throat clean	Cardiac Failure	I
139	M. Nolan	F	9	4	21	50,000 IM 60,000 IV	9 IM No.1 1 IV No.1 9 IV No.1			Petechiae 6	Died before Throat clean.	Cardiac Failure	I
127	J.R. Norton	M	12	4	11	40,000 IM 60,000 IV	1 IV No.1 9 IM No.1 1 IV No.1 9 IV No.1 1 IV No.1			Petechiae	Died before Throat clean.	Cardiac Failure	I
<u>COMPLICATED GRAVIS SERIES.</u>													
748	J. Harvey	F	4	4	Within 24 hrs	8,000 pre ad 40,000 IM 60,000 IV				Petechiae on adm:	Died before Throat clean	Cardiac Failure	G
725	F. Delves	F	4	3		40,000 IM 40,000 IV				Albuminuria 8	6	Discharged 57th Day	G
566	M.B. Halliday	F	5	3		30,000 IM 60,000 IV				Otorrhoea 22	5	Discharged 60th Day	G
<u>SERUM.</u>													
416	A. Blizzard	M	4	2	22	40,000 IM 60,000 IV	10 IM		Triple Rhythm.	Congenital cleft palate. Fits.	6	Cardiac Failure	G
242	T. Kelly	F	$4\frac{1}{2}$	2	Within 24 hrs	40,000 IM 60,000 IV	10 IM No.1				Died before Throat clean	Cardiac Failure	G
318	W. Newton	F	9	2	6	24,000 pre ad 20,000 IM 60,000 IV	10 IM No.1 10 IM No.1			T. B. Spine with sinuses, haemorrhage from bowels.	4	Death due to T.B. and Diphtheria.	G

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MISCELLANEOUS GROUP Continued.

Lab No.	NAME	SEX	AGE	Day of Disease on Adm:	Day of Disease on which Death Occurred	A.D.S. and Route Units.	A.B.S. and Route ccs.	Paralysis	Cardiac Complications	Other Sequelae	Days for Membrane to Clear	Remarks (if any)	Type
	<u>SERUM.</u>												
91	S. Waite	F	7	3	6	40,000 IM 60,000 IV	20 IM No.1 15 IP No.1			Petechiae 6 Obstruction- Tracheotomy. Suppression of urine.	Died before Throat clean	P.M. Subcapsular Haemorrhages & marked congestion kidneys. Heart - flabby.	A.G.
18	K. Flanagan	F	7	5	16	60,000 IV 40,000 IM	10 IM No.1 10 IV No.1		Heart block	Albuminuria 8	5	Cardiac Failure	A.G.
34	M. Broadbent	F	10	4	5	8,000 pread 80,000 IM 80,000 IV	18 IM No.1 2 IV No.1			Asphyxia - Tracheotomy.	Died before Throat clean	Cardiac Failure	A.G.

SERUM ADMINISTRATION.

The administration of a product which was really an unknown quantity, required extreme care, and from the case records, it would be observed that advance in dosage was made slowly and cautiously. Desensitization was done whenever any doubt existed as to the possibility of allergic reaction, and the dose of Anti-bacterial Serum was always delayed until after the antitoxin administration. Antitoxic Serum was given intravenously and intramuscularly. The average dose employed was approximately 100,000 units, given in two parts, usually 40,000 units intramuscularly, followed in half an hour to one hour by 60,000 units intravenously. This method corresponds to the scheme recommended in the report of the Medical Superintendents, London County Council, 1936. The Anti-bacterial Serum was given by the intramuscular, intravenous or intra-peritoneal route, either by one or a combination of these methods.

Regarding the immediate reactions, fortunately they were not severe, only one case giving cause for anxiety and alarm. The delayed manifestation of Serum reactions were not striking, though the incidence was considerably higher than in the group treated by antitoxin alone, and they were all cutaneous in character. The number of cases which experienced Serum rashes in the Anti-bacterial Serum treated group was 31.4%, compared with 20%, which occurred in the Control group, which had antitoxin alone.

Having hinted at the difficulty of assessing this therapeutic substance in this series of cases, and this

difficulty becoming more realistic on account of the fact that the effect of the Anti-bacterial Serum was not dramatic and convincing, comparisons must be the basis of argument, and those which will be dealt with are the age and sex, reaction of membrane to Serum, the incidence of paresis, cardiac complications, other sequelae, disappearance of the organisms from the throat, and mortality rates.

Being cognisant of the fact that this series is small from which to draw dogmatic conclusions, but considering the time and effort to collect and treat a group of this severity, it is necessary to offer some opinion, even if it is only in the nature of a guide to future work of this kind, or to offer a base for future experiment.

ANALYSIS OF CASE RECORDS.

Before considering the analysis of the series of cases which have been collected during the clinical trial, in order to facilitate discussion, it was deemed advisable to subdivide them into several classifications.

- (A) Group 1. Comprises a group of 75 Gravis cases, 35 of which were treated with Gravis Anti-bacterial Serum, plus Diphtheria antitoxin, and 40 Control cases which received Diphtheria antitoxin alone.
- (B) Group 2, which consists of 11 cases of severe Diphtheria, due to the Intermediate organism, 6 of which were treated with Anti-bacterial Serum, and antitoxin, and 5 Controls, which were treated with Diphtheria antitoxin alone.

(C) Group 3, which is a series of 6 complicated Gravis cases, 3 of which had Anti-bacterial Serum, plus antitoxin, and 3 Control cases which had antitoxin alone, 1 case in each series dying within 24 hours.

In the Serum treated group, one was complicated by having a cleft palate and subject to epileptic fits, another had a T.B. spine and sinuses. In view of those complications, it was decided to exclude these cases from Group 1.

(D) Group 4. 3 cases due to infection with Atypical Gravis organism.

TABLE 1.

AGE	Anti-bacterial Serum Treated Cases		Death		Antitoxin Control Group		Death	
	M	F	M	F	M	F	M	F
0-3	0	2	1	0	2	2	0	2
4-5	6	7	2	2	6	8	4	2
6-7	3	3	1	1	6	5	1	2
8-9	3	2	0	0	1	4	0	0
10-11	2	3	0	1	3	0	0	0
12-14	1	3	0	2	1	2	0	0
TOTAL	15	20	10		19	21	11	

Table 1 shows the age and sex distribution of the cases dealt with in Group 1, including a table of deaths as they occurred in each of the sub-divisions. The deaths were approximately alike in both series, only a greater number occurred in the younger ages in the Control group than in the Anti-bacterial Serum treated group.

Incidence of infection and death rate bear no relation to sex.

TABLE 2.

	Anti-bacterial Serum.	Antitoxin Controls.
Mortality Rate. (All ages).	28.6%	27.5%
Recovery Rate. (All ages).	71.4%	72.5%

This table indicates the mortality and recovery rates of the cases dealt with in Group 1.

TABLE 3.

Average Day of Disease on Admission.	SERUM	CONTROL
All Cases	3.1	3.3
Cases which recovered.	2.8	3.1
Cases which died.	3.9	3.8

The findings in this Table indicate the average day of disease of the cases in Group 1, on admission to hospital. It is recorded that the cases treated with Anti-bacterial Serum were admitted, on the average, rather earlier than the cases in the Control group.

The cases which recovered in the Anti-bacterial Serum treated group were admitted, on the average, on a 2.8 day of disease, compared with cases in the Control group, which were admitted later, on the 3.1 day of disease.

Regarding the cases which died, those in the Anti-bacterial Serum treated group were admitted on the 3.9 day of disease, as compared with the cases in the Control group which were admitted on the 3.8 day of disease.

The importance of the time factor in the treatment of severe Diphtheria is illustrated from the above figures.

TABLE 4.

	SERUM	CONTROL
Average number of days for membrane to clear from throat.	5.2	5.5

Table 4 indicates the average number of days which are required for membrane to clear from the throat. The speed with which the throats cleared in the group treated with Anti-bacterial Serum did not differ materially from that in the case of the Control group - 5.2 days in the former against 5.5 days in the latter.

TABLE 5.

SERIES.	Serum Group	Death	Control Group	Death
Cardiac Complications.	6	5	10	3
Albuminuria.	8	0	10	3
Serum Rash.	11	1	8	0
Petechial Rash.	5	5	5	4

There is great similarity in the occurrence of the complications in the Anti-bacterial Serum treated and Control cases of Group 1, although it is interesting to record that the incidence of Serum rashes showed an increase in the Anti-bacterial Serum group over the Controls - 31.4% in the Anti-bacterial Serum treated, against 20% in the Control series.

TABLE 6.

ROUTE	Cases that Recovered.	Cases that Died.	Complete Series
IM.	18	5	23
IM.IV.	3	1	4
IP.	1	1	2
IM.IP.	1	3	4
IV.IP.	1	0	1
IV.IM.IP.	1	0	1
TOTAL	25	10	35

Table 6 summarises the route by which the Anti-bacterial Serum was administered, with reference to those who recovered and those who died.

TABLE 7.

Average amount of Serum given I.V.	5 ccs.
Average amount of Serum given I.M.	18.2 ccs.
Average amount of Serum given I.P.	12.5 ccs.

This Table summarises the amount of Serum given on an average, by the various routes.

TABLE 8.

Average day of disease on which death took place in Control Group.	14th day.
Average day of disease on which death took place in Serum Group.	14.5 days.

Considering the period of disease at which death occurred, the effect of Anti-bacterial Serum did not seem to prolong life to any degree. The average day of disease on which death occurred is indicated in the above table, where it will be observed that the difference between the average period at which death took place is .5 of a day in favour of the Anti-bacterial Serum treated cases.

TABLE 9.

Average amount of Serum given to cases which died.	22 ccs
Average amount of Serum given to cases which recovered.	22 ccs

The amount of Anti-bacterial Serum which was administered to the cases which were fatal and the cases which recovered, were similar.

TABLE 10.

Average amount of Antitoxin given to Anti-bacterial Serum Group.	97,000 units
Average amount of Antitoxin given to the Controls.	95,000 units.

The average amount of antitoxin given to the Anti-bacterial Serum treated cases, and that given to the Control group was approximately alike.

Summarising the results of the cases in Group 1, 26 Serum treated cases survived the acute stage and of these 13 developed paresis (which is 50%), 1 died. On the Control group, 30 cases survived the acute stage and of these 14 (which is 46.6%) developed paresis, 1 died.

Of the cases which recovered in the Group 1, which escaped any complications attributable to Diphtheria, 8 occurred in the Anti-bacterial Serum group and 11 in the Control group, which is 23% and 27% respectively. Here the Control series shows a relative, though insignificant, advantage over the Anti-bacterial Serum treated group.

The disappearance of the organism from the throat did not seem to be materially affected by Gravis Anti-bacterial Serum. Daily routine swabbing was carried out for a period, but was abandoned. It is recorded, in some of the case notes, that the cultures remained persistently positive and virulent, in several of the Gravis Anti-bacterial Serum treated cases, for a considerable period.

INTERMEDIATE SERIES.TABLE 1.

AGE	Anti-bacterial Serum Treated Cases		Death		Antitoxin Treated Cases.		Death	
	M	F	M	F	M	F	M	F
0-3					1		1	
6-7	3		1		2		2	
8-9	1	1	1	1				
10-11					2		1	
12-14	1		1					
TOTAL	5	1	3	1	5		4	

Table 1 shows the age and sex distribution of the cases dealt with in Group 2, including a table of deaths, as they occurred in each of the subdivisions. There is no material difference in the deaths in each group, but they practically all occur in the 5-10 age period. The two series are not directly comparable, as there were no female cases in the Control group.

TABLE 2.

	Anti-bacterial Serum.	Antitoxin Controls.
Mortality Rate (All ages)	66.6%	80%
Recovery Rate (All ages)	33 $\frac{1}{3}$ %	20%

This Table indicates the mortality and recovery rates of the cases dealt with in Group 2. The death rates are very high indeed in this group, which give a very clear indication of the severity of infection, even though bacteriologically the organisms were Intermediate. The differences of death rates in a series so small as this is insignificant, even though the result of Anti-bacterial Serum treated group appear more favourable than the Control group.

TABLE 3.

Average day of disease on admission	Serum	Control
All cases.	3.8	3.2
Cases which recovered.	3	5
Cases which died.	4.2	2.75

The Anti-bacterial Serum treated cases were admitted, on the average, at a later stage of disease than the Control cases. It is rather surprising to record this fact, considering that the results of treatment in the Anti-bacterial Serum treated cases appear rather better than the Control group.

The cases recovering in both series are surprising, considering that treatment was instituted at such a late period. Regarding the death in the group, the Control series were treated much earlier than the Anti-bacterial Serum treated group, and in spite of the fact that the Controls were treated comparatively early, they died.

TABLE 4.

	Serum	Control
Average number of days for membrane to clear from throat.	6.5	4.6

The time for local lesion to clear up was considerably longer in the Anti-bacterial Serum treated group than the Control series.

TABLE 5.

SERIES.	Serum Group	Death	Control Group	Death
Cardiac Complications.			2	1
Albuminuria.			1	1
Serum Rash.			1	1
Petechial Rash.	4	4		

All cases of petechial rashes died. There were no serum rashes or reactions occurring in the Anti-bacterial Serum treated group, compared with the Control. The fact that the series is so small and the mortality rate so high in each series that many cases died before sufficient time elapsed for the Serum reaction to develop.

TABLE 6.

ROUTE	Cases that Recovered.	Cases that Died.	Complete Series
IM.	2	1	3
IM.IV.		2	2
IV.IM.IP.		1	1

The above Table indicates the route by which the Anti-bacterial Serum was administered, with reference to recoveries and deaths.

TABLE 7.

Average day of disease on which death took place in Control group.	6.25
Average day of disease on which death took place in Serum group.	12.25

In this group, the period elapsing before the fatal issue seemed to be prolonged in the Anti-bacterial Serum treated group, to nearly twice the period in the case of the Control.

TABLE 8.

Average amount of Serum given to cases which died.	21.25 ccs
Average amount of Serum given to cases which recovered.	22.5 ccs
Average amount of A.D.S. given to cases which died.	92,500 units.
Average amount of A.D.S. given to cases which recovered.	76,666 units.

The amount of Serum, Anti-bacterial Serum and Antitoxin was very similar in both groups.

COMPLICATED GRAVIS SERIES.TABLE 1

Age	Anti-bacterial Serum Treated Cases		Death		Antitoxin Treated Cases		Death	
	M	F	M	F	M	F	M	F
4-5	1	1	1	1		3		1
8-9		1		1				
TOTAL	1	2	1	2		3		1

TABLE 2.

	Anti-bacterial Serum	Antitoxin Controls.
Mortality Rate (All ages).	100%	33 $\frac{1}{3}$ %
Recovery Rate (All ages).	0%	66.6%

TABLE 3.

Average Day of Disease on admission.	Serum	Control
All Cases	2	3.3
Cases which recovered.	0	3
Cases which died.	2	4

TABLE 4.

Average number of days for membrane to clear from throat.	Serum	Control
	5	5 $\frac{1}{2}$

COMPLICATED GRAVIS SERIES.TABLE 5.

	Serum Group	Death	Control Group	Death
Albuminuria.			1	
Petechial Rash.			1	1

TABLE 6.

ROUTE	Cases that Recovered.	Cases that Died.	Complete Series.
IM		3	3

TABLE 7.

Average Day of Disease on which death took place in Control Group.	1st Day
Average Day of Disease on which death took place in Serum Group.	9.6 Day.

TABLE 8.

Average amount of Serum given to cases which died.	12.3 ccs
Average amount of Serum given to cases which recovered.	None

TABLE 9.

Average amount of A.D.S. given to cases which died.	100,000 units.
Average amount of A.D.S. given to cases which recovered.	85,000 units.

Average amount of A.D.S. given to cases which

100,000
units.

ATYPICAL GRAVIS.TABLE 1.

M		F	Deaths	
Age	Anti-bacterial Serum Treated Cases.		M	F
0-3		1		1
4-5		2		2
TOTALS		3		3

TABLE 2.

	Serum
Mortality Rate	100%
Recovery Rate	-

TABLE 3.

Average Day of Disease on Admission.	Serum
Cases which Died.	4

TABLE 4.

Average number of days for membrane to clear from throat.	5
---	---

TABLE 5.

Route	Cases that Died.
IM	1
IM.IV	1
IM.IP	1

TABLE 6.

Average Day of Disease on which death took place.	9th
Average amount of Serum given to cases which died.	25 ccs.
Average amount of A.D.S. given to cases which died.	106,000 units.

SUMMARY & CONCLUSIONS.

1. Severe Diphtheria occurs, and exacts its toll of human life in Manchester.
2. The idea of a new Therapeutic Agent was conceived in the nature of a Gravis Diphtheria Anti-bacterial Serum.
3. The outline of preparation and standardisation of Gravis Diphtheria Anti-bacterial Serum is described.
4. The attempt at experimental evaluation of the Therapeutic Serum was carried out in animals.
5. The results of the treatment of 35 severe cases of Gravis Diphtheria, with Gravis Anti-bacterial Serum, are compared with the results in 40 cases of similar type and severity, which were treated without Anti-bacterial Serum.
6. The results of the treatment of 6 cases of severe Diphtheria, due to the Intermediate type of Diphtheria organism, with Gravis Anti-bacterial Serum, are compared with 5 similar cases which were treated without Anti-bacterial Serum.
7. The results of treatment of 3 complicated cases of Gravis Diphtheria with Anti-bacterial Serum, are compared with 3 similar cases which were treated without Anti-bacterial Serum.
8. The results of treatment of 3 severe cases of Diphtheria, due to Atypical Gravis organisms, which were treated with Anti-bacterial Serum, are described.
9. The course of the disease was not modified in any way by the administration of Anti-bacterial Serum.

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I wish to acknowledge my indebtedness to Dr. D. Sage Sutherland, for the facilities provided at Monsall Hospital during the course of this investigation; to Dr. D. T. Robinson for his typing of the Diphtheria organism, and the results of his animal experiment with Anti-bacterial Serum, and to Dr. Petrie for the details of preparation and standardisation of the
Anti-bacterial Serum.

-----oOo-----

History of Present Illness
Vomiting
Diarrhea
Coughing
Date of Death

APPENDIX 1.

Pages 46 - 116.

GRAVIS ANTI-BACTERIAL SERUM TREATED CASES.

Pages 117 - 196.

DIPHTHERIA ANTI TOXIN TREATED CASES.

Condition on Admission
Throat inflamed
Extensive
covering both
palates
in mouth
No diphtheria
membrane
throat
above of throat
rapid
throat
throat



Disease. Severe faucial Diphtheria.

Date of Admission. 26.2.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis & Rhinorrhoea. Serum reaction ad.
Albuminuria 8. Vaginal Discharge 21.
Palatal Paresis 40. Left Otorrhoea 79.

Period for throat to clean. 6 Days.

Date of Discharge. 8.6.36

Date of Death.

Bacteriological Examination.

26.2.36

Cultures +
Dick Test -

2.6.36)

3.6.36) -

4.6.36)

History of Present Illness.

Vomiting)
Sleepiness) 25.2.36
Shivering)

Sore throat.)
Adenitis.) 26.2.36
Difficulty in breathing)

Treatment.

Syringe fauces with
chlorine water

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Adrenalin m.5 P.R.N.

A.B.S. 2 ccs I.V.

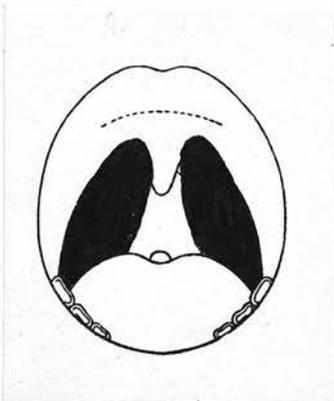
A.B.S. 20 ccs I.P. 9.30 p.m.

Previous Medical History.

Whooping cough, 1935.

Condition on Admission.

Tongue furred. Throat injected.
Oedematous tonsils. Extensive
membrane covering both, edges
active.
Glands very marked adenitis and
periadenitis in neck.
No Koplik's spots. No discharges.
No rash.
Lungs - scattered rhonchi both
sides of chest.
Heart - rapid and regular.
Sounds closed.
General condition - toxic.



Date

- 26.2.36 Collapsed about 30 minutes after serum injection.
Severe rigor.
Treatment. Radiant Heat. Adrenalin m.5 P.R.N.
- 27.2.36 Membrane spread over both tonsils soft palate
oedema marked. Periatenitis bilateral.
Heart - rapid and regular.
General condition - toxic.
- 29.2.36 Throat - extensive thick separating membrane on
tonsils and soft palate. Glands subsiding. Still
enlarged. Colour fair. Pulse volume poor.
Skin clear.
General condition - unchanged.
- 1.3.36 Membrane separating.
General condition - improved.
- 2.3.36 Throat clean. Heart regular and rapid.
Colour and pulse good.
General condition - rather better.
- 11.3.36 Improving.
- 16.3.36 Palate active. Colour and pulse good.
General condition - fair.
- 1.4.36 Palate active. Heart regular. Tone fairly good.
- 6.4.36 Palate active. Heart regular. Tone fairly good.
- 7.4.36 Palate sluggish, slight dysphagia. Colour and
pulse good.
Treatment. Semi-solid diet.
- 8.4.36 Having difficulty with semi-solids. Palate inactive
Treatment. Nasal feeds.
Atropine gr. $\frac{1}{100}$ P.R.N.
- 10.4.36 Mucous collecting in throat. Colour and pulse good.
- 13.4.36 Palate moving slightly.
Heart regular. Tone fair.
- 17.4.36 Palate moving. Colour and pulse good.
Treatment. Omit nasal feeds.
- 20.4.36 Slight cardiac irregularity.
- 22.4.36 Heart regular.
Treatment. 1 Pillow.
- 24.4.36 Improvement maintained.
Treatment. Sit up.
Patient's convalescence continued uninterrupted,
though prolonged, on account of persistent +
culture which was virulent.
- 8.6.36 Discharged.



Disease. Very severe faucial Diphtheria.

Date of Admission. 19.11.35

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. { Adenitis, Rhinorrhoea ad.
Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 22.11.35

Bacteriological Examination.

19.11.35

Cultures on ad. +
Dick Test -

History of Present Illness.

6 weeks ago - Whooping Cough.
Vomiting.)
Headaches.)
Shivering.) 16.11.35
Sore throat.)
Nasal Discharge.)

Patient was
Desensitised

Treatment.

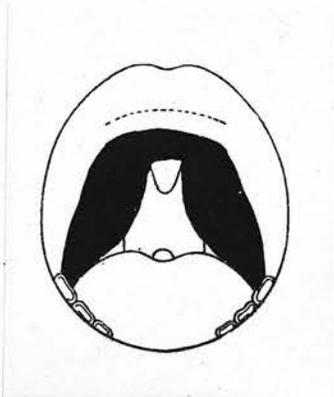
A.D.S. 60,000 units I.M.
Poultices to neck.
A.D.S. 40,000 units I.V.
Mist. A.S.A. m.4 4 hourly
Camphor & Oil $\frac{1}{2}$ cc. P.R.N.
Brandy $\frac{3}{4}$ P.R.N.
15 ccs. A.B.S. No.1 I.M.)
10 ccs. A.B.S. No.1 I.P.)
8.30 p.m.

Previous Medical History.

Tonsillitis.)
Pneumonia.) Infancy.
Asthma.)

Condition on Admission.

Patient looks ill. Marked pallor of skin and mucous membranes.
Throat - thick membrane covering entire surface of both tonsils, $\frac{1}{2}$ palate and Nasopharynx involved. Loose at edges.
Glands - enlarged and tender behind both angles of mandible.
Nostrils - excoriated, thick purulent discharge from right.
Pulse - poor volume, rapid and regular.
Heart - not enlarged, regular. Sounds of fair quality.
Muscles - limp.
General condition - poor.



Disease. Severe faucial Diphtheria.

Date of Admission. 23.6.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad Serum Rash 9 Palatal Paralysis 38

Period for throat to clean. 5 Days.

Date of Discharge. 31.8.36

Date of Death.

Bacteriological Examination.

23.6.36

Cultures +

26.8.36)

27.8.36) -

28.8.36)

History of Present Illness.

Gradual onset.

Sore throat 21.6.36

Adenitis 22.6.36

Convalescent from Pneumonia.

Treatment.

Syrings fauces with chlorine water.

A.D.S. 32,000 units pre.ad.

A.D.S. 20,000 units I.M.

A.D.S. 40,000 units I.V.

A.B.S. 10 ccs.

Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Measles and whooping cough.

Condition on Admission.

Tongue furred. Throat - membrane over both tonsils and uvula.

Oedema of tissues marked.

Bilateral adenitis and periadenitis of cervical glands.

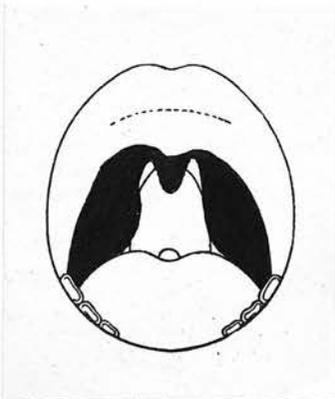
Heart - regular, rapid. Sounds soft.

Lungs - breath sounds normal.

Nasal discharge profuse.

No Koplik's spots.

General condition - toxic.



Date

Continued.

24.6.36 Membrane thickened and separating. Throat less oedematous.
Heart sounds rapid and regular.
General condition - toxic.

28.6.36 Throat clean, ulcerated. Glands subsided.
Colour and pulse satisfactory.

29.6.36 Generalised serum rash.

1.7.36 Colour and pulse satisfactory.
Heart - regular

2.7.36 Cervical adenitis. Temperature elevated.
Treatment. Antiphlogistine to neck.

6.7.36 Throat clean. Glands subsided.
Heart sounds closed. Tone fair.
Colour and pulse poor. Vomited in the evening.
No further vomiting. Colour and pulse improved.

7.7.36 Improved.

13.7.36

20.7.36 Glands very enlarged right side of neck.
Heart irregular. Palate active.

22.7.36 Treatment. Abscess drained.

27.7.36 Throat clean. Palate active. Circulation satisfactory.

28.7.36 Nasal phonation in speech. Palate sluggish.
Heart - regular. Colour and pulse good.

10.8.36 Palate still sluggish.
Heart regular.

15.8.36 Palate moving. Phonation quite clear.
Improving. 1 Pillow.

21.8.36 Improvement maintained.
Treatment - Up.

31.8.36 Convalescence continued uninterrupted.
Discharged fit.



Name Mary Peattie

Sex F. Age 4

Lab. No. 558

Disease. Severe faucial Diphtheria.

Date of Admission. 29.5.36.

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Petechiae
Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 2.6.36

Bacteriological Examination.

29.5.36

Cultures +
Dick Test -

History of Present Illness.

Sore throat.)
Glandular swelling.) 27.5.36
Vomiting. 28.5.36

Treatment.

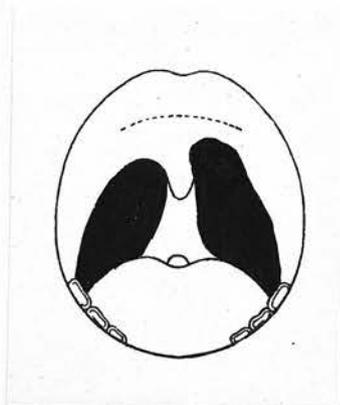
Syringe fauces with chlorine water.
Poultices to neck 4 hourly.
A.D.S.40,000 units I.M.
Mist A.S.A.m.8 P.R.N.
Salines.
A.D.S.60,000 units I.V.
A.B.S. 25 ccs No.1
Adrenalin m.5
A.B.S.10 cc No.1 I.M.)
30.5.36)

Previous Medical History.

Mumps 1932.
Chicken Pox 1933
Measles 1936

Condition on Admission.

Tongue furred. Throat injected.
Oedematous left tonsil. Huge membranes present on both sides of fauces covering anterior pillar on left side, extending on to palate.
Glands marked adenitis and periadenitis left side of neck.
Heart - rapid and regular.
Lungs - breath sounds normal.
Skin clear. No Koplik's spots.
No discharges.
General condition - fair.



Name Margaret ...

Date

Continued.

30.5.36 Throat membrane thickening over left tonsil, cleaning off right. Glands subsiding. Skin clear.
 Heart very rapid and regular.
 General condition - toxic.

1.6.36 Throat membrane separating with marked haemorrhage. Glands subsiding.
 Heart tone very poor. Pulse feeble.
 Colour - marked pallor.
 Bruising of skin, petechial haemorrhages.
 General condition - very toxic.
 Oedema and bruising of left mastoid region.
 No tenderness. No elevation of temperature.

Treatment. Haemoplastin 2 ccs.
 Camphor in oil $\frac{1}{2}$ cc 4 hourly.
 H_2O_2 swab to throat.

p.m.
 2.6.36 Colour cyanosed. Pulse imperceptible.
 7.30 p.m. Patient's condition deteriorated and she died.



Name Margaret Machin

Sex F Age 5

Lab. No.
495

Disease. Severe faucial Diphtheria.

Date of Admission. 4.5.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Albuminuria 11
Strabismus 24 Nasal phonation 42

Period for throat to clean. 5 Days.

Date of Discharge. 8.7.36

Date of Death.

Bacteriological Examination.

4.5.36

Cultures +
Dick Test -

4.7.36)

5.7.36) -

6.7.36)

Treatment.Syrings fauces with
chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

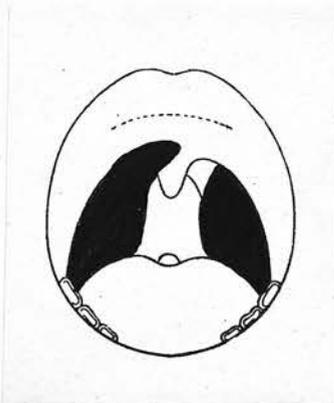
A.B.S. 20 ccs I.M. No.1)
5.5.36)

Mist A.S.A. m.5 P.R.N.

History of Present Illness.Sore throat.)
Headache.) 3.5.36
Shivering.)Vomiting.)
Nasal discharge.) 4.5.36**Previous Medical History.**

Measles 1934.

Mumps. February, 1936

Condition on Admission.Tongue coated. Tonsils enlarged
and oedematous. Membrane covering
both. Active over anterior pillar
of fauces, Nasopharynx and nose
involved. Adenitis and periadenitis
both sides of neck. Skin clear.
No Koplik's spots.
Heart - regular. Sounds of fair
quality.
Lungs - breath sounds coarse.
Muscles - Limp.
General condition - Very poor.

Date

Continued.

- 5.5.36 Throat extensive membrane over both tonsils and palate. Glands ++.
Heart - rapid. Sounds closed. Tone poor.
Urine clear.
General condition - toxic.
Treatment. Salines.
- 7.5.36 Throat cleaning. Glands still enlarged.
Rhinorrhoea +. Albumen + in urine.
Heart rapid.
General condition -, still toxic.
Slight epistaxis this morning.
- 11.5.36 Throat clean. Tonsils enlarged and ulcerated.
Heart sounds closed and regular.
Generally improving.
- 18.5.36 Palate active.
Heart tone improved.
General condition - better.
- 25.5.36 Improving.
- 30.5.36 Generalised abdominal pain, distension present.
Faecal masses palpable in colon.. No rigidity or localised tenderness.
Treatment. Olive oil enema.
- 8.6.36 Palate active.
Circulation satisfactory.
- 15.6.36 Palate sluggish. Nasal phonation.
Colour and pulse satisfactory.
- 23.6.36 Palate active. Pulse good.
Heart regular.
General condition - improved.
Treatment. I Pillow.
- 28.6.36 Patient's convalescence continued uninterrupted.
Treatment. Up.
- 8.7.36 Discharged.



Name Jean Manning

Sex F Age 5

Lab. No.
461

Disease. Severe faucial Diphtheria.

Date of Admission. 22.4.36

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Strabismus.

Period for throat to clean. 4 Days.

Date of Discharge. 16.6.36

Date of Death.

Bacteriological Examination.

22.4.36

Cultures +
Dick Test -

11.6.36)

12.6.36) -

13.6.36)

Treatment.Syringe fauces. with
chlorine water.

A.D.S.40,000 units I.M.

A.D.S.40,000 units I.V.

A.B.S.10 ccs I.M. (22.4.36)

A.B.S.10 ccs I.M. (23.4.36)

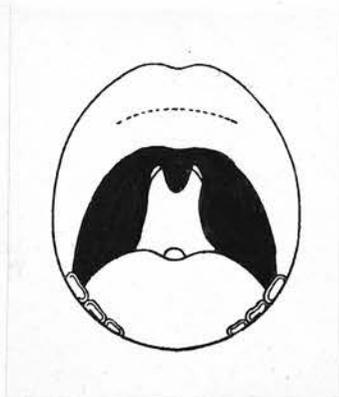
Mist A.S.A. m.5 P.R.N.

History of Present Illness.Sore throat)
Adenitis) 18.4.36**Previous Medical History.**

Measles in infancy.

Condition on Admission.

Tongue furred. Throat injected.
 Oedematous. Tonsils enlarged.
 Extensive membrane over both
 tonsils, uvula and nasopharynx.
 Glands enlarged both sides of neck.
 No discharges. No Koplik's spots
 and no rash.
 Heart sounds - pure. Tone fair.
 Lungs - breath sounds normal.
 General condition - fair.



Date

Continued.

- 23.4.36 Thickened membrane over both tonsils and uvula.
Periadenitis left side of neck.
Heart - rapid and regular. Tone poor. Muscles soft
General condition - poor.
- 27.4.36 Throat clean. Colour and pulse fairly good.
Muscles limp.
- 3.5.36 Left internal strabismus.
- 5.5.36 Palate active. Heart sounds closed. Tone fair.
Colour and pulse seems better.
- 11.5.36 Palate active. Heart tone fair.
- 18.5.36 General improvement.
- 23.5.36 Tonsils injected. Specked with exudate -
Tonsillitis.
- 25.5.36 Throat clean. Colour and pulse good.
Improving.
- 30.5.36 Circulation satisfactory.
Treatment. 1 Pillow.
- 5.6.36 Improving.
- 6.6.36 Palate active.
Heart regular. Tone improved. No paresis.
General condition - good.
- 16.6.36 Convalescence continued uninterrupted and patient
discharged.

18.6.36

20.6.36

22.6.36

Treatment

Syringe throat with

oblation water.

A.S.S. 40, 100 mgm 1-2.

A.S.S. 20, 100 mgm 1-2.

A.S.S. 15 and 100.

Saline

Dist. A.S.S. 40 (hourly)

10 and 100, 100, 100

10 and 100, 100, 100

Previous Medical History

Swollen in infancy.

On 10 - 100 mgm of red

throat 1936.

Condition on Admission

Throat - tonsils swollen

and uvula with white

exudate, which covered

the soft palate. There

was usual discharge.

There was both sides of neck.

Arteriosclerosis

Heart sounds regular. Tone fair.

Lungs - breath sounds normal.

Skin clean. Temp. normal.

No English's noted.

General condition - fair.



Name May Ridgeway.

Sex F Age 4

Lab. No. 459

Disease. Severe faucial Diphtheria.

Date of Admission. 25.4.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea & Adenitis ad Albuminuria 5
Otorrhoea 13 Serum Rash 14 Strabismus 46
Facial Paresis & Pharyngeal Paresis 46

Period for throat to clean. 5 Days.

Date of Discharge. 2.7.36

Date of Death.

Bacteriological Examination.

25.4.36

Cultures +
Dick Test +

28.6.36)
29.6.36) -
30.6.36)

Treatment.

Syringe fauces with chlorine water.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
A.B.S.15 ccs I.M.
Salines
Mist.A.S.Am.4(4 hourly)
A.B.S.10 ccs I.M.(26.4.36)
A.B.S.10 ccs I.M.(27.4.36)

History of Present Illness.

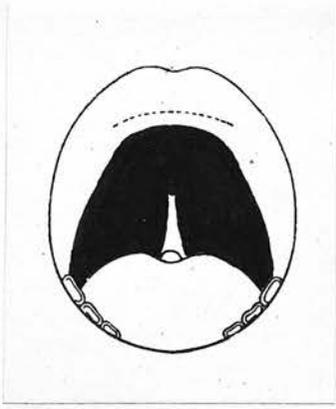
Vomiting. 22.4.36
Shivering
Glandular swelling.) 24.4.36
Confined to bed since 22.4.36

Previous Medical History.

Measles in infancy.
Swellings of glands of neck -
December, 1935.

Condition on Admission.

Throat. Tonsils meeting in mid-line, covered with thin filmy membrane, which extends on to uvula and $\frac{5}{4}$ soft palate. Profuse purulent nasal discharge. Glands enlarged both sides of neck, periadenitis +
Heart sounds regular. Tone fair.
Lungs - breath sounds normal.
Skin clear. Tongue furred.
No Koplik's spots.
General condition - toxic.



Date

Continued.

- 26.4.36 Membrane well thickened, now extended on to hard palate. Oedema of fauces present. Glands bilateral bullneck. Colour and pulse fair. General condition - very toxic.
- 27.4.36 No separation of membrane. Glands still enlarged. No petechiae on skin. Heart irregular. Tone poor. Urine - albumen present.
- 4.5.36 Throat clean. Heart improved. Colour and pulse better. Omit Mist. A.S.A.
- 6.5.36 Slight aural discharge. General serum rash. General condition improved.
- 11.5.36 Heart irregular. Tone fair. Colour and pulse poor.
- 16.5.36 Heart sounds - soft, irregular. Colour and pulse poor. Treatment. Camphor in oil $\frac{1}{2}$ cc P.R.N.
- 18.5.36 Palate active. Circulation still unsatisfactory.
- 5.6.36 Palate inactive. Dysphagia. Treatment. Nasal feed.
- 7.6.36 Colour and pulse still unsatisfactory. Slight right internal strabismus and tendency to nystagnus. Slight paresis left side of face. Diaphragmatic movement normal. Pulse 80.
- 14.6.36 Palate moving well. Treatment. Omit nasal feeds.
- 17.6.36 Heart regular. Face tone improved. Palate active. General improvement. Treatment. 1 Pillow.
- 2.7.36 Convalescence uneventful and patient discharged fit and well.



Disease. Severe faucial Diphtheria.

Date of Admission. 20.4.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Serum Rash 14
Cardiac Irregularity 31

Period for throat to clean. 5 Days.

Date of Discharge. 15.6.36 Date of Death.

Bacteriological Examination.

20.4.36

Cultures +
Dick Test +

7.6.36)
8.6.36) N. & T. -
9.6.36)

History of Present Illness.

Gradual onset. Patient in bed since 19.4.36.

Vomiting.)
Sore Throat.)
Headache.) 19.4.36
Glandular Swelling.)

Treatment.

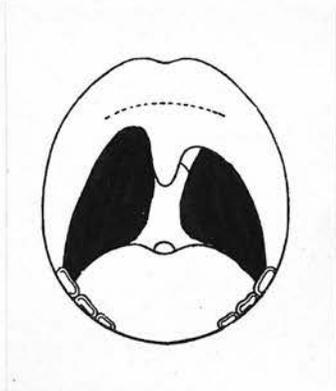
Syringe fauces with chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 50,000 units I.V.
A.B.S. 12 ccs I.P.
A.B.S. 13 ccs I.M.

Previous Medical History.

Mumps 1932.

Condition on Admission.

Tongue furred. Throat injected. Tonsils very large. Foetor ++ Extensive exudate covering both tonsils, extending from right tonsil on to palate. Glands enlarged both sides of neck. Skin clear. Cheeks flushed. Heart rapid, regular. Sounds closed. Lungs - breath sounds normal. No Koplik's spots. Nose moist. General condition - fairly good.



Disease. Severe faucial Diphtheria.

Date of Admission. 20.4.36 6 p.m.

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Bradycardia 10

Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 26.4.36

9.25 pm

Bacteriological Examination.

20.4.36

Cultures T +

N -

Dick Test -

Treatment.

Syringe fauces with chlorine water.

Poultices.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Adrenalin m iii P.R.N.

Mist A.S.A.m. 6 P.R.N.

Brandy 3i P.R.N.

A.B.S. Batch No. 1 10 cc I.M.

A.B.S. Batch No. 1 10 cc I.P.

History of Present Illness.

Gradual onset. Patient in bed since 16.4.36.

Sore Throat 16.4.36

Glandular swelling 17.4.36

Vomiting)

Bleeding from nose.) 19.4.36

Nasal Discharge.)

Sleepiness)

Hoarseness.)

Slight recession) 20.4.36

Previous Medical History.

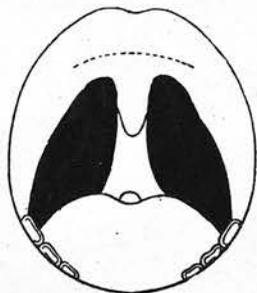
Measles) 1935 Oct-Nov.

Whooping Cough) Monsall.

? Meningitis when 4/12 years old.

Condition on Admission.

Tongue furred. Throat injected. Extensive thick exudate on enlarged tonsils and $\frac{1}{2}$ soft palate and adjacent portions of lateral pharyngeal walls. Marked foetor. Glands - adenitis and periadenitis right and left. Skin - few spots on face. Nose - excoriation of nostrils. Profuse purulent Rhinorrhoea. No Koplik's spots. Heart - regular. Sounds of moderately good quality. Lungs - breath sounds normal. General condition - fair. Good voice. No recession. No laryngeal stridor.



Date

Continued.

- 21.4.36 Throat - Membrane separating with bleeding.
Oedema less.
Glands - still markedly enlarged.
Skin clear.
Heart - tone poor.
General condition - toxic.
Treatment. Radiant heat
Salines
- 22.4.36 General condition - still toxic.
Colour and pulse poor.
Irritation on skin. No petechiae.
Membrane separating.
Treatment. Fluids.
- 23.4.36 Skin - very fine macules on trunk and limbs.
No catarrh. No Koplik's spots.
Adenitis marked in neck.
General condition - poor.
Treatment. Barrier.
- 24.4.36 Cleaning. Left tonsil still patchy exudate present.
Heart rate 60, irregular.
Colour cyanosed. Pulse feeble.
General condition - exceedingly poor.
Throat clean.
- 25.4.36 Heart rate still slow. Tone feeble.
No petechiae.
General condition - extremely poor.
- 26.4.36 Cyanosed and cold. Pulseless.
Heart rate - very slow.
General condition - extreme.
- 9.45 p.m. Patient died.

Name Joan Chadwick.

Sex F Age 5

Lab. No.

428

Disease. Severe faucial Diphtheria.

Date of Admission. 31.3.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Palatal Paresis 28

Period for throat to clean. 5 Days.

Date of Discharge. 20.6.36

Date of Death.

Bacteriological
Examination.

31.3.36

Cultures +
Dick Test -

History of Present Illness.

Vomiting.)
 Sore Throat.)
 Shivering.) 30.3.36
 Headache.)
 Rhinorrhoea.)

17.6.36)

18.6.36) -

19.6.36)

Treatment.

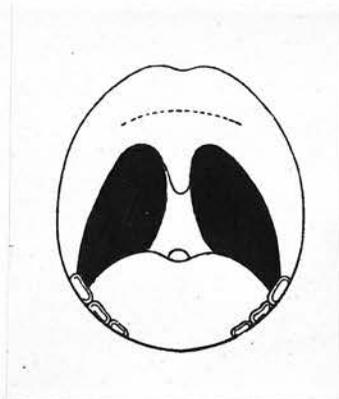
Syringe fauces with
 chlorine water.
 Poultices to neck.
 A.D.S. 40,000 units I.M.
 A.D.S. 60,000 units I.V.
 Mist A.S.A.m. 8 P.R.N.
 A.B.S. 10 ccs No. 1 I.M.

Previous Medical History.

Measles in infancy.

Condition on Admission.

Tongue furred. Throat oedematous.
 Tonsils huge, extensive membrane over
 both extending on to 1/3 soft palate.
 Ulcerated area on left buccal mucosa
 covered with membranous exudate.
 Glands enlarged both sides of neck.
 No Koplik's spots. Skin clear.
 Profuse seropurulent rhinorrhoea.
 Heart regular. Sounds closed.
 Tone poor.
 Lungs - breath sounds normal.
 General condition - poor, toxic,
 restless and excitable.



Date

Continued.

- 31.3.36 Throat membrane thickened, no separation. Oedema less. Glands still enlarged. Colour and pulse fair.
- 6.4.36 Throat clean. Fauces ulcerated.
Heart - rapid. Tone fair.
- 8.4.36 Vomited this morning. Colour and pulse poor.
- 13.4.36 Palate sluggish.
Heart regular. Tone poor.
Colour and pulse unsatisfactory.
- 20.4.36 Palate active.
Heart regular. Tone fair.
Colour and pulse poor.
- 27.4.36 Throat clean. Palate sluggish.
Heart sounds - closed and regular.
- 4.5.36 Palate inactive.
Sounds closed and regular. Managing semi-solid diet
- 12.5.36 Palate immobile. Collecting mucous in pharynx.
Colour and pulse - fairly good.
Heart - regular.
Treatment. Nasal feeds. Atropine gr. $\frac{1}{100}$ P.R.N.
- 18.5.36 Palate active. Colour and pulse good.
Heart - satisfactory.
General condition - improving.
- 23.5.36 Improvement maintained.
Treatment. 1 Pillow. Omit nasal feeds.
- 25.5.36 Palate active. Circulation satisfactory.
Muscle tone improving.
General condition - improved.
- 1.6.36 Treatment. Get up.
Convalescence continued uninterrupted.
- 20.6.36 Patient discharged.



Name William Snall.

(66)

Sex M Age 5

Lab. No. 345

Disease. Severe faucial Diphtheria.

Date of Admission. 26.2.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Palatal 38
Pharangeal 39 Facial 36

Period for throat to clean. 6 Days

Date of Discharge. 19.5.36 Date of Death.

Bacteriological Examination.

26.2.36

Cultures +
Dick Test +

12.5.36)
13.5.36) -
14.5.36)

Treatment.

Syringe fauces with chlorine water.
Poultices to neck.
A.D.S. 8,000 units pre.ad.
A.D.S.40,000 units I.M.
Salines
Mist A.S.A.m.6 4 hourly.
A.B.S.1 cc I.V. 5.30 p.m.
A.B.S.10 cc I.M.
A.B.S.10 cc I.P. 8.45 p.m.
A.D.S.60,000 units I.V.

History of Present Illness.

Patient has been ailing for 8 weeks.

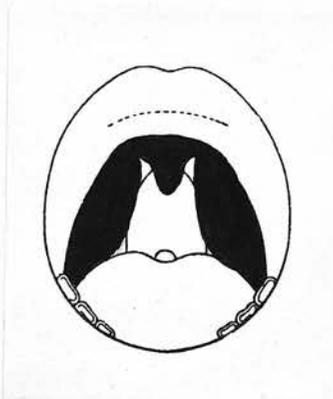
Vomiting 25.2.36
Sleepiness 26.2.36
Sore throat 23.2.36
Glandular swelling 23.2.36.

Previous Medical History.

Measles 10 weeks ago.
Influenza 2 years ago.

Condition on Admission.

Extensive membrane over both tonsils, palate and uvula, spreading on to $\frac{1}{2}$ soft palate, Nasopharynx and nose.
Glands enlarged, with marked periadenitis both sides of neck.
Profuse purulent nasal discharge.
Heart - regular. Sounds clear.
Lungs - breath sounds normal.
No Koplik's spots. Skin clear.
General condition - very poor.



Date

Continued.

27.2.36 Still extensive membrane on palate and tonsils.
Periadenitis present. Heart rapid.
General condition - very toxic.

29.2.36 Throat cleaning.

1.3.36 Throat still cleaner.

3.3.36 Throat clean.
Heart - rapid and regular. Colour and pulse poor.
Muscles limp.

10.3.36 Throat clean. Glands subsided.
Heart - rapid and regular. Left aural discharge.
Treatment. Barrier. Mist. A.S.A. m.5 P.R.N.
Swab ear dry 4 hourly.

17.3.36 Improving generally.

24.3.36 Throat. Palate sluggish. Collecting mucous in
pharynx. Heart - rapid and regular.
General condition - fair.

26.3.36 Colour and pulse poor. Vomiting.
Right facial weakness.
Treatment. Salines.

28.3.36 Colour and pulse still poor. No further vomiting.
Palate still sluggish.

29.3.36 Palate flaccid. Thick post nasal discharge in
pharynx. Heart sounds - fair. Pulse soft.
Muscle tone poor.
General condition - feeble.
Treatment. Nasal feeds. Atropine gr. $\frac{1}{100}$ P.R.N.

2.4.36 Palate and pharyngeal wall still immobile.
Colour and pulse poor.

7.4.36 Still collecting mucous in pharynx.
Slight movement of pharyngeal wall.
Heart - 1st sound very soft. Diaphragm moving well
General condition - fair.

14.4.36 Palate moving briskly.
Heart sounds regular. Tone improved.
Treatment. Omit nasal feeds.
Semi-solid diet.

21.4.36 Improvement maintained.
Treatment. 1 Pillow.

28.4.36 Progress good. Circulation satisfactory.
Muscles firmer.

29.4.36 Treatment. Get up.
Convalescence continued uninterrupted.

19.5.36 Patient discharged well.

Disease. Severe faucial Diphtheria.

Date of Admission. 18.2.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis ad Albuminuria 10 Palatal Paresis 19
Pharangeal Paralysis 37 Diaphragmatic Paresis 46

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 31.3.36

**Bacteriological
Examination.**

18.7.36

Cultures +
Dick Test +

History of Present Illness.

Sudden onset.

Vomiting.)

Sore Throat.)

Glandular Swelling.) 15.2.36

Sleepiness.)

Cough.) 17.2.36

Treatment.

Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S.40,000 units I.M.

A.D.S.50,000 units I.V.

Mist A.S.A. m.7 P.R.N.

A.B.S.20 cc No.1 I.P.)

19.2.36)

Previous Medical History.

Chicken Pox.)

Scarlet Fever.) 1934

No previous serum given.

Condition on Admission.

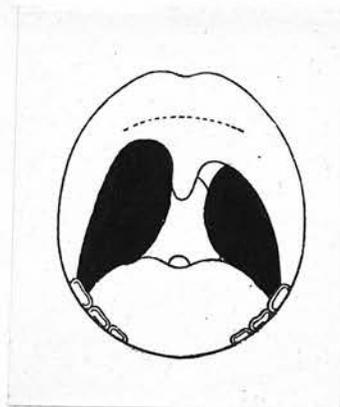
Well nourished patient. Tongue
furred. Throat injected. Thick
membranous exudate on both tonsils.
Membrane extending from right
tonsil to palate. Foetor marked.
Glands enlarged and tender in neck.
Skin, face - area of pustular
erythema on left cheek.
Heart - rapid and regular. Sounds
clear.

Lungs - breath sounds normal.

No discharges. No Koplik's spots.

Muscle tone poor.

General condition - fair.



Date

Continued.

- 19.2.36 Throat - extensive membrane still present, extending on to palate on right side. Membrane not yet thickened. Periaadenitis both sides of neck. Skin clear. Heart regular. Tone fair. General condition - toxic.
- 21.2.36 Membrane separating. Still toxic. Colour and pulse - fair.
- 24.2.36 Throat clean - ulcerated. Heart regular.
- 28.2.36 Patient vomiting to-day. Colour and pulse poor. Heart sounds poor. Bruising. Treatment. Salines.
- 29.2.36 Patient still vomiting. Heart irregular at times. Muscles limp. Condition - poor.
- 1.3.36 Vomiting ceased. Heart still irregular. Colour and pulse poor.
- 4.3.36 Slight nasal phonation.
- 5.3.36 Albuminuria.
- 11.3.36 Heart more regular. Pulse improved. Still albumen in urine.
- 16.3.36 Palate active. Skin clear. Albumen present in urine. Heart tone poor.
- 22.3.36 Definite palatal paresis, dysphagia. Colour and pulse - fair. Treatment. Nasal feed.
- 25.3.36 Palate still immobile.
- 28.3.36 General condition poor this p.m. Impaired percussion note over right lower lobe. Occasional moist sounds heard. ? early diaphragmatic paresis.
- 29.3.36 Colour slightly cyanotic. Poor diaphragmatic movement. Heart - occasional extra systoles present.
- 30.3.36 Throat - collecting mucous. No movement of pharyngeal wall. Heart - irregular at times. Tone poor. Chest - diminished air entry. Moist sounds present bilaterally. Treatment. Atropine $\frac{1}{100}$ P.R.N. Strychnine $\frac{5}{100}$ 4 hourly. Oxygen. Suction.
- 31.3.36 Colour more cyanosed. Feeble diaphragmatic movement. Pulse poor at times. Heart - regular, extremely rapid.
- 10 a.m. Treatment. Placed in Drinker Respirator.
- 10 p.m. Patient collapsed and died.



Name Herbert Francis Hepple.

Sex M

Age 5

Lab. No.

70

Disease. Faucial Diphtheria.

Date of Admission. 21.11.35

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis & Rhinorrhoea ad. Septic gland.
Serum reaction immediate.

Period for throat to clean. 4 Days.

Date of Discharge. 25.1.36

Date of Death.

Bacteriological Examination.

21.11.35

Cultures +
Dick Test -

8.1.36)

9.1.36) -

10.1.36)

History of Present Illness.Patient at school 2 days ago 19.11.35
Felt ill on 20.11.35 with sore
throat.

Headache.)

Drowsiness.)

Nasal Discharge.) 21.11.35

Glandular Swelling.)

Treatment.Syringe fauces with
chlorine water.

A.D.S. 40,000 units I.M.

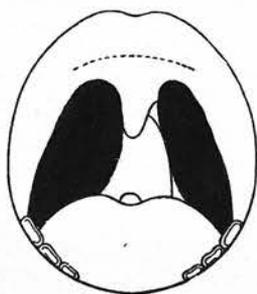
A.D.S. 60,000 units I.V.

Mist A.S.A. m.7 P.R.N.

A.B.S.No.1 20 ccs I.P.

Previous Medical History.

Measles in infancy.

Condition on Admission.Tongue - clean. Throat - marked
oedema of right peritonsillar
tissues. Tonsils enlarged. Membrane
on both tonsils, active edge on both
sides, extending on to soft palate.
Glands - bullneck right side,
enlarged glands left side of neck,
not so much as the right.
Colour good. Pulse volume fair.
Heart - not enlarged. Regular
sounds of good quality.
Lungs - breath sounds normal.
Discharges - nil. No Koplik's spots.
Muscle tone - fair.
Patient - stuporose.
General condition - toxic.

Date

Continued.

21.11.35 Very restless. Abdominal pain and vomiting after serum. Pulse 120.

23.11.35 Oedema still marked. Membrane separating. Glands subsiding. Skin clear. Heart sounds closed and regular. Tone fair. Nasal discharge still present. Urine clear.
 General condition - better to-day.
Treatment. Salines.

24.11.35 Right parotid gland enlarged. Temperature elevated.

27.11.35 Throat - exudate still present on right tonsil. Oedema still marked. Glands - Right parotid still enlarged and hard. Heart - regular.
Treatment. Antiphlogistine to glands.
 Barrier.

30.11.35 Swelling of parotid still marked. Glands in neck fluctuant. Colour and pulse fair.
Treatment. Neck incised.
 Antiphlogistine.

3.12.35 Throat clean, ulcerated. Glands subsiding. Heart - regular, tone fair.
 Improving.

10.12.35 General improvement maintained.

14.12.35 Throat clean. Palate active.

17.12.35 Heart sounds closed and regular. No paresis. General condition - good.
Treatment. Off Barrier.

2.1.36 Improvement maintained.
Treatment. 1 Pillow.

4.1.36 Improving.
Treatment. 2 Pillows.

5.1.36 Boil on buttock.
Treatment. Foments.

6.1.36 Improving.

7.1.36 Palate active. Circulation satisfactory. Muscles firm.
Treatment. Sit up.

11.1.36 Treatment. Up.

16.1.36 Neck almost healed.
Treatment. Silver Nitrate to scar.

25.1.36 Palate active, glands healed. Heart and circulation satisfactory. Cultures -
 Discharged to home.



Name Michael Carney

Sex M Age 4

Lab. No. 600

Disease. Severe faucial Diphtheria.

Date of Admission. 4.6.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis ad Serum Rash.

Period for throat to clean. 4 Days.

Date of Discharge. 28.7.36

Date of Death.

Bacteriological Examination.

4.6.36
Cultures +
Dick Test -

21.7.36)
22.7.36) -
23.7.36)

History of Present Illness.

Vomiting)
Sore Throat) 2.6.36

Shivering)
Adenitis) 3.6.36

Headache)
Sleepiness) 4.6.36

Treatment.

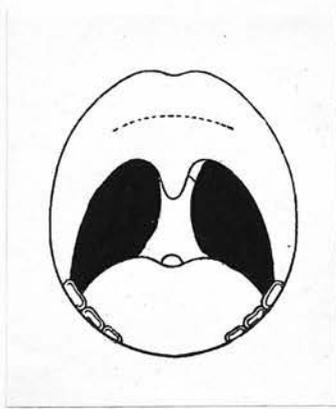
Syringe fauces with chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 10 ccs I.M.
A.B.S. 15 ccs I.M. (5.6.36)
Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Whooping Cough 1935
Measles 1936

Condition on Admission.

Throat injected. Tonsils markedly enlarged. Both are covered with membrane. Glands enlarged both sides of neck. Marked foetor. No Koplik's spots. Skin clear. Heart - marked tachycardia. Sounds closed and regular. General condition - fair.



Name Norman Metcalfe

Sex M Age 5

Lab. No.

655

Disease. Severe faucial Diphtheria.

Date of Admission. 24.6.36 11.15 a.m.

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea & Adenitis ad Petechiae 7
Gallop Rhythm 12

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 6.7.36

Bacteriological Examination.

24.6.36

Cultures +
Dict Test -

History of Present Illness.

Sudden onset.
Vomiting)
Sleepiness) 23.6.36
Sore throat, 21.6.36
Adenitis 22.6.36

Treatment.

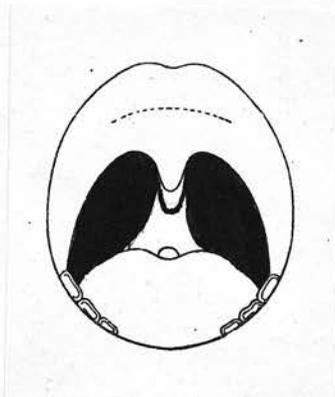
Syringe fauces with chlorine water.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
A.B.S. 25 ccs I.M.(25.6.36)

Previous Medical History.

Measles in infancy.
Chicken Pox 1935.

Condition on Admission.

Throat injected. Tonsils enlarged, both covered with thick greyish yellow membrane. Fauces oedematous, almost occluded by tonsils and uvula, Membrane present in left nostril. Skin clean. No Koplik's spots. Heart - tachycardia. Lungs - breath sounds normal. General condition - poor.



Date

- 25.6.36 Extensive membrane over both tonsils and uvula.
Glands ++. periadenitis. Colour and pulse fair.
General condition - toxic.
Treatment. Salines.
Mist. A.S.A.m. 5 P.R.N.
- 26.6.36 Throat membrane thickened, separating.
Glands still enlarged. Pulse poor. Urine clear.
General condition - toxic.
- 27.6.36 Throat cleaning. Glands still enlarged.
Petechiae on shoulders.
Heart sounds soft and very rapid.
Condition - poor.
Treatment. Camphor in oil $\frac{1}{2}$ cc 4 hourly.
- 29.6.36 Throat not entirely clean. Glands subsiding.
General condition - poor.
- 1.7.36 Throat clean. Colour and pulse very poor.
- 2.7.36 Colour very grey. Cyanotic.
Pulse nearly imperceptible.
Heart - gallop rhythm.
General condition - very poor.
- 3.7.36 Liver palpable. Pulse imperceptible.
Gallop rhythm still persists.
- 6.7.36 Patients condition deteriorated.
Died 5.55 a.m.

15.6.36
16.6.36
17.6.36
18.6.36
19.6.36
20.6.36
21.6.36
22.6.36
23.6.36
24.6.36

Treatment.
Syringe feeds with
chlorine water.
No. 3, 40, 100 units 1st.
A.S.S. 100 units 1st.
Folic acid 10 mg.
Ampicillin 2 P.R.N.
A.S.S. 100 units.

Previous Medical History

Details on Admission

Temp 101.4
Pulse 140
Respirations 40
Cyanosis - present
Mucous membranes - dry
Tongue - coated
Stools - 1 per day
Urine - 100 cc
General condition - poor



Disease. Severe faucial Diphtheria.

Date of Admission. 23.7.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. (Adenitis
Serum Rash 11

Period for throat to clean. 6 Days.

Date of Discharge. 19.9.36

Date of Death.

Bacteriological Examination.

23.7.36
Cultures -
Swab pre. ad. +
Dick Test -
Gravis Infection.
11.9.36 Swab -
12.9.36 " -
13.9.36 " +
15.9.36 " -
16.9.36 " -
17.9.36 " -

Treatment.

Syringe fauces with chlorine water.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Poultices to neck.
Blocks.
Adrenalin.m.5 P.R.N.
A.B.S. 25 ccs.

History of Present Illness.

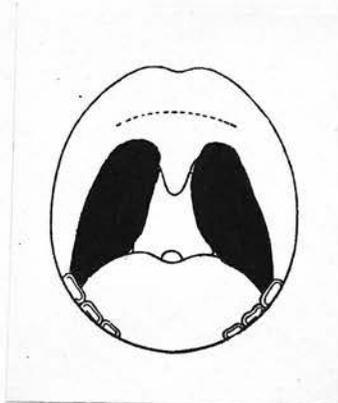
Sudden onset.
Vomiting 26.7.36
Sleepiness)
Headache.)
Rigors.) 27.7.36
Sore Throat.)
Bilateral Adenitis.)

Previous Medical History.

Whooping Cough.
Pneumonia 1934.

Condition on Admission.

Tongue furred.
Throat - both tonsils covered with thick greyish white membrane, extending on to palate.
Glands - peradenitis both sides of neck, more marked on left side.
Skin - No petechiae bruising.
Heart - Rapid, Sounds closed. Regular.
Lungs - Breath sounds normal.
No Koplik's spots. Nasal discharge.
General condition - toxic.



Date

Continued.

28.7.36 Throat membrane spread on to soft palate.
Glands still enlarged.
Heart - regular.
General condition - good.

30.7.36 Epistaxis this morning.
Membrane separating on throat.

3.8.36 Throat clean. Glands subsided.
Heart - regular. Sounds closed.
General condition - good.

6.8.36 Serum rash - generalised.

11.8.36 Glands subsided. Colour and pulse good.
Heart - regular.

18.8.36 Palate active.
Heart regular. Colour and pulse satisfactory.

25.8.36 Palate active.
Heart - regular. Colour and pulse good.
Muscle tone - improved.

1.9.36 Palate active.
Heart - regular. No paresis. Colour fair.
General condition - fairly good.
Treatment. 1 Pillow.

5.9.36 Improving.

8.9.36 Treatment. Sit up.

19.9.36 Improvement maintained.
Treatment. Up on couch.
Convalescence continued uninterrupted and patient discharged well.

Treatment

Previous Medical History

Surface laceration
whitish colour.
20.8.36, 2.9.36, etc.
20.8.36, 2.9.36, etc.
Facilitated at home.
20.8.36, 2.9.36, etc.

Condition on Admission.
Large nasal discharge, tonsils enlarged
and with thick dirty coating.
Nasal discharge, extending on to soft palate,
intense. Glands enlarged and tender
with sides of neck. Bilateral parotiditis.
Purulent nasal discharge. Membrane detached in places.
No Koplik's spots. Heart - regular, not enlarged. Lungs - breath sounds normal. Colour fair. Nutrition fairly good. Reflexes normal.



Name Pauline Brookes.

Sex F Age 6

Lab. No.

460

Disease. Severe faucial Diphtheria.

Date of Admission. 27.4.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Petechiae 6

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 30.4.36

Bacteriological Examination.

27.4.36

Cultures +
Dick Test -**History of Present Illness.**

Sudden onset. In bed since 25.4.36

Last perfectly well 23.4.36

Sore throat 24.4.36

Glandular swelling 26.4.36

Sleepiness)

Headache)

Blood stained nasal discharge) 27.4.36

Treatment.Syringe fauces with
chlorine water.

A.D.S. 8,000 pre. ad.

A.D.S. 30,000 units I.M.

A.D.S. 60,000 units I.V.

Poultices to neck.

Salines.

Brandy ʒii P.R.N.

Mist A.S.A.m. 8 4 hourly.

Radiant Heat.

A.B.S. 15 ccs. I.M.

Previous Medical History.

Measles in infancy.

Condition on Admission.

Tongue furred. Tonsils enlarged and covered with thick dirty membranous exudate, extending on to both sides of soft palate, nasopharynx and nose.

Foetor intense. Glands - enlarged and tender both sides of neck.

Bilateral periadenitis.

Purulent nasal discharge. No membrane detected in nares.

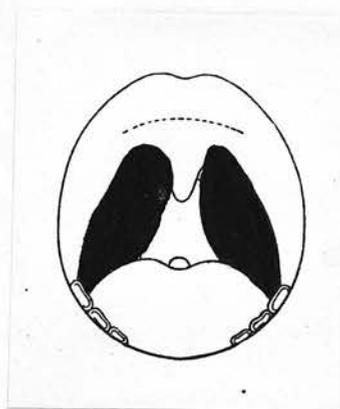
No Koplik's spots.

Heart - regular, not enlarged, rapid. 1st sound only moderate quality.

Lungs - breath sounds normal.

Colour fair. Nutrition fairly good.

Toxaemia marked.



Date

Continued.

- 28.4.36 Throat extensive membrane over tonsils and palate, thickening and beginning to separate with haemorrhage. Glands ++ on both sides of neck.
 Skin - No petechiae.
 Heart - rapid. Tone poor. Regular.
 Nasal discharge profuse.
 Urine clear.
 General condition - toxic.
- 29.4.36 Haemorrhage from nose and throat.
 Petechiae on chest.
 Treatment. Adrenalin Swabs if bleeding continues.
- 30.4.36 Membrane still separating. Haemorrhage persists.
 Glands still enlarged.
 Heart very rapid. Irregular. Tone poor.
 Pulse feeble. Colour cyanotic.
 General condition - extremely low.
- 30.4.36 Gradually deteriorated.
 2.20 p.m. Died.

Name Roy Dolman.

Sex M Age 6

Lab. No.
381

Disease. Severe faucial Diphtheria.

Date of Admission. 10.3.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea. Bullneck. Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 13.3.36

Bacteriological Examination.

10.3.36

Cultures +
Dick Test -**History of Present Illness.**

Gradual onset.

Patient in bed since 5.3.36

Sore throat, glandular swelling.
8.3.36**Treatment.**Syringe fauces with
chlorine water.

A.D.S.40,000 units I.M.

A.D.S.60,000 units I.V.

Poultices.

Mist. A.S.A. ¹⁰/_m 4 hourly.

A.B.S.10 ccs. I.M.

A.B.S.10 ccs. I.P.

Previous Medical History.Measles)
Whooping Cough) 1934.**Condition on Admission.**

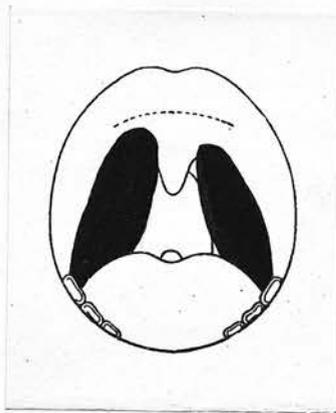
Tongue furred.

Throat injected. Extensive thick
membranous exudate on both tonsils
and large area of the palate,
especially on the right side and
nasopharynx.Glands - Bullneck right side,
adenitis left.Nose - profuse purulent discharge.
No membrane seen.Heart - regular. Sounds of fair
quality.

Lungs - Breath sounds normal.

Skin - clear. Pallor - very marked.

General condition - very toxic.



Name: Alan Sullivan
Date

Sex: M Lab. No. 381
Continued.

11.3.36 Throat oedematous with extensive membrane on palate
and both tonsils. Bullneck +
Heart - very rapid. Tone feeble.
Peripheral circulation sluggish.
General condition - extremely toxic.
Treatment. Salines.
Mist. A.S.A. m.5 4 hourly.

13.3.36 General condition deteriorated.
3.0 a.m. Died - cardiac muscle failure.

Reason for death by death - Septic

Date of admission 11.3.36 Date of Death

Examination History of Present Illness

25.3.36
26.3.36
28.3.36

Diagnosis
Mist. A.S.A. m.5 4 hourly

Treatment. Previous Medical History.

Springe faucet with
chlorine water.
Foultions.
A.D.S. 20,000 water I.V.
A.D.S. 20,000 water I.V.
Mist. A.S.A. m.5 4 hourly
A.S.S. 10 mg No.2 I.V.

Chemistry Sept 1935.
Nov 1935.

Condition on Admission.

Throat injected.
Tonsils greatly enlarged and
covered with purulent film.
Mucous membrane of soft palate
swollen. Tonsils present.
No evidence of acute tonsillitis.
No acute inflammation of
pharynx. Lungs clear. Pulse 120.
Temp 101.0. Spleen not palpable.
No acute abdominal symptoms.
Heart - slight tachycardia.
Respiratory system clear.
No acute changes in
General condition -



Name Alan Sullivan

Sex M Age 6

Lab. No.

295

Disease. Severe faucial Diphtheria.

Date of Admission. 9.2.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad

Period for throat to clean. 6 Days.

Date of Discharge. 4.4.36

Date of Death.

Bacteriological Examination.

9.2.36

Cultures +
Dick Test -

24.3.36)

25.3.36) -

26.3.36)

Treatment.Syringe fauces with
chlorine water.

Poultices.

A.D.S. 40,000 units I.M.

A.D.S. 40,000 units I.V.

Mist. A.S.A. m.7 P.R.N.

A.B.S. 10 cc No.1 I.M.

History of Present Illness.

Sudden onset.

In bed on 7.2.36

Sleepiness

Headache

Glandular swelling)

7.2.36

Excoriation of right nostril 8.2.36

Previous Medical History.

Whooping Cough 1932.

Measles 1933.

Condition on Admission.

Tongue furred. Throat injected.

Tonsils greatly enlarged and covered
with exudate of varying thickness.Uvula oedematous, $\frac{1}{2}$ soft palate
involved. Foetor present.Glands palpable in neck and slightly
tender. Skin clear. Colour good.

No Koplik's spots and no discharges.

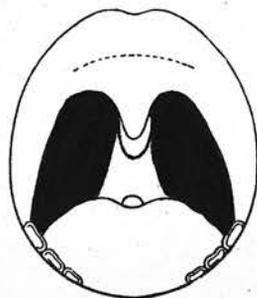
Right nostril excoriated.

Heart - rapid and regular.

Sounds clear.

Lungs - breath sounds normal.

General condition - only fair.



Date

Continued.

- 10.2.36 Rhinorrhoea. Throat, membrane still over both tonsils and uvula. Fauces still oedematous. Glands still enlarged. Heart - regular. General condition - fairly toxic.
- 11.2.36 Membrane still over both tonsils. Glands still enlarged. Colour and pulse fair.
- 15.2.36 Throat clean. Skin clear. Glands subsided. Colour and pulse fair. No marked response to serum.
- 18.2.36 Circulation seems satisfactory.
- 25.2.36 Throat clean. Palate active. Heart satisfactory. General condition seems better.
- 3.3.36 Palate active. Heart regular. General condition - fairly good.
- 10.3.36 General improvement.
- 17.3.36 Palate active. Heart regular. Colour and pulse good. No paresis.
- 20.3.36 Improvement maintained. Treatment. 1 Pillow.
- 22.3.36 Treatment. Sit up.
- 23.3.36 Treatment. Up on couch. Convalescence continued uninterrupted.
- 4.4.36 Discharged.



Name Kathleen Carney

(84)

Sex F

Age 7

Lab. No.
569

Disease. Severe faucial Diphtheria.

Date of Admission. 31.3.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad

Period for throat to clean. 5 Days.

Date of Discharge. 28.7.36

Date of Death.

Bacteriological Examination.

31.5.36

Cultures +
Dick Test -

23.7.36)

24.7.36) -

25.7.36)

History of Present Illness.

Vomiting.)
Sore throat.)
Headache.) 29.5.36
Shivering.)
Epistaxis.)

Treatment.

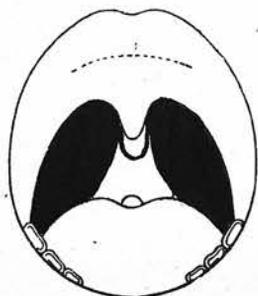
Syringe fauces with chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 10 ccs I.M.
A.B.S. 25 ccs I.M.)
1.6.36)
Mist A.S.A. m.7 P.R.N.

Previous Medical History.

Measles)
Bronchitis) Infancy.

Condition on Admission.

Throat injected, and oedematous.
Tonsils enlarged and covered with thickened membrane over both. Beginning to separate on left.
Foetor marked.
Glands adenitis and periadenitis in neck.
Skin - Herpes labialis.
Heart sounds rapid and regular.
Lungs - breath sounds normal.
No Koplik's spots. No discharges.
General condition - rather toxic.



Disease. Severe faucial Diphtheria.

Date of Admission. 31.3.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad

Period for throat to clean. 5 Days.

Date of Discharge. 28.7.36

Date of Death.

Bacteriological Examination.

31.5.36

Cultures +
Dick Test -

23.7.36)

24.7.36) -

25.7.36)

History of Present Illness.

Vomiting.)
Sore throat.)
Headache.) 29.5.36
Shivering.)
Epistaxis.)

Treatment.

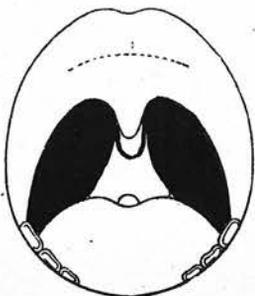
Syringe fauces with
chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 10 ccs I.M.
A.B.S. 25 ccs I.M.)
1.6.36)
Mist A.S.A. m.7 P.R.N.

Previous Medical History.

Measles)
Bronchitis) Infancy.

Condition on Admission.

Throat injected, and oedematous.
Tonsils enlarged and covered with
thickened membrane over both.
Beginning to separate on left.
Foetor marked.
Glands adenitis and periadenitis in
neck.
Skin - Herpes labialis.
Heart sounds rapid and regular.
Lungs - breath sounds normal.
No Koplik's spots. No discharges.
General condition - rather toxic.



Date

1.6.36 Membrane still present on throat. Oedema and foetor ++. Glands subsiding. Skin clear. Heart - rapid. Tone fair.

5.6.36 Throat clean.

8.6.36 Throat still ulcerated. Heart rapid. Sounds closed. General condition fair.

15.6.36 Throat clean. Palate active. Heart - regular. Colour and pulse good. Improving.

1.7.36 Palate active. Skin clear. Heart - regular. Colour and pulse good.

6.7.36 Palate sluggish. Nasal intonation. Heart - regular. Colour and pulse good.

10.7.36 Palate quite brisk. Phonation clear.

13.7.36 General circulation good. Muscle tone improving. Treatment. 1 Pillow.

20.7.36 General improvement maintained. Treatment. Sit up.

25.7.36 Treatment. Up. Convalescence continued uninterrupted and

28.7.36 patient discharged fit.



Name Josephine Marie Cooper.

Sex F

Age 6

Lab. No.

568

Disease. Severe faucial Diphtheria.

Date of Admission. 3.6.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Albuminuria 7
Serum Rash 10

Period for throat to clean. 5 Days.

Date of Discharge. 25.7.36

Date of Death.

Bacteriological Examination.

3.6.36

Cultures +
Dick Test -

20.7.36)

21.7.36) -

22.7.36)

Treatment.Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

Desensitise.

A.D.S. 60,000 units I.V.

Adrenalin m.3 4 hourly

A.B.S. 25 ccs

A.B.S. 10 cc I.M. (4.6.36)

History of Present Illness.Sore throat)
Headache) 31.5.36
Vomiting)

Immunised against Diphtheria 1933

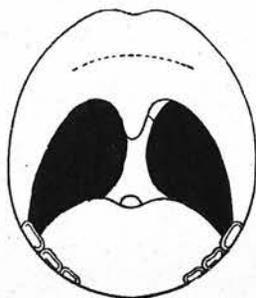
Previous Medical History.Chicken Pox)
Whooping Cough) Infancy.
Scarlet Fever 1933
Measles 1934.**Condition on Admission.**Tongue furred. Throat injected,
and oedematous. Tonsils enlarged
and both covered with extensive
membrane.Glands - adenitis and periadenitis
both sides of neck.

Heart - regular and rapid.

Lungs - breath sounds normal.

Skin clear. No Koplik's spots.

General condition - fairly toxic



Date

Continued.

3.6.36 Very marked serum reaction, extensive urticarial eruption.

4.6.36 Membrane thickened, separating. Oedema of fauces less.
Heart - regular and rapid.
General condition - toxic. Omit Adrenalin.

8.6.36 Throat cleaning, ulcerated. Mist A.S.A. m.5 P.R.W.
Heart - regular. Colour and pulse good.

15.6.36 Improving.

1.7.36 Palate active.
Heart - regular. Tone improving. No paresis.

6.7.36 Heart sounds distant - regular.
Colour and pulse - good.

10.7.36 Improving.

12.7.36 Palate active. General circulation improved.
Muscle tone better.
Treatment. 1 Pillow.

20.7.36 Progress maintained.
Treatment. Up.
Patient's convalescence continued uneventful.

25.7.36 Discharged.



Name Joseph Slater.

Sex M Age 9

Lab. No.

772

Disease. Severe faucial Diphtheria.

Date of Admission. 1.8.36

Day of disease on admission. Sixth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Palatal Paresis 16
& 35

Period for throat to clean. 6 Days.

Date of Discharge. 9.10.36

Date of Death.

Bacteriological Examination.

1.8.36

Cultures +
Dick Test -

29.8.36)

30.8.36)

22.9.36) -

24.9.36)

25.9.36)

Treatment.Syringe fauces with
chlorine water.

Poultices to neck.

Desensitise for

40,000 units A.D.S I.M.

A.D.S. 60,000 units I.V.

A.B.S. 25 ccs I.M.

History of Present Illness.Vomiting.)
Sore throat) 27.7.36
Headache.)
Shivering.)

Rhinorrhoea 31.7.36

Glandular Swelling) 29.7.36
Drowsiness)**Previous Medical History.**

None.

N.B. Asthma in previous history.

Condition on Admission.

Tongue furred.

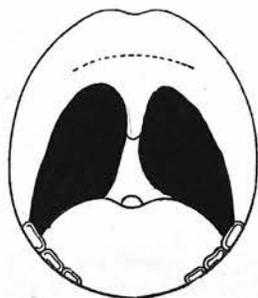
Throat oedematous on right side.

Very extensive membrane over
right tonsil, extending over
fauces to palate. Left tonsil
also covered. Tonsillar
enlargement extends over midline
and conceals left tonsil and
uvula. Foetor marked.Glands very marked adenitis and
periadenitis right side of neck.
Profuse serous rhinorrhoea.

No Koplik's spots. No discharges

Heart sounds poor and regular.

Chest - breath sounds normal.

General condition - very toxic,
unsatisfactory.

Date

Continued.

- 2.8.36 Still extensive membrane over fauces, beginning to separate with bleeding. Rhinorrhoea ++
Heart - rapid and regular.
General condition - poor.
- 3.8.36 Membrane separating. Foctor ++
Glands still enlarged. Rhinorrhoea still profuse.
Colour and pulse fair.
- 4.8.36 Oedema subsiding. Membrane separating slowly.
Rhinorrhoea less.
General condition - still poor.
- 6.8.36 Throat clean. Heart regular.
General condition - fair.
- 8.8.36 Throat clean. Colour and pulse good.
- 10.8.36 Nasal intonation in speech.
Bradycardia.
- 12.8.36 Palate sluggish. Vomited during night.
Heart satisfactory.
- 15.8.36 Palate active.
General condition - brighter.
- 25.8.36 Palate active. Colour and pulse satisfactory.
Heart - regular.
- 26.8.36 Palate active.
- 30.8.36 Palate sluggish. Collecting mucous in throat.
- 1.9.36 Palate immobile. Colour and pulse satisfactory.
Heart - regular.
- 6.9.36 Dysphagia.
Treatment. Nasal feeds. Atropine gr.1/100 P.R.N.
- 13.9.36 Palate acting. Colour and pulse satisfactory.
Phonation improved.
Treatment. Semi-solid diet.
- 17.9.36 Improving.
Treatment. 1 Pillow.
- 21.9.36 Improvement maintained.
Treatment. Sit up.
- 9.10.36 Convalescence continued uninterrupted and patient discharged, walking stiffly.



Name Betty Walton

Sex F Age 8

Lab. No. 532

Disease. Severe faucial Diphtheria.

Date of Admission. 22.5.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Rhinorrhoea & Adenitis ad Albuminuria 17
Cardiac Irregularity 40

Period for throat to clean. 4 Days.

Date of Discharge. 28.7.36

Date of Death.

Bacteriological Examination.

22.5.36

Cultures +
Dick Test -

20.7.36)

21.7.36) -

22.7.36)

History of Present Illness.

Sore throat)
Headache.) 21.5.36
Glandular swelling)

Treatment.

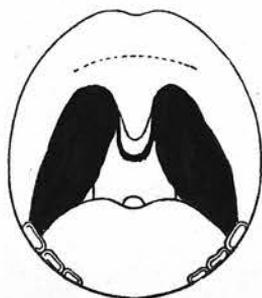
Syringe fauces with chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 25 ccs I.M.
Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Measles.
Chicken Pox.
Whooping Cough.

Condition on Admission.

Tongue furred. Throat, membrane on both tonsils, extending on to palate, probably more recent and more active on the right. Oedema slight. Adenitis and periadenitis both sides of neck. Skin - septic spots present on trunk. Heart - rapid and regular. Tone poor. Lungs - breath sounds clear. Nasal discharge. Profuse sero-sanguineous. No Koplik's spots. General condition - toxic.



Date

23.5.36 Membrane thickened over both tonsils and anterior pillars. Oedema less. Glands still enlarged. Septic spots still present on skin. Colour and pulse poor. General condition - fair.

25.5.36 Throat clean. Glands subsiding. Muscles soft and flabby.

1.6.36 Improving.

8.6.36 Throat clean. Heart sounds - closed and regular. Colour and pulse satisfactory.

15.6.36 Circulation satisfactory.

30.6.36 Palate active. Heart sounds - closed and regular. Colour and pulse good.

1.7.36 Improving.

2.7.36 Vomiting. Colour and pulse fair. Heart - regular.

3.7.36 Colour - very poor. Pulse unsatisfactory. Volume poor. General condition - feeble.
Treatment. Radiant Heat.
Oxygen and Cardiac Foments.
Mist. A.S.A.m.5 4 hourly.

4.7.36 Palate active. Heart irregular. Tone fair. Colour and pulse improved.

7.7.36 Colour and pulse definitely better to-day. Heart - rapid. Tone improved.

8.7.36 Heart regular. Pulse steady, volume good. Colour improved.
Treatment. 1 Pillow.
Omit all stimulants.

12.7.36 Heart and circulation satisfactory. Muscle tone improving.
Treatment. Syrup Triplex 3i T.D.S.

20.7.36 Treatment. Up.

28.7.36 Patient's convalescence continued uninterrupted. Discharged.



Name Clifford Lewis Brettelle

Sex M

Age 9

Lab. No.

711

Disease. Severe faucial Diphtheria.

Date of Admission. 14.7.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis ad Serum Rash 11

Period for throat to clean. 6 Days.

Date of Discharge. 9.9.36

Date of Death.

Bacteriological
Examination.

14.7.36
 Cultures -
 Dick Test +
 Swab 15.7.36 -
 " 16.7.36 -
 " 17.7.36 +
 " 31.8.36 -
 " 7.9.36 -

History of Present Illness.

Vomiting 5.7.36
 Sore throat)
 Headache) 12.7.36
 Adenitis 13.7.36

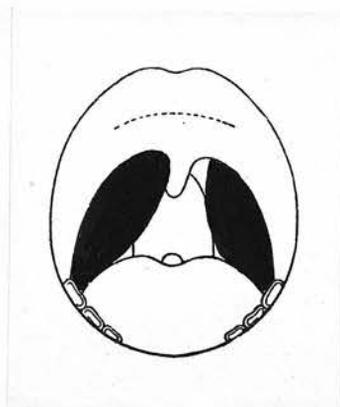
Treatment.

Syringe fauces with
 chlorine water.
 Mist. A.S.A.m10 P.R.N.
 A.D.S.30,000 units I.M.
 A.D.S.60,000 units I.V.
 Poultices to neck.
 A.D.S. 8,000 units pre.ad.
 A.B.S. 25 ccs (15.7.36)

Previous Medical History.

Condition on Admission.

Throat injected. Tonsils injected
 Both covered with greyish membrane
 extending on to uvula on right
 side.
 Tongue furred.
 Marked foetor of breath.
 Glands just palpable.
 No discharges.
 Skin clear.
 Heart - tachycardia.



Date

15.7.36 Membrane over anterior pillar of tonsils thickened.
Glands still enlarged in neck. Skin clear.
Heart - regular. Colour and pulse good.

20.7.36 Throat clean.

22.7.36 Throat clean. Glands subsided.
Heart regular. Colour and pulse good.

23.7.36 Serum Rash.

28.7.36 General condition - improved.

4.8.36 Colour and pulse - satisfactory.

11.8.36 Palate active.
Heart - regular. Colour and pulse good.

18.8.36 Circulation satisfactory.
Muscle tone improved.

25.8.36 Palate active.
Heart - regular. Colour and pulse good.
Treatment. 1 Pillow.

30.8.36 Improving.
Treatment. Sit up.

1.9.36 Heart - regular. Colour and pulse satisfactory.
No paresis.
Progress satisfactory.

9.9.36 Convalescence continued uninterrupted and
patient discharged.



Name Sylvia Cummings.

Sex F Age 8

Lab. No.
713

Disease. Severe faucial Diphtheria.

Date of Admission. 15.7.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Serum Rash 17 Albuminuria ad Adenitis ad
Sluggish palate 21

Period for throat to clean. 5 Days.

Date of Discharge. 21.9.36

Date of Death.

Bacteriological Examination.

15.7.36

Cultures +
Dick Test -

15.9.36)

16.9.36) -

17.9.36)

Treatment.Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

A.B.S. 10 ccs.

Mist A.S.A. m.5 P.R.N.

History of Present Illness.Sore throat.)
Headache)
Adenitis) 12.7.36
Loss of Voice)
Rhinorrhoea.)**Previous Medical History.**

Measles in infancy

Chicken Pox in infancy.

Condition on Admission.

Tongue - furred. Marked foetor.

Throat - injected and oedematous.

Tonsils - large. Extensive membrane
present on both tonsils and on uvula.
Membrane is extending on to palate
on right side.

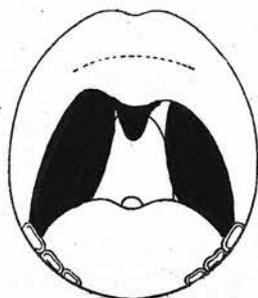
Heart sounds clear.

Lungs - breath sounds clear..

Cervical adenitis present.

No Koplik's spots. Nares excoriated.

General condition - toxic.



Date

- 15.7.36 Extensive membrane over enlarged tonsils and uvula. Thickening. Glands markedly enlarged in neck. Heart sounds soft and rapid. Tone fair. General condition - toxic.
- 20.7.36 Throat clean. Glands subsided. Heart - regular. General condition - good.
- 27.7.36 Palate active. Heart - regular. Tone good. Colour and pulse satisfactory.
- 28.7.36 Generalised serum rash. Treatment. Adrenalinm.4 P.R.N.
- 2.8.36 Nasal phonation. Palate sluggish. Treatment. Strychnine $\frac{1}{200}$ B.I.D.
- 10.8.36 Palate still sluggish. ^{BT} Phonation nasal. Heart - rapid and regular. General condition - fair.
- 20.8.36 Palate almost immobile. Nasal phonation. No.dysphagia.
- 22.8.36 Furunculosis of ext: auditory meatus.
- 30.8.36 Palate moving.
- 31.8.36 Palate quite brisk. Colour and pulse satisfactory. Omit strychnine.
- 3.9.36 General condition - improved. No paresis. Treatment. 1 Pillow.
- 11.9.36 Improvement maintained. Treatment. Sit up.
- 13.9.36 General condition - satisfactory. Treatment. Up on couch.
- 21.9.36 Convalescence continued uninterrupted and patient discharged quite well.



Condition on Admission
 Throat clean, glands subsided.
 Heart - regular.
 Tone good.
 Colour and pulse satisfactory.
 Generalised serum rash.
 Treatment. Adrenalinm.4 P.R.N.
 Nasal phonation. Palate sluggish.
 Treatment. Strychnine $\frac{1}{200}$ B.I.D.
 Palate still sluggish. ^{BT} Phonation nasal.
 Heart - rapid and regular.
 General condition - fair.
 Palate almost immobile. Nasal phonation.
 No.dysphagia.
 Furunculosis of ext: auditory meatus.
 Palate moving.
 Palate quite brisk.
 Colour and pulse satisfactory. Omit strychnine.
 General condition - improved. No paresis.
 Treatment. 1 Pillow.
 Improvement maintained.
 Treatment. Sit up.
 General condition - satisfactory.
 Treatment. Up on couch.
 Convalescence continued uninterrupted and patient discharged quite well.

Disease. Severe faucial Diphtheria.

Date of Admission. 25.7.36

Day of disease on admission. First.

Type of organism. Gravis.

Complications. (Adenitis
(Serum Rash 9

Period for throat to clean. 6 Days.

Date of Discharge. 19.9.36

Date of Death.

Bacteriological Examination.

25.7.36

Cultures +
Dick Test -

Pre.ad.

16,000 units A.D.S.

11.9.36)
12.9.36) -
13.9.36)**Treatment.**Syringe fauces with
chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Poultices.

Saline.

Mist A.S.A.m. 4 P.R.N.

Blocks.

A.B.S. 25 ccs. No. 1 I.M.

History of Present Illness.

Sudden onset 24.7.36

Vomiting.

Sore throat.

Rigors.

Headache.

Adenitis.

Admitted to Booth Hall with
fractured femur 17.5.36. Now full
range of movements.**Previous Medical History.**

Chicken Pox.

Whooping Cough.

Measles.

Condition on Admission.Tongue furred. Fauces injected and
covered with gelatinous active
looking membrane posteriorly.

Tonsils ++.

Both tonsils extensively covered with
darkish membranous exudate.

Oedema +.

Small patch on uvula.

Glands of neck enlarged and tender.

Skin clear, except for acneform
eruption of left leg, due to plaster.

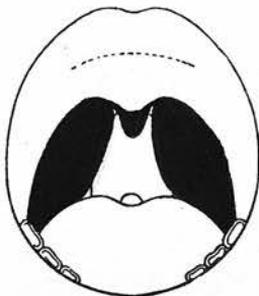
Foetor +

Nose moist, slight excoriation.

Heart - tachycardia.

Lungs - breath sounds normal.

General condition - fairly good.



Date

25.7.36 Membrane extended over both tonsils, reaching on to soft palate.

26.7.36 Oedema of fauces. Membrane thickening. Glands still enlarged. Heart - rapid. Tachycardia.

27.7.36 Throat cleaner to-day. Pulse regular.

31.7.36 Throat clean. Palate active. Heart - regular. Sounds soft. Blowing systolic murmurs in all areas.

1.8.36 Serum rash.

6.8.36 General condition improved.

11.8.36 General condition improved.

18.8.36 Muscle tone more satisfactory. Circulation good.

25.8.36 Heart - systolic bruit still present. Regular.

1.9.36 Throat clean. Palate active. Mitral systolic murmur. Tone fair. Slight irregularity.

5.9.36 Treatment. 1 Pillow.

8.9.36 General condition improved.

11.9.36 Allow up.

19.9.36 Convalescence continued uninterrupted and patient discharged reasonably well. Mitral systolic bruit persisted, which was Haemic.



Name Gwelym Edwards

Sex M Age 11

Lab. No.
321

Disease. Severe faucial Diphtheria.

Date of Admission. 21.2.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Otorrhoea 18
Palatal paresis 27

Period for throat to clean. 7 Days.

Date of Discharge. 7.5.36

Date of Death.

Bacteriological
Examination.

21.2.36

Culture +
Dick Test +

24.4.36)

25.4.36) -

26.4.36)

Treatment.

Syringe fauces with
chlorine water.

Poultices to neck 4 hourly.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

10cc A.B.S. I.M. (22.2.36
5.0 p.m.)10 cc A.B.S. I.V. (22.3.36
5.30 p.m.)

Mist A.S.A.m.7 P.R.N.

History of Present Illness.

Vomiting	}	20.2.36
Sore throat.		
Headache.		
Shivering.		
Glandular swelling)		

Previous Medical History.

Measles in infancy.

Pneumonia - $2\frac{1}{2}$ years ago.Empyema - $2\frac{1}{2}$ years ago.

Condition on Admission.

Thin film of membrane covering both tonsils, and extending to soft palate and uvula. Oedema of faucial tissues, tongue coated. Glands, periadenitis both sides of neck.

Heart - regular. Tone fair.

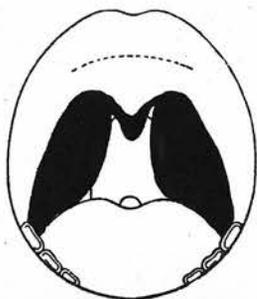
Lungs - breath sounds clear

Scar on right side of chest.

No Koplik's spots.

Left internal strabismus.

General condition - poor.



Date

- 22.2.36 Throat oedematous, with extensive membrane over both tonsils and soft palate.
Glands - bullneck.
Heart - regular and rapid.
General condition - toxic.
- 25.2.36 Throat not yet clean - Oedema less.
Glands subsiding.
Colour and pulse good.
- 28.2.36 Throat clean.
- 3.3.36 Colour and pulse fair.
- 6.3.36 Right otorrhoea.
Treatment. Swab ear dry 4 hourly.
- 17.3.36 Palate sluggish.
Heart irregular, rapid. Tone fair.
Treatment. Strychnine 1/100 T.D.S.
- 24.3.36 Palate inactive. gr.
Heart sounds - soft.
- 30.3.36 Palate inactive.
Heart sounds regular. Dysphagia.
General condition - poor.
Treatment. Nasal feeds.
Atropine gr.1/100 P.R.N.
- 7.4.36 Palate moving.
Heart tone - poor.
- 11.4.36 Palatal movement.
Improved. Can manage light diet.
Treatment. Light diet.
Omit nasal feeds.
- 14.4.36 Palate active.
Heart tone improved. Colour and pulse good.
Treatment. Omit strychnine.
- 18.4.36 Improving.
Treatment. 1 Pillow.
- 21.4.36 Muscles firming.
Heart regular - tone improving.
Treatment. Sit up.
Syrup Triplex 1 dr.T.D.S.
- 7.5.36 Patient's convalescence uninterrupted.
Discharged.



Name Evelyn Derbyshire

Sex F Age 11

Lab. No. 220

Disease. Severe faucial Diphtheria.

Date of Admission. 14.1.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Rhinorrhoea. Adenitis ad Enteritis 26

Period for throat to clean. 6 Days.

Date of Discharge. 12.3.36

Date of Death.

Bacteriological Examination.

14.1.36
Cultures +
Dick Test -
15.1.36 +
3.3.36 -
4.3.36 -
5.3.36 -

History of Present Illness.

Vomiting)
Sore Throat) 13.1.36
Shivering.)
Sleepiness.)
Headache.) 14.1.36
Adenitis.)

Mother admitted to Monsall Hospital 11.1.36

Treatment.

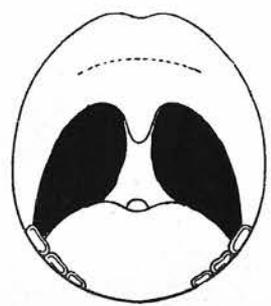
Syringe fauces with chlorine water.
Poultices to neck.
A.D.S. 40,000 units I.M.
Desensitize.
A.D.S. 60,000 units I.V.)
A.B.S. 25 ccs. I.M.) 15.1.36
5.15 p.m.

Previous Medical History.

Measles 1931
Tonsillitis 1935.
Reported to have been immunised against Diphtheria 1935.

Condition on Admission.

Tongue - moist, furred.
Throat - congested - oedematous.
Membrane covering both tonsils.
Tonsils enlarged.
Glands - palpable both sides of neck. Periadenitis.
No Koplik's spots.
No discharges.
Heart - sounds regular in rate and rhythm. Force good.
Lungs - normal.
Squint left eye.
General condition - only fair.



Date

- 15.1.36 Spread of exudate from left tonsil to 2/3 soft palate. Oedema and injection of left tonsil and surrounding area of palate. Foetor marked. Marked adenitis of right side of neck. Pulse volume good. Heart sounds - clear. General condition - fair. Treatment. Brandy \mathfrak{z}^{ii} P.R.N. Mist A.S.A.m.7 P.R.N. Blocks. Salines P.R.N.
- 16.1.36 Throat membrane thickened. No definite separation. Periadenitis still present. Heart regular. Tone fair. Rhinorrhoea ceased. Urine clear.
- 17.1.36 Foetor ++ Membrane separating. Colour and pulse variable. General condition - toxic.
- 20.1.36 Throat clean.
- 27.1.36 Heart irregular at times. Condition - fair. Treatment. Mist A.S.A.m.7 4 hourly.
- 3.2.36 Circulation still feeble.
- 5.2.36 Mucous in stool. Temperature 103° F. Enteritis. Treatment. Kaylere Oil \mathfrak{z}^{i} P.R.N. Barrier.
- 10.2.36 Stools satisfactory. Colour and pulse improved.
- 17.2.36 Palate active. Heart tone improved. Pulse volume better.
- 23.2.36 Improving. Treatment. Omit all stimulants. Syrup Triplex. \mathfrak{z}^{i}
- 27.2.36 Treatment. 1 Pillow.
- 2.3.36 Progress maintained. Sit Up.
- 12.3.36 Discharged. General condition - satisfactory.



Name Edith Lilian Simonite.

Sex F

Age 10

Lab. No.

209

Disease. Severe faucial Diphtheria.

Date of Admission. 9.1.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis. Albuminuria 5.
Nystagmus 21 Nasal Intonation. 40

Period for throat to clean. 5 Days.

Date of Discharge. 19.3.36

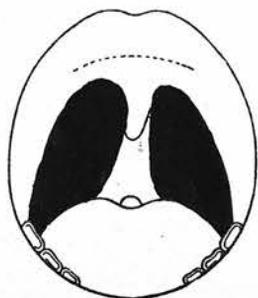
Date of Death.

Bacteriological Examination.

9.1.36

Cultures +
Dick Test -5.3.36)
6.3.36) -
7.3.36)**History of Present Illness.**

Gradual onset. Patient has not been in bed.

Vomiting)
Headache.) 6.1.36
Sore throat.)
Glandular Swelling.)**Treatment.**Syringe fauces with
chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 40,000 units I.V.
A.B.S. 10 ccs. I.M.
Mist A.S.A. m.6 P.R.N.**Previous Medical History.**Measles, 1929
Mumps 1931
Chicken Pox 1932.**Condition on Admission.**Tongue furred. Throat injected.
Tonsils enlarged. Extensive
Diphtheretic membrane on both
tonsils and 1/3 soft palate.
Membrane separating on left.
Foetor marked.
Glands, marked adenitis and
periadenitis both sides of neck.
Skin - face flushed, no rash.
Heart - regular - sounds of fair
quality.
Lungs - breath sounds normal.
No nasal discharge.
General condition - fair.

Date

10.1.36 Membrane separating from both tonsils.
Glands subsiding.
Heart - regular. Tone fair.
Albumen present in urine.
General condition - fair.

11.1.36 Membrane separating.
Colour and pulse good.

13.1.36 Throat clean.
Colour and pulse - fair.

26.1.36 Lateral nystagmus.

27.1.36 Palate active.
Heart sounds - regular. Tone poor.
Nystagmus still present.

3.2.36 Palate active.
Colour and pulse good.

10.2.36 Palate active.
Heart regular. Nystagmus not present.

12.2.36 Heart satisfactory.
Knee jerks active.
Improving.

14.2.36 Nasal intonation in speech.

17.2.36 Palate active.
Heart - extra systoles.
Nasal intonation improving.

24.2.36 Palate active. Speech clear.
Heart regular. Colour and pulse good.
Treatment. 1 Pillow.

14.2.36 Treatment. Strychnine $\frac{1}{200}$ B. I. D.

2.3.36 Improving. gr.

5.3.36 Treatment. Sit up. Omit strychnine.
Progress uninterrupted.

Treatment. Up.
Convalescence uneventful.

19.3.36 Discharged.

Condition on Admission

Temperature - 100.4
Pulse regular - 72
Respiration - 18
Blood pressure - 110/70
Wasting of fat - 25%
Tongue coated.
Lungs - breath sounds normal.
Chest - no rales.
Heart - not enlarged.
Spleen - not palpable.
Pulse regular. Volume normal.
Lungs - breath sounds normal.
Tongue coated with white.
No Koplik's spots.
Lateral nystagmus - present.
General condition - fair.



Name Joseph Brindley

Sex M Age 10

Lab. No.
76

Disease. Severe Faucial Diphtheria.

Date of Admission. 22.11.35

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Serum Rash 10
Albuminuria. Enteritis 18 Palatal Paresis 28

Period for throat to clean. 5 Days.

Date of Discharge. 5.2.36

Date of Death.

Bacteriological Examination.

22.11.35

Cultures +
Dick Test -

20.1.36)

21.1.36) -

22.1.36)

History of Present Illness.Sore throat.)
Vomiting.) 21.11.35
Sleepiness.)Vomiting.)
Glandular swelling) 22.11.35**Treatment.**Syringe fauces with
chlorine water.

A.D.S.40,000 units I.M.

A.D.S.60 000 units I.V.

A.B.S.25'ccs. No.1 I.M.)
(6.30 p.m.)**Previous Medical History.**

Chicken pox 1931.

Transferred from Henshaw's
Institution for the Blind.**Condition on Admission.**Tongue clean. Throat injected.
Thick exudate over both tonsils,
spreading on to soft palate.Foetor marked. Glands enlarged and
tender, both sides of neck,
especially right. Periadenitis
right side of neck.

Skin clear - colour good.

Heart - not enlarged, regular,
sounds of good quality.

Pulse regular. Volume good.

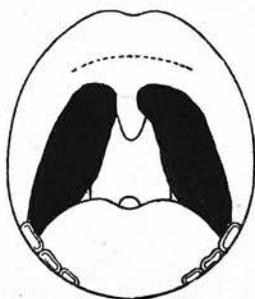
Lungs - breath sounds normal.

Muscle tone - fair.

No Koplik's spots.

Marked nystagmus continually present.

General condition - fairly good.



Date

- 22.11.35 Oedema of throat more marked. Periadenitis increased.
Generally more toxic.
Treatment. Salines.
Mist. A.S.A. m.5 4 hourly.
- 23.11.35 Throat oedema ++. Very thin membrane spread on to palate. Glands still marked bullneck.
Heart regular - tone good.
Rhinorrhoea ++
General condition - toxic.
- 27.11.35 Throat clean. Ulcerated. Tonsils still enlarged. Glands subsided.
Heart regular. Tone fair.
Faint trace of albumen.
- 30.11.35 Albuminuria marked to-day.
- 5.12.35 Albuminuria improved.
- 8.12.35 Relaxed stools. Blood & mucous present.
Treatment. Hydrarg with crete.
Kaylene Oil 3ⁱⁱ T.D.S.
- 10.12.35 Bowels improved, circulation satisfactory.
- 16.12.35 Vomiting to-day. Colour poor. Pulse fair.
Treatment. Omit food by mouth.
Salines.
- 17.12.35 Slight nasal intonation in speech.
Vomiting still. Colour and pulse good.
Treatment. Radiant heat 4 hourly.
Adrenalin m.5 4 hourly.
- 19.12.35 Palatal paresis.
- 20.12.35 No vomiting for 36 hours. Circulation fair.
Pulse volume improved.
Generally better.
Treatment. Atropine gr.1/100 P.R.N. Nasal feeds.
- 26.12.35 Palate still immobile. Collecting mucous in pharynx. Pulse feeble.
General condition - poor.
- 28.12.35 Urine clear. Generally more comfortable.
- 29.12.35 Apex beat diffuse.
- 31.12.35 Palate beginning to move.
Respiration shallow. Circulation feeble.
- 2.1.36 General condition improved.
Treatment. Omit nasal feed & stimulants.
- 7.1.36 Palate quite brisk. Colour and pulse improved.
- 13.1.36 Improvement maintained.
Treatment. 1 Pillow.
- 16.1.36 Improvement continued.
Treatment. Sit up.
- 20.1.36 Circulation and muscle tone improved.
Treatment. Up.
- 5.2.36 Discharged to Henshaws Institution. Walking well and fully recovered.

Name Veronica Maloney

Sex F Age 10

Lab. No.
762

Disease. Severe faucial Diphtheria.

Date of Admission. 29.7.36

Day of disease on admission. Sixth.

Type of organism. Gravis.

Complications. Adenitis. Slight Rhinorrhoea. Triple Rhythm.
Cardiac Muscle Failure.

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 7.8.36

Bacteriological
Examination.

29.7.36

Cultures +
Dick Test -

History of Present Illness.

Sore throat. 23.7.36
Headache 25.7.36
Epistaxis 26.7.36

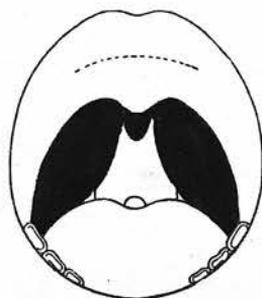
Treatment.

Syringe fauces with
chlorine water 4 hourly.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 25 ccs. I.M.
Mist A.S.A. m.10 P.R.N.

Previous Medical History.

Measles.

Condition on Admission.

Tongue furred. Throat, membrane
over both tonsils and uvula.
Foetor marked. Glands enlarged
both sides of neck.
Skin - No petechiae. No rash.
No Koplik's spots.
Heart - rapid. Tone fair.
Sounds soft.
Lungs - Breath sounds normal.
No discharges.
General condition - fair.

Date

30.7.36 Throat cleaning. Post nasal discharge ++.
 Very slight rhinorrhoea.
 Heart - regular. Sounds soft. Colour - poor.
 General condition - fair.

31.7.36 Throat cleaning.
 General condition - fairly good.

2.8.36 Throat cleaning. Colour and pulse unsatisfactory.
 Heart - very rapid.

3.8.36 Throat not yet clean.
 Heart - rapid and regular.
 General condition - fair.

4.8.36 Throat clean.
 Colour rather cyanosed. Marked tachycardia.
 General condition - poor.

6.8.36 Heart - Triple rhythm present to-day.
 Colour remains cyanosed.
 Pulse imperceptible at times.

7.8.36 Patient's condition deteriorated and she died
 5.40 p.m. Cardiac muscle failure.



Name Alfred Bigham

Sex M

Age 12

Lab. No. 314

Disease. Severe faucial Diphtheria.

Date of Admission. 19.2.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Enteritis 16.

Period for throat to clean. 5 Days.

Date of Discharge. 15.4.36

Date of Death.

Bacteriological Examination.

19.2.36

Cultures +
Dick Test -

6.4.36)

7.4.36) -

8.4.36)

Treatment.

Syringe fauces with chlorine water.
A.D.S. 40,000 units I.M.
Poultices to neck.
A.B.S. 10 ccs I.M.
A.D.S. 40,000 units I.V.
A.B.S. 1cc I.V.

History of Present Illness.

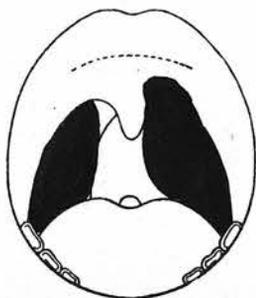
Vomiting.)
Sore throat.) 17.2.36
Glandular swelling)

Previous Medical History.

Measles.

Condition on Admission.

Throat injected. Membrane present on both tonsils and on to soft palate on left side and nasopharynx. Nose excoriated. Profuse nasal discharge present. No membrane seen in nose. Glands enlarged. Both sides of neck. Heart sounds regular. Tone fair. Lungs - breath sounds normal. Skin clear. General condition - fair.



Date

Continued.

- 19.2.36 Throat oedematous with active membrane still on left tonsil. Glands enlarged. Bullneck.
Heart - satisfactory.
General condition - fair.
Treatment. Mist A.S.A.m.5 P.R.N.
- 25.2.36 Throat clean. Palate active. Glands subsided.
Heart regular.
- 2.3.36 Palate active.
Heart regular. Tone fair. Complaining of nausea.
- 3.3.36 Stool relaxed and offensive.
Colour and pulse poor.
Treatment. Bowels lavage
Oil Ricini ʒii
Barrier.
- 10.3.36 Palate active. Heart regular. Stool normal.
General condition - improved.
- 17.3.36 Palate active.
Heart - satisfactory.
- 24.3.36 Improving.
- 31.3.36 Heart regular. Colour and pulse satisfactory.
- 1.4.36 Muscle tone improving.
Colour and pulse good.
Treatment. 1 Pillow.
- 4.4.36 Treatment. Sit up.
- 6.4.36 Progress satisfactory.
Treatment. Up on couch.
- 15.4.36 Patient discharged.



Disease. Severe faucial Diphtheria.

Date of Admission. 8.1.36 6.30 p.m.

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea & Adenitis ad. Serum Rash 12.
Albuminuria. Petechiae.

Period for throat to clean. 8 days.

Date of Discharge.

Date of Death. 20.1.36

Bacteriological Examination.

8.1.36

Cultures +
Dick Test -**History of Present Illness.**Vomiting.)
Sleepiness.)
Sore Throat) 6.1.36
Shivering.)

Glandular swelling 8.1.36

Treatment.Syringe fauces with
chlorine water.

A.D.S. 16,000 units I.M.

A.D.S. 40,000 units I.M.)

A.D.S. 60,000 units I.V.) 12.30 a.m.

A.B.S. 25 ccs I.M. (9.1.36)

Previous Medical History.

Measles in infancy.

Condition on Admission.Throat injected. Tonsils enlarged
and a small patch of membrane on
each.Glands - very marked cervical
adenitis both sides.Heart & Lungs - No evidence of
disease.

Skin - no rash.

No discharges.

No Koplik's spots.



Date

Continued.

- 8.1.36 Throat oedematous. Membrane forming on inner aspects of both tonsils and edge of uvula. Periatenitis both sides of neck. Rhinorrhoea, profuse, serosanguineous. Colour and pulse fair.
Treatment. Adrenalin m5 P.R.N.
Poultices to neck.
- 9.1.36 Throat still oedematous. Membrane on throat and nasopharynx well formed. Foetor ++
Glands - still marked periatenitis.
Heart - regular. Tone fair. Pulse good.
No paresis. Urine clear.
General condition - poor.
Treatment. Salines.
- 10.1.36 Rhinorrhoea practically ceased. Throat oedema ++
Membrane thickened and separating. Still marked periatenitis. Peripheral circulation sluggish.
Pulse regular. Heart sounds distant. Urine clear.
No petechiae.
General condition - poor.
Treatment. Salines.
Paraldehyde 3i P.R.
Mist A.S.A.m. 5 P.R.N.
- 11.1.36 Still marked oedema of throat. Membrane separating with haemorrhage.
Heart still rapid. Sounds poor.
Petechiae present on chest and upper limbs.
General condition - extremely toxic.
Treatment. Radiant Heat - 4 hourly.
- 13.1.36 Throat cleaning, ulcerated. Heart tone poor, irregular.
Petechiae ++. Bruising of chin & side of face.
- 16.1.36 Throat clean.
Heart regular - tone fair.
General condition - poor.
- 17.1.36 Marked bruising still present. Cyanosed.
Heart grossly irregular.
Albumen present.
General condition - poor.
- p.m.
20.1.36 Serum rash.
Circulation gradually became more feeble.
Deteriorated.
- 10.50 a.m. Died.



Disease. Severe faucial Diphtheria.

Date of Admission. 25.7.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis & Rhinorrhoea ad Petechiae 8
Albuminuria 7. Triple Rhythm 14.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 5.8.36

Bacteriological Examination.

25.7.36

Cultures +
Dick Test -

History of Present Illness.

Sudden onset 21.7.36
Sore Throat 21.7.36
Adenitis 22.7.36
Vomiting 23.7.36

Treatment.

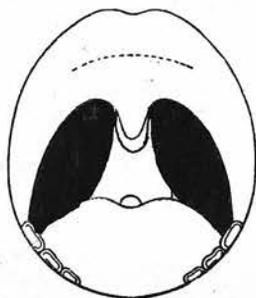
Syringe fauces with
chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 10 ccs No.1 I.V.
A.B.S. 25 ccs I.M. (26.7.36)
Mist A.S.A. m.10 P.R.N.

Previous Medical History.

Measles)
Chicken Pox.) In infancy.

Condition on Admission.

Tongue furred. Fauces injected
and oedematous. Both tonsils
covered extensively with
membranous exudate.
Marked bilateral enlargement of
cervical glands. Bullneck.
Profuse nasal discharge.
Skin clear. No Koplik's spots.
Heart - rapid, regular.
Marked tachycardia.
General condition - poor.



Date

Continued.

- 26.7.36 Extensive membranous exudate over both tonsils and uvula. Oedema marked. Appearance of membrane active. Profuse serous rhinorrhoea. Membrane both nares. Foetor ++ Glands enlarged in neck. Bruising at side of I.M. injection. Tachycardia. General condition - poor.
- 27.7.36 Membrane still present on throat, thickening. Glands still enlarged. Rhinorrhoea slight. Membrane both nares. Oedema of face present. Numerous petechiae around left axilla. Albumen in urine. Colour and pulse poor.
- 28.7.36 Membrane thickening and separating. Glands ++ Heart - tachycardia persists. Sounds very soft. Trace of albumen in urine. General condition - very poor.
- 29.7.36 Membrane separating with haemorrhage. Heart sounds poor quality. Oedema of face still present. General condition - poor.
- 30.7.36 Membrane separating. Oedema of face improved. Petechiae present in left axilla.
- 31.7.36 Throat cleaning.
- 3.8.36 Throat not yet clean. Oedema of face disappeared. Heart sounds soft.
- 4.8.36 Heart - triple rhythm. General condition - very poor.
- 5.8.36 Patient collapsed and died of cardiac muscle failure.
1.35 a.m.



Name May Russell

Sex F Age 12

Lab. No.

42

Disease. Severe faucial Diphtheria.

Date of Admission. 15.11.35

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Rhinorrhoea & adenitis ad Bullneck. Albuminuria ad Otorrhoea 25 Right conjunctivitis 22 Palatal Paresis 33 Pharyngeal paresis.

Period for throat to clean. 3 Days.

Date of Discharge. 20.1.36

Date of Death.

Bacteriological Examination.

15.11.35

Cultures + Dick Test +

11.1.36)

12.1.36) -

13.1.36)

History of Present Illness.

Last perfectly well 10.11.35

Last at school 11.11.35

Vomiting.)

Sore throat,)

Headache) 11.11.35

Sleepiness)

Glandular swelling 12.11.35

Nasal discharge 13.11.35

Treatment.

Syringe fauces with chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A.m.5 P.R.N.

A.B.S. 1 cc No.1 I.V.

A.B.S. 9 cc No.1 I.M.

A.B.S. 10 ccs I.V. (16.11.35)

Previous Medical History.

Whooping Cough 1928

Chicken Pox)

Scarlet Fever) 1935.

Bronchitis)

Condition on Admission.

Throat injected. Thick loose membrane bleeding when swabbed on uvula, soft palate and both tonsils, nasopharynx involved.

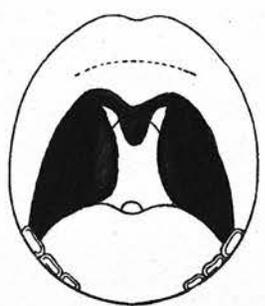
Glands - periadenitis marked both sides of neck.

Heart sounds regular. Tone good Lungs - breath sounds normal.

Colour - fair.

Nutrition good.

General condition - toxic.



Date

15.11.35	<u>Treatment.</u> Salines. Paraldehyde 3i P.R. P.R.N. Mist A.S.A.m.5 4 hourly.
16.11.35	Throat oecema less, membrane thickened over uvula and separating from tonsils. Skin - no petechiae. Heart - rapid, regular. Sounds closed, Rate 120.
17.11.35	Throat - oedema practically subsided. Membrane clear. Ulceration + Glands subsiding. No periadenitis. Nose - epistaxis, this occurring probably from separating membrane in nasopharynx. Colour fair. Pulse regular - 120. Urine - faint trace of albumen. General condition - less toxic. <u>Treatment.</u> Adrenalin plug to nose if necessary.
p.m.	Severe epistaxis. <u>Treatment.</u> Plug with H ₂ O ₂ gauze to nose.
19.11.35	Epistaxis subsided.
23.11.35	Throat clean. Glands subsided. Heart & circulation satisfactory. Much better. Omit Mist A.S.A.
25.11.35	Heart sounds rapid. Pulse feeble. <u>Treatment.</u> Radiant heat 4 hourly. Camphor in Oil $\frac{1}{2}$ cc P.R.N.
2.12.35	Generally improved. Conjunctivitis right eye. <u>Treatment.</u> Irrigate eye 4% Boracic Lotion Instil Guttae Argyrol 10%
4.12.35	Slight elevation of temperature. Urine and stools satisfactory. Circulation fairly good.
5.12.35	Slight otorrhoea right ear. <u>Treatment.</u> Clean ear with H ₂ O ₂ Instil Guttae Spirit. Ac: Bor:
8.12.35	Throat - collections of post nasal discharge. Heart satisfactory.
9.12.35	Post nasal discharge troublesome.
13.12.35	Palatal paresis.
14.12.35	Palate immobile. Pharyngeal wall not acting. Nasal intonation in speech. Heart - rapid and regular. Apex beat diffuse.
15.12.35	Difficulty in swallowing semi-solids. Nasal feeds.
17.12.35	Collections of mucous troublesome. <u>Treatment.</u> Blocks Suction. Atropine gr $\frac{1}{100}$ P.R.N.
22.12.35	Palate immobile. Diaphragm acting well.
23.12.35	Palate moving slightly. Circulation satisfactory.
28.12.35	Palate moving. Pharyngeal wall active. Circulation satisfactory. General condition - improved.
29.12.36	<u>Treatment.</u> Semi-solids. Off blocks.

Date

3.1.36	Heart regular. Palate brisk. General condition - satisfactory. <u>Treatment.</u> 1 Pillow.
7.1.36	<u>Improving.</u> <u>Treatment.</u> Sit Up.
11.1.36	<u>Treatment.</u> On couch.
19.1.36	General condition - satisfactory. Complete recovery.
20.1.36	Discharge to home.

Disease. Severe faucial Diphtheria.

Date of Admission. 13.5.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad.

Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 19.5.36

Bacteriological Examination.

13.5.36

Cultures +
Dick Test.**History of Present Illness.**

Sudden onset.

Vomiting

Sleepiness

Sore throat. } 10.5.36

Headache. }

Glandular swelling }

Bleeding from nose } 13.5.36

Treatment.Syringe fauces with
chlorine water 4 hourly.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A. m.5 4 hourly.

Brandy 3̄ P.R.N.

Salines.

Previous Medical History.

Whooping Cough. February 1936.

Measles

Bronchitis } 1935.

Condition on Admission.

Tongue furred. Throat injected.

Extensive recent membranous

exudate on left side of palate,

spreading edge. Thick membrane

present on both tonsils.

Glands, adenitis and periadenitis,

left side of neck. Skin clear.

Pallor marked. Nasal discharge.

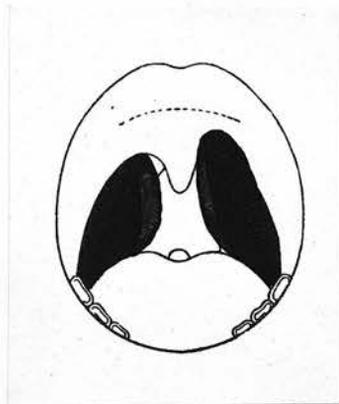
Heart - rapid, regular.

Sounds clear.

Lungs - breath sounds normal.

General nutrition - only fair.

Patient toxic.



Date

14.5.36 Membrane on palate and tonsils thickened.
 Oedema less. Glands subsided.
 Heart - rapid and regular.
 General condition - fair.
Treatment. Salines.
 Mist A.S.A. m.5 P.R.N.

15.5.36 Membrane separating. Glands subsiding.
 Skin clear. Nose dry. Patient restless.

18.5.36 Throat clean. Heart rapid. Tone poor.
 Colour poor. Pulse feeble.
 General condition - poor.

19.5.36 Heart - very irregular. Tone feeble.
 Restless. Cyanosed. Marked pallor.
 General condition - extreme.

2.20 p.m. Patient's condition deteriorated. Died.

Examination
 Inspection
 Palpation
 Percussion
 Auscultation

Treatment
 Salines
 Mist A.S.A.
 Mist A.S.A.

Condition on Admission

Throat enlarged. Membrane
 thick, extending to
 anterior pillar of
 velum. Tonsils
 enlarged. Glands
 swollen. Pulse
 rapid. Skin
 clear.



Name Barbara Huckle

(119)

Sex F Age 3

Lab. No.
411

Disease. Severe faucial Diphtheria.

Date of Admission. 23.3.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis and Rhinorrhoea ad.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 30.3.36

Bacteriological Examination.

23.3.36

Cultures +
Dick Test -

History of Present Illness.

Sore throat)
Sleepiness) 21.3.36

Nasal discharge.

Treatment.

Syringe fauces with chlorine water.

Desensitise.

A.D.S. 40,000 units I.M.

A.D.S. 40,000 units I.V.

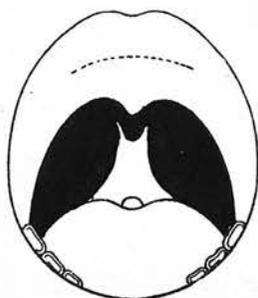
Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Chronic bronchitis.

Condition on Admission.

Tonsils enlarged. Membrane covering both, extending to uvula and anterior pillar of fauces. Glands periadenitis right side of neck. Heart - rapid and regular. Sounds poor in quality. Lungs - breath sounds vesicular. Skin clear. Profuse nasal discharge. General condition - toxic.



Date

- 24.3.36 Membrane necrotic, separating from tonsils and uvula. Glands subsiding.
Skin - clear.
Heart - very rapid. Sounds soft.
General condition - poor.
Treatment. Salines.
Mist A.S.A. m.5 4 hourly.
- 25.3.36 Still very toxic.
Colour and pulse unsatisfactory.
Restless at times.
Treatment. Paraldehyde 3† P.R.
- 29.3.36 Throat clean, ulcerated.
Patient restless at times.
Pulse extremely rapid. Colour unsatisfactory.
Condition - extreme.
Treatment. Camphor in oil $\frac{1}{2}$ cc 4 hourly.
Oxygen P.R.N.
- 30.3.36 Patient's condition deteriorated and she
2.40 a.m. died.

Treatment:

Prescribed by Dr. H. H. H. H.

Condition on Admission:

Temp. 101.5° F. Pulse 140. Respiration 40. Blood pressure 100/60. Throat clean. Glands well developed. Heart normal - regular. Lungs - breath sounds normal. Skin - clear. General condition - fair.



Name Donald Stewart

(121)

Sex M Age 3

Lab. No. 361

Disease. Severe faucial Diphtheria.

Date of Admission. 28.2.36

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea, Albuminuria ad. Cardiac Irregularity 43.

Period for throat to clean. 5 days.

Date of Discharge. 5.5.36

Date of Death.

Bacteriological

Examination.

28.2.36

Cultures +

Dick Test +

28.4.36)

29.4.36) -

30.4.36)

History of Present Illness.

Vomiting.)
Sleepiness.)
Sore throat.) 24.2.36
Headache.)
Glandular swelling.

Treatment.

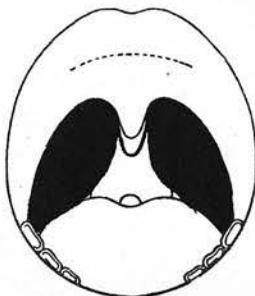
Syringe fauces with chlorine water 4 hourly.
Poultices to neck.
A.D.S. 40,000 units I.M.
A.D.S. 40,000 units I.V.

Previous Medical History.

Nil.

Condition on Admission.

Thick membrane present on both tonsils, which are enlarged and oedematous. Profuse purulent nasal discharge. Glands enlarged both sides of neck.
Heart sounds - regular. Tone fair.
Lungs - breath sounds normal.
Skin - clear.
General condition - fairly good.



Date

Continued.

- 29.2.36 Thick membrane separating from both tonsils and adjacent edge of palate on left side. Foetor present. Glands palpable and tender in neck. Heart regular. Sounds clear. Skin clear.
- 1.3.36 Membrane not entirely separated. Profuse nasal discharge. Pulse volume poor.
- 2.3.36 Throat clean and tonsils ulcerated. Glands subsiding. Colour and pulse fair. General condition - fairly good.
- 11.3.36 Throat clean. Palate active. Heart regular. Tone fairly good. General condition - improved.
- 16.3.36 Palate active. Heart sounds soft but regular. Muscles flabby.
Treatment. Mist A.S.A. $m\bar{v}$ P.R.N.
- 30.3.36 Palate active. Colour and pulse satisfactory.
- 6.4.36 Palate sluggish. Nasal intonation in speech. Heart irregular, rapid. Tone fair.
- 8.4.36 Palate still flaccid.
Treatment. Strychnine $gr \frac{1}{200}$ B.I.D
- 13.4.36 Palate sluggish. Heart sounds irregular. General condition - fair.
- 20.4.36 Throat clean. Palate active. Heart tone improved, regular. Muscles still soft. Improving.
Treatment. 1 Pillow.
- 24.4.36 Improving.
Treatment. Sit up. Omit strychnine.
- 27.4.36 Heart regular, tone improved. Muscles more firm. Patient progressed satisfactorily.
- 5.5.36 Discharged well.



Name John Rupert Steadman

(123)

Sex M Age 3

Lab. No. 230

Disease. Very Severe faucial Diphtheria.

Date of Admission. 8.1.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Cardiac Irregularity.

Period for throat to clean. 6 Days.

Date of Discharge. 7.3.36

Date of Death.

Bacteriological Examination.

8.1.36

Cultures + pre.ad.

Cultures + on ad.

Dick Test +

26.2.36)

27.2.36) -

28.2.36)

Treatment.

Syringe fauces with chlorine water 4 hourly.

A.D.S.20,000 units IM

A.D.S.20,000 units IM 12.40

a.m.

A.D.S.60,000 units IV (9.1.36)

History of Present Illness.

Sore throat)

Headache) 6.1.36

Shivering)

+ K.L.B. swab 6.1.36

Previous Medical History.

Measles 1934.

Condition on Admission.

Throat injected. Tonsils enlarged and oedematous. Covered with membrane. Tongue furred.

Glands not enlarged.

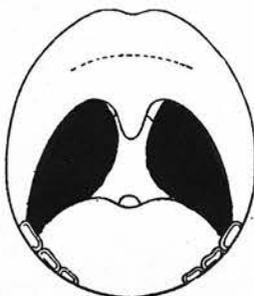
Heart - sounds closed and regular.

Chest - clear.

Skin - no rash. No Koplik's spots.

No discharges.

General condition - fairly good.



Date

- 8.1.36 Extensive membrane over both tonsils.
Gland not markedly enlarged.
- 9.1.36 Spread of membrane on to anterior pillar of fauces
left side and soft palate. Adenitis more marked
to-day.
General condition - rather more toxic.
Treatment. Mist A.S.A. m.6 P.R.N.
Adrenalin m.6 "
- 10.1.36 Membrane thickening. Pulse and colour satisfactory.
Heart - rapid and regular.
Treatment - Salines.
- 14.1.36 Throat clean. Heart sounds soft.
Pulse poor but quite satisfactory.
- 16.1.36 General improvement.
- 19.1.36 Colour and pulse varies at times. Muscles soft.
General condition - only fair.
- 25.1.36 General condition - seems improved.
- 31.1.36 Throat - palate active.
Heart irregular. Tone fair.
- 7.2.36 Palate active. Heart satisfactory.
General condition - fairly good.
- 14.2.36 Improving - colour and pulse good.
- 18.2.36 Treatment. 1 Pillow.
- 19.2.36 Scarlet Fever in ward. Patient Dick Test +
Treatment. A.S.S. 10 ccs. Desensitize.
- 20.2.36 Improving.
Treatment. Sit up.
- 23.2.36 Improvement maintained.
- 28.2.36 Treatment. In clothes.
- 7.3.36 Discharged fit.

Syringe Culture etc.
Nitroline etc. etc. etc.
Diet A.S.A. m.6 3 hourly.
Lamp for in m.1 1 or P.R.N.

Condition on Admission.
Throat - Tonsils. Gland not
markedly enlarged. Soft palate
very pinkish. Adenitis
marked on left.
Heart - tachycardia
glands. No neck.
Skin - clear.
Heart - tachycardia
lungs - crepitation
General condition - very toxic.



Name George Williamson

Sex M Age 4

Lab. No.

785

Disease. Severe faucial Diphtheria.

Date of Admission. 5.8.36

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Petechiae 6
Circulatory failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 8.8.36

Bacteriological
Examination.

5.8.36

Cultures +
Dick Test -

History of Present Illness.

Sudden onset.

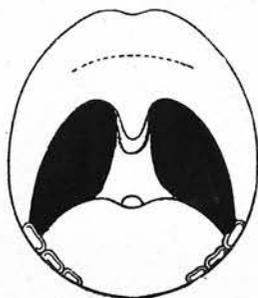
Vomiting)
Sore throat) 1.8.36
Adenitis)

Treatment.

A.D.S.40,000 units I.M. Nil.
A.D.S.60,000 units I.V.
Syringe fauces with
chlorine water 4 hourly.
Mist A.S.A. m.4 4 hourly.
Camphor in oil 1 cc P.R.N.

Previous Medical History.

Condition on Admission.

Tongue furred. Fauces injected and
oedematous. Both tonsils covered
with thickened membrane, oedema of
tissues marked.
Bilateral enlargement of cervical
glands. Bullneck.
Skin - clear.
Heart - tachycardia pronounced.
Lungs - breath sounds normal.
General condition - very toxic.

Date

6.8.36 Membrane thickened and separating from tonsils.
Oedema persists.
Serous rhinorrhoea continues.
Cervical glands enlarged with degree of periadenitis.
Heart - Bradycardia. 56 per minute.

7.8.36 Pulse 50. Regular. Thready. Marked double bullneck

11.15 a.m. Colour cyanosed. Extremities cold.
Capillary stasis.
General condition - toxic.
Tongue swollen, dry and glazed.
Tonsils in apposition. Blood stained separating exudate. Urine clear. Hepatic enlargement.
General condition - very poor.

8.8.36 Patient collapsed. Bruising at site of hypodermic
6.15 a.m. injection.
General condition - extreme. Died.

Treatment

Patient's Medical History

Spring fever with
ulcerative colitis
A.S.S. 40,000 with I.S.
Dysentery.
A.S.S. 60,000 with I.S.

Chronic ulcerative colitis
A.S.S. 40,000 with I.S.
Dysentery, Widal negative, Sabin
negative, Widal negative, Sabin
negative.

What I.S.S. with P.S.S.

Condition on Admission

On admission. The patient
showing slight fever at
admission. The patient
admitted with a temperature
Heart - 56 per minute.
Lungs - breath sounds normal.
Chest clear. No rales.
No discharges.
General condition - toxic.



Name Rosie Glover.

Sex F Age 5

Lab. No.
660

Disease. Severe faucial Diphtheria.

Date of Admission. 28.6.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Serum Rash 16

Period for throat to clean. 4 Days.

Date of Discharge. 2.9.36

Date of Death.

Bacteriological Examination.

28.6.36

Cultures +
Dick Test +

26.8.36)

27.8.36) -

28.8.36)

Treatment.Syringe fauces with
chlorine water. 4hrly
A.D.S. 40,000 units I.M.
Desensitize.A.D.S. 60,000 units I.V.
(p.m.)

Mist A.S.A. m.5 P.R.N.

History of Present Illness.

Gradual onset.

Vomiting.

Sore throat.

Glandular Swelling.)

} 27.6.36

Previous Medical History.

Immunised against Diphtheria

2 doses $1\frac{1}{2}$ years ago.

Measles, whooping cough) Dates

mumps and chicken pox) unknown.

Condition on Admission.Throat injected. Thin grey membrane
covering right tonsil and left
tonsil also partly covered. Glands
enlarged both sides of neck.

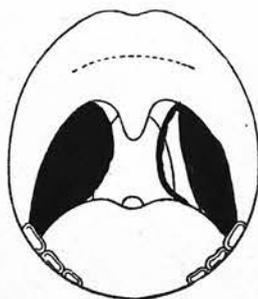
Heart - rapid and regular.

Lungs- breath sounds normal.

Skin clear. No Koplik's spots.

No discharges.

General condition - fair.



Date

- 28.6.36
p.m. Membrane spread on to Anterior Pillar of right side.
Periadenitis of cervical glands.
General condition -, toxic.
Treatment. A.D.S. 60,000 units I.V. Salines.
- 29.6.36 Membrane thickened over both tonsils. Glands
subsiding.
Heart - satisfactory.
General condition - fairly good.
- 3.7.36 Throat clean.
Heart regular. Colour and pulse satisfactory.
- 11.7.36 Generalised serum rash.
- 13.7.36 Palate active.
Heart sounds - closed and regular. Tone fair.
Improving.
- 20.7.36 Improvement maintained.
- 27.7.36 Palate active.
Heart sounds closed and regular. Colour and pulse
good. No paresis.
- 7.8.36 General condition improved.
- 12.8.36 Elevation in pulse rate.
- 17.8.36 Heart more satisfactory. Pulse steadier.
- 19.8.36 General condition - improved.
Treatment. 1 Pillow.
- 25.8.36 Improvement maintained.
Treatment. Up on couch.
- 2.9.36 Convalescence continued uninterrupted and patient
discharged fit and well.



Disease. Severe faucial Diphtheria.

Date of Admission. 15.6.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Serum Rash 16.
Septic Finger 17. Strabismus 52.
Palatal Paresis 52. Foot drop.

Period for throat to clean. 5 Days.

Date of Discharge. 4.9.36

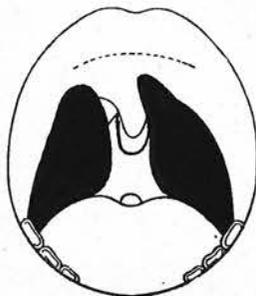
Date of Death.

Bacteriological Examination.
15.6.36Cultures +
Dick Test +
29.8.36)
30.8.36) -
31.8.36)**History of Present Illness.**

Last quite well 11.6.36

Vomiting)
Sleepiness) 12.6.36
Headache.)Glandular swelling 13.6.36
Sore throat 15.6.36
Difficulty in breathing 15.6.36**Treatment.**Syringe fauces with
chlorine water 4 hourly.
Poultices to neck.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist. A.S.A. m.5 P.R.N.
Brandy $\frac{3}{i}$ P.R.N.**Previous Medical History.**

Bronchitis.

Condition on Admission.Throat. Tonsils and right side of
adjacent palate on left side covered
with membrane. Uvula oedematous.
Tonsils enlarged. Glands in neck
enlarged, periadenitis.
Nose membrane present in left nostril
Thin profuse serous rhinorrhoea
present.
Heart rapid. Sounds pure.
Lungs clear.
General condition - fair.
No Koplik's spots.

Date

16.2.36 Throat clearing. Glands still enlarged.
Heart - sounds - regular.
General condition - good.

20.6.36 Throat clean.

24.6.36 Marked urticarial serum rash.
Heart sounds soft.
Pulse volume and force poor.

25.6.36 Septic index finger left hand.

1.7.36 Throat clean.
Heart - regular. Tone fair.

6.7.36 Palate active. Colour and pulse satisfactory.
Heart regular.

13.7.36 Improving.
Heart tone fair. Colour pale.

20.7.36 Palate sluggish. Heart regular.

27.7.36 Palate moving quite briskly. Int. strabismus
left eye.

8.7.36 Speech clear. Squint still present.

13.7.36 Eyes improved. No squint. Palate active.
Circulation satisfactory.

21.7.36 General condition improved.

28.7.36 Mild degree of left foot drop.

4.9.36 Circulation satisfactory. Convalescence was
continued uninterrupted, and patient was
discharged walking stiffly.

Treatment

Springer's Vaccine 2 doses
with chloride of lime
A.D. 5.30, 6.00 and 6.30
A.D. 7.40, 8.00 and 8.30

Previous Medical History

Condition on Admission

Temp. 38.2, 38.4, 38.6, 38.8
Pulse 100, 100, 100, 100
Respiration 20, 20, 20, 20
Blood pressure 120/80, 120/80
Cervical glands enlarged
Hiccups. 24 hr. - 24 hr.
Spots on chest. 24 hr. - 24 hr.
Nausea on the 1st day.
Heart - regular. Force, 24 hr. - 24 hr.
Lungs - normal. 24 hr. - 24 hr.
Refused medicine.



Name Sheila Walker

(131)

Sex F Age 4

Lab. No. 609

Disease. Faucial Diphtheria.

Date of Admission. 13.6.36

Day of disease on admission. Fourth

Type of organism. Gravis.

Complications. Cervical Adenitis ad. Cardiac Muscle Failure 13

Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 25.6.36

Bacteriological Examination.

13.6.36

Cultures +
Dick Test -

History of Present Illness.

Vomiting)
Sore Throat.) 12.6.36
Glandular Swelling)

Treatment.

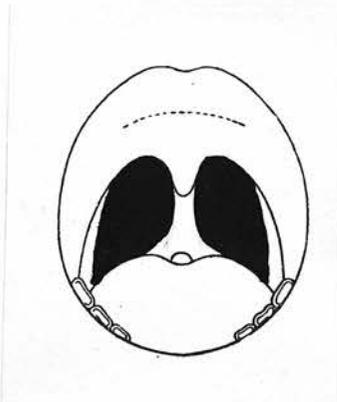
Syringe fauces 4 hourly
with chlorine water.
A.D.S. 30,000 units I.M.
A.D.S. 40,000 units I.V.

Previous Medical History.

Measles 1934.

Condition on Admission.

Tongue fur red. Fauces injected.
Oedematous. Both tonsils covered,
latero-posteriorally with membranous
exudate. Naso-pharynx involved.
Cervical glands enlarged. Nasal
discharge. Skin - few macular
spots on chest. Many chicken-pox
scars on the back.
Heart - rapid. Marked tachycardia.
Lungs - breath sounds normal.
General condition - toxic.



Date

- 14.6.36 Membrane thickening. Peradenitis of cervical glands still present.
Heart very rapid.
Condition - toxic.
Treatment. Adrenalin m.5 P.R.N.
- 19.6.36 Throat clean, but ulcerated.
Glands subsided.
Colour and pulse poor.
- 23.6.36 Heart irregular. Marked tachycardia.
Colour and pulse unsatisfactory.
Treatment. Mist A.S.A. m.5 4 hourly.
- 24.6.36 Vomiting to-day. Throat clean.
Post-nasal discharge present.
Tachycardia. Heart sounds very soft.
Pulse - poor in volume.
Treatment. Salines.
Camphor in Oil $\frac{1}{2}$ c.c. P.R.N.
Radiant Heat.
Oxygen P.R.N.
- 25.6.36 Patient's condition deteriorated and she
7.30 a.m. died.

Bacteriology
Examination

Treatment

Progress & History

Strains isolated
of the type
of the type
of the type
of the type

Condition on Admission

On admission, patient is
feverish, tachycardic, with
marked tachycardia, with
irregular rhythm over
apex. Lungs a little red
peripherally but no
infiltration. Sputum
Heart - regular, rapid
Lungs - breath sounds
General condition - fair.



Name Jack Waldron

Sex M Age 5

Lab. No. 533

Disease. Severe faucial Diphtheria.

Date of Admission. 23.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Cardiac Collapse 26.

Period for throat to clean. 7 days.

Date of Discharge. 29.7.36

Date of Death.

Bacteriological Examination.

23.5.36

Cultures +
Dick Test +

24.7.36)

25.7.36) -

26.7.36)

History of Present Illness.

Sore throat 21.5.36

Vomiting)
Shivering) 22.5.36
Adenitis)
Rhinorrhoea)

Treatment.

Syringe fauces with chlorine water 4 hourly.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.

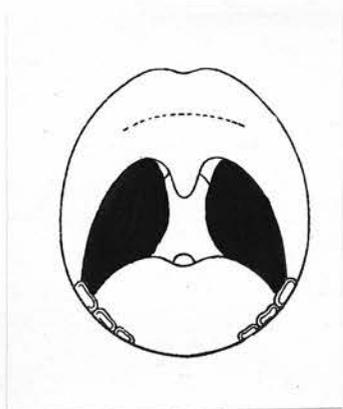
Previous Medical History.

Measles, 1934
Whooping cough, 1934.
Chicken pox, 1934.

Immunised against Diphtheria 10 weeks ago.

Condition on Admission.

Tongue furred. Throat injected and oedematous. Extensive membranous exudate covering both tonsils and extending over ant.pillar on right side. Glands adenitis and periadenitis both sides of neck. No Koplik's spots. Skin clear. Heart - regular, rapid. Tone fair. Lungs - breath sounds normal. General condition - fair.



Date

- 23.5.36 Extensive membrane on both tonsils, and uvula.
Glands periadenitis ++. Skin clear.
Heart rapid. Sounds closed.
Nasal discharge. Muscles very soft.
Colour and pulse poor.
General condition - toxic.
Treatment. Salines. Mist. A.S.A.m.5 P.R.N.
- 24.5.36 Vomited to-day. Membrane separating.
Colour and pulse poor.
- 26.5.36 Still vomiting. Colour and pulse poor.
Heart very rapid.
Treatment. Camphor in oil $\frac{1}{2}$ cc P.R.N.
- 30.5.36 Throat clean.
- 2.6.36 Generally improved. Circulation more satisfactory.
- 7.6.36 Palate active,
Heart rapid and regular. Colour and pulse good.
- 16.6.36 Palate active. Speech clear.
Heart sounds - closed and regular.
Generally greatly improved.
- 30.6.36 Improvement maintained.
- 5.7.36 General condition - good.
Treatment. 1 Pillow.
- 10.7.36 Muscle tone improved. Colour and pulse good.
Heart - regular.
Treatment. Up.
- 29.7.36 Convalescence continued uninterrupted.
Patient discharged well.

Treatment

Medical History

On 23.5.36 patient was
admitted with a
fever, rapid
heart, and
vomiting.
Mist. A.S.A.m.5 P.R.N.

Condition on Admission

Temp. 101.5, pulse 140, respir. 20
Chest - normal, no rales, no
rhonchi, no wheezing, no
crackles, no dullness, no
hyper-resonance. No
pleuritic pain. No
No Eglic's spots.
Heart - regular, rapid, 140.
Lungs - breath normal.
Eyes - Right internal strabismus.
General condition - fair.



Name Ellen Kelly

Sex F Age 5

Lab. No. 523

Disease. Severe faucial Diphtheria.

Date of Admission. 21.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Palatal Paralysis. 42.

Period for throat to clean. 5 Days.

Date of Discharge. 6.8.36

Date of Death.

Bacteriological Examination.

21.5.36
Cultures +
Dick Test -
3.8.36)
4.8.36) -
5.8.36)

History of Present Illness.

Sore throat. 19.5.36
Vomiting.)
Headache.) 20.5.36
Glandular swelling)

Treatment.

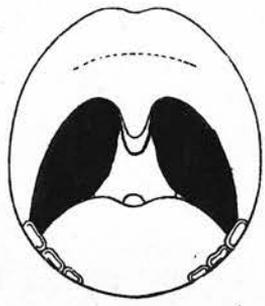
Syringe fauces with chlorine water 4 hourly.
Pre.ad. serum ? quantity.
A.D.S.40,000 units I.M.
A.D.S.40,000 units I.V.
Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Measles.

Condition on Admission.

Throat. Tonsils enlarged and oedematous, membrane covering both. Glands enlarged on both sides of neck, with a degree of periadenitis on right side of neck. Nasal discharge present. No rash. No Koplik's spots. Heart - regular, rapid. Tone fair. Lungs - breath sounds normal. Eyes - Right internal strabismus. General condition - fair.



Date

- 22.5.36 Extensive membrane over both tonsils, which is thickening and separating. Peritonsillitis still present, right side of neck.
Heart - regular. Colour and pulse satisfactory.
- 25.5.36 Throat clean. Oedema of fauces subsided. Glands not enlarged. Skin clear. Heart regular.
Urine clear.
General condition - good.
- 1.6.36 Throat clean. Tonsils +.
Heart regular. Colour and pulse good.
- 8.6.36 Palate active. Heart sounds closed and regular.
No paresis.
General condition - good.
- 15.6.36 Improving.
- 30.6.36 Palate sluggish. Nasal intonation in speech.
Heart regular.
- 1.7.36 Palate still sluggish. Facial paresis.
- 6.7.36 Paresis of palate and face still present.
- 11.7.36 Improving.
- 13.7.36 Palate active. Circulation satisfactory.
- 14.7.36 Vomited undigested food. Colour and pulse good.
- 15.7.36 Heart regular. Tone fair. No further vomiting.
- 16.7.36 Vomiting. Colour and pulse fair.
General condition - poor.
- 20.7.36 General condition - more satisfactory.
- 6.8.36 Convalescence continued uninterrupted and patient discharged on 6.8.36



Disease. Severe faucial Diphtheria.

Date of Admission. 18.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea and Adenitis ad.
Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 23.5.36

Bacteriological Examination.

18.5.36

Cultures +
Dick Test -

History of Present Illness.

Vomiting.)
Sleepiness.) 16.5.36
Sore Throat.)

Glandular swelling both sides of neck - 16.5.36

Treatment.

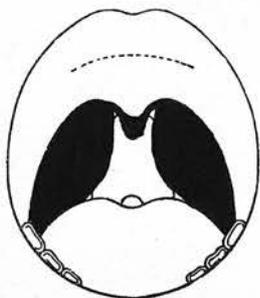
Syringe fauces with chlorine water 4 hourly.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Adrenalin m.5 P.R.N.

Previous Medical History.

Measles in infancy.

Condition on Admission.

Throat. Tonsils enlarged and oedematous. Both covered with membrane. Glands enlarged both sides of neck. Marked periadenitis. Skin clear.
Heart - rapid and regular.
Sounds closed.
Lungs - breath sounds normal.
General condition - toxic.



Date

- 19.5.36 Membrane thickened over both tonsils, present on uvula. Adenitis and periadenitis unchanged. Heart - very rapid. General condition - toxic.
- 20.5.36 Membrane separating from fauces. Glands subsiding. Heart - rapid and regular. Pulse poor. Very marked pallor. Vomiting. Pulse irregular at times. Treatment. Salines. Radiant Heat.
- p.m.
21.5.36 No further vomiting. Heart - irregular, rapid. Tone poor. Colour and pulse unsatisfactory. Returning salines. General condition - extreme.
- 23.5.36 Deteriorated. Died.
- 3.10 a.m.

Basal

Examined

1.1.1

1.1.1

1.1.1

1.1.1

1.1.1

1.1.1

1.1.1

1.1.1

Treatment

Saline

Saline

Saline

Saline

Saline

Saline

Condition on Admission

Temperature 103.6, pulse 140, respiration 30. Extremities cool, cyanosis at nail beds, sclerae pale, conjunctivae pale. Membrane on left tonsil, white, adherent. Tonsils well enlarged. Heart well enlarged, right side of heart. Lungs - breath sounds clear. No Koplik's spots. General condition - poor.



Disease. Severe faucial Diphtheria.

Date of Admission. 7.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Albuminuria 9
Palatal Paresis 35.

Period for throat to clean. 5 Days.

Date of Discharge. 4.7.36

Date of Death.

Bacteriological
Examination.
7.5.36Pre.ad.swab +
Dick Test -1.7.36)
2.7.36) -
3.7.36)

History of Present Illness.

Sudden onset. In bed since 5.5.36

Vomiting.)
Sleepiness.)
Sore throat) 5.5.36
Cough.)
Headache.)

Glandular swelling 6.5.36

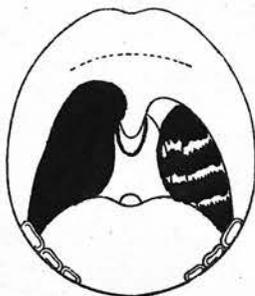
Treatment.

Syringe fauces with
chlorine water 4 hourly.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Salines.
Poultices to neck.

Previous Medical History.

Chicken Pox 1933.
Measles. April 1936

Condition on Admission.

Tongue furred. Throat injected.
Extensive membranous exudate with
active edge covering right side of
tonsil and palate. Patches of
membrane on left tonsil, uvula
oedematous. Foetor well marked.
Glands enlarged with periadenitis
right side of neck. Nasal discharge
Heart regular. Sounds clear.
Lungs - breath sounds normal.
No Koplik's spots.
General condition - fair.

Date

- 8.5.36 Membrane thickened over palate. Oedema of fauces still persists. Glands still enlarged.
Heart - regular and rapid.
General condition - toxic.
- 11.5.36 Throat clean. Tonsils +. Glands subsided.
Colour and pulse improved.
- 18.5.36 Improving.
- 25.5.36 Palate active. Circulation satisfactory.
- 1.6.36 Palate active.
Heart - very poor 1st sound.
General condition - only fair.
Treatment. Mist. A.S.A. m.5 P.R.N.
- 8.6.36 Palate sluggish.
Heart - 1st sounds still soft.
- 15.6.36 Palate sluggish. Nasal phonation well marked.
Heart tone improved.
Treatment. Strychnine gr.1/200 B.I.D.
- 24.6.36 Palate brisk. Speech clear.
Heart improved.
- 25.6.36 Treatment. 1 Pillow.
- 28.6.36 Improvement maintained.
Treatment. Omit strychnine.
- 4.7.36 Convalescence continued uninterrupted and patient discharged fit.

Treatment

Aspirin 5 grains 4 times a day

Eucalypti water 4 times a day

Painless to rest

Syrup of Marshmallows

A.S.A. 5 grains 4 times a day

Syrup of Marshmallows



Disease. Severe faucial Diphtheria.

Date of Admission. 4.5.36

Day of disease on admission. Fifth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Cardiac Collapse 6 & 7

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 9.5.36

Bacteriological
Examination.

4.5.36

Cultures +
Dick Test +

History of Present Illness.

Vomiting.)
Sleepiness.) 3.5.36
Sore Throat.)Glandular swelling)
Nasal discharge.) 4.5.36

Treatment.

Syringe fauces with
chlorine water 4 hourly.
Poultices to neck
4 hourly.

A.D.S. 40,000 units I.M.

A.D.S. 40,000 units I.V.

Adrenalin m.5 P.R.N.

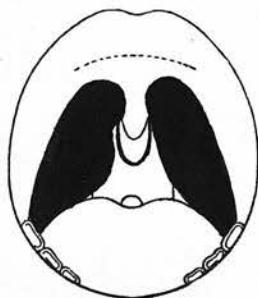
A.D.S. 40,000 units I.V.

(5.5.36 p.m.)

Previous Medical History.

Whooping cough)
Chicken pox) 1935
Measles)

Condition on Admission.

Throat. Tonsils enlarged. Membrane
covering both extending on to palate
Uvula oedematous. Slight nasal
discharge. Glands enlarged both
sides of neck, periadenitis on left.
Skin clear.Heart - regular and rapid
Lungs - breath sounds normal.
General condition - fair.

Date

- 5.5.36 Throat membrane thickening on palate and tonsils.
Oedema present. Foetor marked. Skin clear.
Heart - rapid and regular.
General condition - extremely toxic.
Treatment. Salines.
- p.m. Extension of membrane on soft palate.
Treatment. A.D.S. 40,000 units I.V.
- 8.5.36 Throat almost clean. Tonsils +. Glands subsided.
Heart tone very poor. Colour poor. Pulse feeble
at times.
General condition - poor.
- p.m. Vomiting.
Treatment. Omit everything by mouth. Salines.
Camphor in oil $\frac{1}{2}$ cc 4 hourly.
Radiant Heat 4 hourly.
Cardiac fomentations frequently.
- 9.5.36 No vomiting to-day.
Heart tone poor. Pulse very poor.
- p.m. Collapsed, pulse imperceptible. Colour cyanosed.
Condition - extreme.
Treatment. Pituitrin 1cc)
Strychnine gr. 1/60) statim.
- 2.35 p.m. Patient's condition deteriorated. Died.

Treatment

Saline solution with
chlorine water 4 hourly
A.D.S. 40,000 units I.V.
A.D.S. 40,000 units I.V.

Condition on Admission

Tonsils enlarged and covered with
white coating, membrane visible
on to 1/2 soft palate. Foetor
marked. Nasal discharge white.
Chest enlarged up back of neck.
Cilia clear.
Heart sounds regular.
Lungs - breath sounds normal.
General condition - fairly good.



Name William Hammond

Sex M Age 5

Lab. No.
456

Disease. Severe faucial Diphtheria.

Date of Admission. 21.4.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad. Scarlet Fever 28.

Period for throat to clean. 6 Days.

Date of Discharge. 4.7.36

Date of Death.

Bacteriological Examination.

21.4.36

Cultures +
Dick Test +

28.6.36)

29.6.36) -

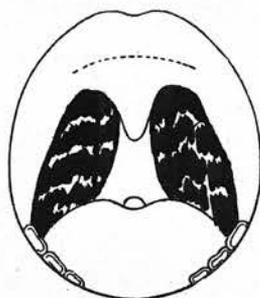
30.6.36)

History of Present Illness.Sore throat.)
Sleepiness.) 21.4.36
Glandular Swelling)

Patient's Mother admitted to Monsall several days previously with Diphtheria.

Treatment.Syringe fauces with
chlorine water 4 hourly
A.D.S. 40,000 units I.M.
A.D.S. 40,000 units I.V.
(22.4.36)**Previous Medical History.**Measles.)
Whooping Cough) 1935**Condition on Admission.**

Tonsils enlarged and covered with patchy looking membrane extending on to 1/3 soft palate. Tongue coated. Nasal discharge slight. Glands enlarged on both sides of neck. No Koplik's spots. Skin clear. Heart sounds regular. Lungs - breath sounds normal. General condition - fairly good.



Date

Continued.

- 22.4.36 Membrane active on left tonsil. Spreading on to palate. Oedema of fauces. Periadentitis right side of neck. Colour and pulse poor.
Treatment. Mist A.S.A. m.5 P.R.N.
- 24.4.36 Membrane well thickened and separating. Glands still enlarged in neck..
Heart rapid. Pulse soft.
General condition - more toxic.
- 28.4.36 Throat clean.
Heart sounds - closed, rapid and regular.
- 3.5.36 Colour and pulse good.
Improving.
- 12.5.36 Progress maintained.
- 19.5.36 Palate active. Colour and pulse satisfactory.
Heart - regular.
General condition - better.
- 20.5.36 Generalised punctate. Erythema. Tongue furred.
Injected fauces.
Recrudescence of Dick Test.
Treatment. Transfer to Cubicles. Scarlet Fever.
- 2.6.36 Desquamation of both hands.
Colour and pulse satisfactory.
- 10.6.36 Circulation satisfactory.
Treatment. 1 Pillow.
- 4.7.36 Convalescence uneventful. Patient discharged.

Treatment

Aspirin 1000 mg
 Chlorine water 1/2 pint
 Penicillin 20 units
 A.S.A. 100 mg
 Mist A.S.A. 1/2 pint
 A.D. 1/2 pint
 Rectal 1/2 pint
 Saline
 Urine

Condition on Admission

Tongue furred. Throat inflamed.
 Oedema of fauces. Periadentitis right side of neck.
 Colour and pulse poor.
 Glands enlarged in neck.
 Heart rapid. Pulse soft.
 General condition - more toxic.
 Skin clear. Temperature 101.0.
 Profuse perspiration. Dehydration.
 No Koplik's spots.
 Heart - regular. 1st and 2nd sounds faint.
 Lungs - clear.
 Nutrition - poor.
 General condition - toxic.



Name William Grafton.

Sex M Age 5

Lab. No.
453

Disease. Severe faucial Diphtheria.

Date of Admission. 16.4.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Petechiae 6

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 21.4.36

Bacteriological
Examination.
16.4.36Cultures +
Dick Test -

History of Present Illness.

Patient not well since 13.4.36
Confined to bed on 15.4.36Sore throat.)
Vomiting.) 15.4.36
Nasal Discharge.)

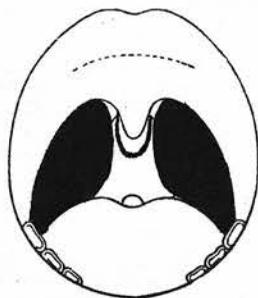
Treatment.

Syringe fauces with
chlorine water 4 hourly.
Poultices to neck.
A.D.S.40,000 units I.M.
Mist A.S.A. m.5 4 hourly.
A.D.S.40,000 units I.V.
Radiant Heat.
Salines.
Oxygen.

Previous Medical History.

Measles - 1933
Pneumonia.

Condition on Admission.

Tongue furred. Throat injected.
Foetor marked. Tonsils covered
with thick dirty membrane, naso-
pharynx and nose involved. Uvula
oedematous. Glands enlarged and
tender behind angle of jaw.
Skin clear. Very marked pallor.
Profuse seropurulent Rhinorrhoea.
No Koplik's spots.
Heart - regular. 1st mitral sound
impure.
Lungs - breath sounds normal.
Nutrition - poor.
General condition - toxic.

Date

- 17.4.36 Thick necrotic membrane over both tonsils.
Foetor ++. Skin bruising present.
Heart sounds -, soft, irregular. Tone poor.
Colour and pulse very unsatisfactory.
General condition - very poor.
Toxaemia ++
p.m. Very restless.
Treatment. Paraldehyde 3† P.R.
- 18.4.36 Generalised bruising. Colour and pulse poor.
Heart irregular and feeble.
General condition - toxic.
Treatment. Camphor in oil 1/2 cc P.R.N.
- 19.4.36 Throat cleaning. Skin petechial.
Haemorrhages ++ on arms, chest and legs.
Heart sounds feeble, irregular.
General condition - extremely poor.
- 20.4.36 Bleeding from nose, probably separation of membrane
in nasopharynx. Peripheral circulation feeble.
Extremities cold.
General condition - extreme.
- 21.4.36 Patient's condition gradually became worse and he
4.50 a.m. died.

21.4.36
21.4.36
22.4.36

Treatment

Spring's...
chlorine water + borax
4.4.36 8.000 mg
4.5.36 7.000 mg
4.6.36 6.000 mg
4.7.36 5.000 mg

Condition on Admission

General very depressed, pale
...
Heart - regular.
Lungs - breath ...
Skin clear.
Some perianthemic ...
sides of neck.
General condition - ...



Name Joyce Leigh

Sex F Age 5

Lab. No.
281

Disease. Severe faucial Diphtheria.

Date of Admission. 25.1.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Rhinorrhoea. Adenitis ad Serum rash 9

Period for throat to clean. 6 Days.

Date of Discharge. 24.3.36

Date of Death.

Bacteriological
Examination.

25.1.36

Cultures +
Dick test +

20.3.36)

21.3.36) -

22.3.36)

History of Present Illness.

Sleepiness)
Sore throat) 25.1.36
Headache.)
Shivering.)

Glandular swelling.

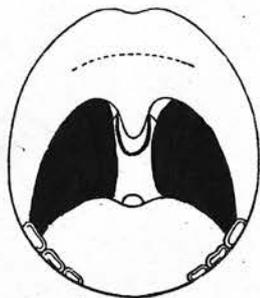
Treatment.

Syrings fauces with
chlorine water. **4 hourly**
A.D.S. 8,000 units pre.ad.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Poultices to neck.

Previous Medical History.

Chicken Pox 1934.
Whooping Cough 1935
Measles 1934.

Condition on Admission.

Fauces very injected, uvula
oedematous. Both tonsils and
nasopharynx covered with membrane.
Profuse Rhinorrhoea. Nose
excoriated. No Koplik's spots.
Heart - regular.
Lungs - breath sounds normal.
Skin clear.
Some periadenitis present both
sides of neck.
General condition - fair.

Date

26.1.36 Membrane on both tonsils. Thickening. Oedema of fauces subsiding. Still marked periadenitis. Rhinorrhoea still profuse. Heart regular. Colour and pulse fair. General condition - toxic.
Treatment. Salines. Mist A.S.A.mv 4 hourly.

27.1.36 Membrane necrotic shrinking. Colour and pulse poor.

28.1.36 Membrane extremely necrotic separating. Glands subsiding. Rhinorrhoea still profuse. General condition - poor.

31.1.36 Throat clean. Glands subsided. Heart rapid. Tone poor, regular.

2.2.36 Generalised serum rash. Adrenalin m.5 P.R.N.

7.2.36 Rather improved. Omit Mist A.S.A.

14.2.36 Palate active. Heart regular, rapid. Generally improving.

21.2.36 Palate active, no paresis. Heart more satisfactory.

28.2.36 Improvement maintained.

6.3.36 Palate active. No paresis. Heart regular, tone improved.
Treatment. 1 Pillow.

13.3.36 Improvement maintained.
Treatment. Sit up.

16.3.36 Treatment. Up.
Convalescence continued uninterrupted and patient

24.3.36 was discharged fit.

Syringe Chest with
calamine water & honey
A.S.A. 40,000 units 1.5
A.S.A. 80,000 units 1.5
Adrenalin m.5
Mist A.S.A. m.5 P.R.N.
Sulphur 5gr.

Condition on Admission
Throat - inflamed. Tonsils
enlarged. Intensive serous
exudate, extending up to
palate. Heart regular, rapid.
Chest - breath sounds normal.
General condition - toxic.



Disease. Severe faucial Diphtheria.

Date of Admission. 10.1.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad. Serum rash 5.
Albuminuria 16. Palatal Paralysis 35.
Strabismus 37. Left Otorrhoea 36.

Period for throat to clean. 6 Days.

Date of Discharge. 27.3.36

Date of Death.

Bacteriological Examination.

10.1.36

Cultures +
Dick Test -

23.3.36)

24.3.36) -

25.3.36)

History of Present Illness.

Sore throat 7.1.36

Drowsiness)
Glandular swelling) 9.1.36

Treatment.

A.D.S.3,000 units pre.ad.

Syringe fauces with
chlorine water 4 hourly.

A.D.S.40,000 units I.M.

A.D.S.60,000 units I.V.

Adrenalin m.5

Mist.A.S.A. m.5 P.R.N.

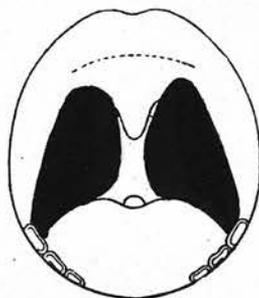
Radiant Heat.

Previous Medical History.

Bronchitis 3 years ago.

Condition on Admission.

Throat injected. Tonsils
enlarged. Extensive membrane
over both, extending on to soft
palate. Glands enlarged both
sides of neck. Skin clear.
No discharges.
Heart - regular. Rapid.
Chest - Breath sounds normal.
General condition - fair.



Date

- 11.1.36 Membrane thickened. Separation beginning. Glands still enlarged. Colour and pulse fair. Heart regular.
General condition - poor.
Treatment. Salines.
- 12.1.36 Separation still taking place. Membrane well thickened. Glands subsiding. Colour and pulse still poor.
- 16.1.36 Throat clean. Colour poor at times. Pulse fair. Urine clear.
General condition - fair.
- 20.1.36 Colour variable. Pulse fair.
- 22.1.36 Pains in wrists and knees. Slight elevation of temperature.
Treatment. Mist Soda Sal $\frac{3}{ii}$ 4 hourly.
Wool to joints.
- 23.1.36 Albumen and trace of blood in urine.
Treatment. Blanket bed and fluids.
- 27.1.36 Joint pains improving. Urine albumen less. General condition - Improved a little.
- 2.2.36 Profuse Otorrhoea.
Treatment. Cleanse ear 4 hourly.
- 6.2.36 Enteritis. One stool relaxed and offensive. No blood or mucous.
Treatment. Barrier.
Mist Bismuth $\frac{3}{ii}$ 4 hourly.
- 9.2.36 Stool normal
- 10.2.36 Throat clean. Palate sluggish. Heart regular. Tone fair. Ear discharging still. Urine clear.
- 11.2.36 Palate sluggish. Nasal intonation +
Treatment. Semi-solid diet. Omit Bismuth.
- 12.2.36 Palate immobile. Nasal phonation present. Heart rapid and regular.
Treatment. Nasal feeds. Atropine gr. 1/100 P.R.N.
- 13.2.36 Slight internal strabismus left eye.
- 16.2.36 Palate still immobile. Diaphragm movement satisfactory.
General condition - poor.
- 17.2.36 Palate still immobile. Colour and pulse poor.
- 21.2.36 Movement of palate. Heart tone rather better, pulse volume improved.
Treatment. Light diet.
- 2.3.36 Improving.
Treatment. 1 Pillow.
- 6.3.36 Improvement maintained.
Treatment. Sit up.
- 11.3.36 ? Slight drooping of left side of face.
- 19.3.36 Facial tone improved.
Treatment. Up on couch.
Convalescence continued uninterrupted.
- 27.3.36 Patient discharged.

Name Ronald Ellis

Sex M Age 5

Lab. No.

149

Disease. Severe faucial Diphtheria.

Date of Admission. 10.12.35

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad Albuminuria 12 Otorrhoea 28
Palatal Paralysis 31 Diaphragmatic paralysis.

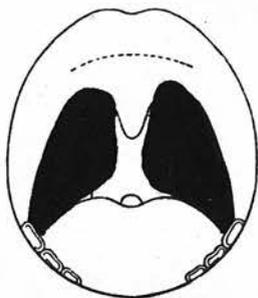
Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 10.1.36

Bacteriological Examination.

10.12.35

Cultures +
Dick Test +**History of Present Illness.**Last perfectly well 7.12.35
Confined to bed 8.12.35.
Vomiting, sleepiness on the 10.12.35
Headache on 8.12.35
Sore throat 9.12.35
Glandular swelling 10.12.35.**Treatment.**Syringe fauces with
chlorine water 4 hourly.
Poultices.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Adrenalin $miii$ P.R.N.
Radiant Heat.**Previous Medical History.**Ear discharge after measles, August
1935.
Whooping cough 1932.
Bronchitis 1935.**Condition on Admission.**Thin filmy membrane covering both
tonsils which are enlarged and
oedematous and $\frac{1}{4}$ soft palate involved.
Tongue coated. No Koplik's spots.
No discharges.
Glands and periglandular tissue
swollen, mostly on left side of neck.
Heart sounds - regular. Tone fair.
Nutrition and colour good.
Skin - clear.
General condition - fairly toxic.

Date

- 10.12.35 Throat - still oedematous. Membrane separating.
Treatment. Salines.
Paraldehyde $\frac{3}{4}$ P.R.N.
- 11.12.35 Membrane still separating. Glands subsiding.
Heart - sounds closed and regular.
Slight Rhinorrhoea.
General condition - fair.
Treatment. Mist. A.S.A. $\dot{m}\dot{v}$ 4 hourly.
- 15.12.35 Throat - clean and ulcerated. Tonsils still
enlarged. Glands - subsiding.
Colour and pulse - satisfactory.
- 17.12.35 Throat - ulcerated. Skin - clear.
Heart - Tachycardia.. Tone poor.
General condition - fair.
- 26.12.35 Vomiting. Colour and pulse - poor.
Peripheral circulation - unsatisfactory.
Treatment. Nil by mouth. Salines. Omit Mist A.S.A.
Ice to suck. Radiant heat.
General condition - worse.
- 29.12.35 No further vomiting. Colour and pulse improved.
Treatment. Fluids. Camphor in oil .5 cc P.R.N.
- 2.1.36 Throat clean - Palate active.
Heart - irregular. Tone poor. No paresis.
Colour and pulse - unsatisfactory.
- 5.1.36 Left Otorrhoea.
- 6.1.36 Throat - clean.
Heart - more regular.
Colour and pulse remain poor.
- 7.1.36 Palate extremely sluggish. Nasal intonation.
Heart regular.
No further vomiting.
General condition - poor.
Treatment. Semi-solids.
- 9.1.36 Not swallowing semi-solids. Large quantities of
mucous collecting in pharynx.
Heart - irregular.
Peripheral circulation - poor.
General condition - unsatisfactory.
Diaphragm not acting.
Treatment. Nasal feeds.
Suction for pharynx P.R.N.
- 10.1.36 Died. Diaphragmatic paralysis.
9.40 a.m.



Disease. Severe faucial Diphtheria.

Date of Admission. 5.8.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Petechiae 5
Triple Rhythm 6. Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 8.8.36

Bacteriological Examination.

5.8.36

Cultures +
Dick Test -

History of Present Illness.

Sleepiness)
Sore throat) 2.8.36

Glandular swelling 4.8.36
Shivering 5.8.36

Treatment.

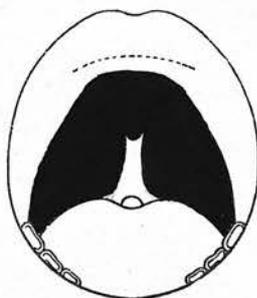
Syringe fauces with
chlorine water, 4 hourly
A.D.S. 8,000 units pre.ad.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist.A.S.A. m.7 P.R.N.

Previous Medical History.

Bronchitis 1936

Condition on Admission.

Tongue furred. Throat injected.
Tonsils enlarged, covered with
thick membrane, which extends up
on to soft and hard palate and
downwards to Post: wall of pharynx.
Bilateral cervical adenitis and
periadenitis. Skin clear.
No Koplik's spots.
Heart - regular and rapid.
General condition -, very poor.



Name Elsie Denton

Sex F Age 6

Lab. No.

608

Disease. Severe faucial Diphtheria.

Date of Admission. 12.6.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad Albuminuria 12

Period for throat to clean. 5 Days

Date of Discharge. 13.8.36

Date of Death.

Bacteriological
Examination.

12.6.36

Cultures +
Dick Test +

11.8.36)

12.8.36) -

13.8.36)

Treatment.

Syringe fauces with
chlorine water. 4hrly
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist A.S.A. m.5 P.R.N.

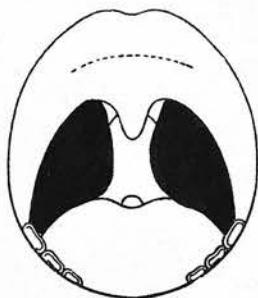
History of Present Illness.

Vomiting)
Sleepiness) 10.6.36
Sore throat)

Previous Medical History.

Measles in infancy

Condition on Admission.

Throat injected. Tonsils
oedematous, covered with thick
yellow membrane. Spreading on to
the posterior pharyngeal wall.
Marked foetor of breath. Glands
enlarged both sides of neck.
Periadenitis on the right side.
Skin clear.
Heart - marked tachycardia.
Lungs - breath sounds normal.
No nasal discharge.
General condition - fairly good.

Date

- 13.6.36 Membrane thickening and separating.
Heart - regular.
Colour and pulse good.
- 15.6.36 General condition - fair.
Throat clearing. Glands subsiding.
Heart rapid but regular.
Colour good.
- 18.6.36 Throat clean.
- 24.6.36 Throat clean. Colour and pulse satisfactory.
Heart - regular. Albuminuria.
- 1.7.36 Heart sounds - closed, regular. Tone fair.
Progress good.
- 6.7.36 No paresis. Colour and pulse satisfactory.
Heart - regular.
- 13.7.36 Improving.
- 20.7.36 Improvement maintained.
- 27.7.36 Palate active.
Heart - regular.
General condition - satisfactory.
- 5.8.36 Treatment. 1 Pillow.
Improvement maintained.
- 14.8.36 Treatment. Up.
Convalescence continued uninterrupted and patient discharged fit.

Treatment:

Apr 12. 8. 1936
 10.0.30, 0.00, 0.00, 0.00
 11.0.30, 0.00, 0.00, 0.00
 12.0.30, 0.00, 0.00, 0.00

Condition on Admission

Throat inflamed. Membrane
 easily and rapidly removed.
 Tongue normal. No paresis.
 Marked factor from
 Skin clean.
 Heart - tachycardia.
 Spleen - enlarged with perisplenitis.
 General condition - weak.



Disease. Severe faucial Diphtheria.

Date of Admission. 1.6.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis ad. Palatal Paresis. Facial Droop 48.

Period for throat to clean. 5.Days.

Date of Discharge. 30.7.36

Date of Death.

Bacteriological Examination.

1.6.36

Cultures +
Dick Test -

27.7.36)

28.7.36) -

29.7.36)

History of Present Illness.

Sudden onset.

Nasal discharge)
Sleepiness)
Sore throat) 31.5.36

Adenitis - 1.6.36

Treatment.

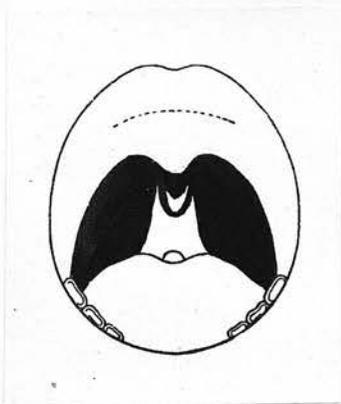
Syringe fauces with
chlorine water 4 hourly.
A.D.S.40,000 units I.M.
A.D.S.50,000 units I.V.
Mist.A.S.A. m.5 P.R.N.

Previous Medical History.

Scarlet Fever.
Chicken Pox.
Measles.

Condition on Admission.

Throat injected. Membrane over both
tonsils and fauces, spreading over
Post.aspect of uvula. Uvula oedematous
Tongue furred. No Koplik's spots.
Serosanguineous discharge from nose.
Marked foetor from breath.
Skin clear.
Heart - tachycardia.
Glands - enlarged with periadenitis.
General condition - toxic.



Date

- 2.6.36 Membrane over both tonsils and uvula. Glands enlarged both sides of neck.
Heart regular. Colour and pulse good.
- 7.6.36 Throat clean.
- 9.6.36 Colour and pulse satisfactory.
Heart - regular.
- 16.6.36 Throat clean. Palate active. Glands Nil.
Heart satisfactory.
Improving.
- 30.6.36 Palate active.
Heart irregular at times.
Colour good. Pulse satisfactory.
- 7.7.36 Circulation satisfactory. No paresis.
- 12.7.36 Palate sluggish. Nasal phonation.
Colour and pulse good.
- 16.7.36 Palate still sluggish. Muscles right side of face atonic.
Treatment. Strychnine *gr 1/200* B.I.D.
- 21.7.36 Phonation clear. Face muscles improving.
Circulation satisfactory.
Treatment. 1 Pillow.
- 28.7.36 Improvement maintained.
Treatment. Up. Omit Strychnine.
- 29.7.36 Convalescence continued uninterrupted and patient discharged fit.

Treatment

Syringe doses of
chlorine water, 4 times
Furazolidone 100 mg
A.D. 8.00, 100 mg
A.D. 8.00, 100 mg
Sedative doses 100 mg

Physical Examination

Conditions on Admission

On admission patient was
suffering with influenza
febrile condition, cough
and sore throat. The
temperature was 101.2
F. Pulse 100. Respiration
18. Heart regular, regular.
Lungs - normal sounds
Skin - normal spots on
trunk and lower limbs. No
rash.
General condition - poor.



Name Arthur Chappelle

Sex M Age 6

Lab. No.

521

Disease. Severe faucial Diphtheria.

Date of Admission. 21.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Petechiae ad Rhinorrhoea ad
 Triple Rhythm 15 Otorrhoea 25 Palatal Paresis
 31

Period for throat to clean. 8 Days.

Date of Discharge. 1.9.36

Date of Death.

Bacteriological
Examination.

21.5.36

Cultures +
Dick Test +

28.8.36)

29.8.36) -

30.8.36)

History of Present Illness.

Nasal discharge 20.5.36

Sore throat 19.5.36

Glands both sides of neck 21.5.36

Treatment.

Syringe fauces with
chlorine water. **4 hourly**

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Calcium Sandoz **10ccs** I.V.

Previous Medical History.

Measles 1931.

Condition on Admission.

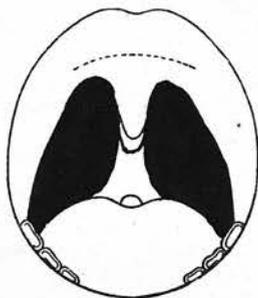
Tonsils and fauces oedematous,
 covered with bloodstained
 filamentous membrane, extending
 on to soft palate. Profuse
 seropurulent nasal discharge.
 Bilateral adenitis and periadenitis
 of cervical glands.

Heart very rapid, regular.

Lungs - breath sounds normal.

Skin - petechial spots on chest,
 trunk and lower limbs. Bruising
 readily.

General condition - poor.



Date

- 22.5.36 Membrane separating with haemorrhage. Oedema of throat less. Glands still enlarged. Petechiae still present.
Heart tone very poor. Rapid and irregular.
General condition - toxic.
Treatment. Paraldehyde 3i P.R.
Mist A.S.A. m.5 4 hourly.
- 23.5.36 Throat still ulcerated and bleeding.
Heart irregular. Tone poor.
- 25.5.36 No change in general condition.
- 28.5.36 Throat not yet clean. Oedema of both orbital regions.
- 29.5.36 Throat clean.
- 31.5.36 Oedema of face improved. Heart triple rhythm.
Pulse imperceptible. Colour cyanosed.
General condition - poor.
- 2.6.36 Face improving. Heart still triple rhythm.
- 5.6.36 Heart more regular. Face improving.
Treatment. $\frac{1}{2}$ cc Camphor in oil 4 hourly.
- 9.6.36 Generally better.
Treatment. Omit Mist. A.S.A. and Camphor in oil
- 16.6.36 Glands enlarged in neck. Heart irregular, tone poor, colour and pulse better.
- 19.6.36 Nasal phonation. Palate sluggish.
Heart - grossly irregular.
- 20.6.36 Collected mucous in throat.
Treatment. Atropine gr.1/100 P.R.N.
Strychnine gr.1/200 T.D.S.
- 21.6.36 Palate still sluggish.
Treatment. Semi-solid diet.
- 23.6.36 Marked dysphagia.
Treatment. Nasal feeds.
- 5.7.36 Palate moving, phonation clear.
Heart regular. Sounds muffled.
General condition - slightly improved.
Treatment. Omit nasal feeds.
- 13.7.36 Palate movement brisk. Heart regular.
General condition - improving.
- 17.7.36 Heart - regular. Muscle tone improving.
Treatment. 1 Pillow.
- 23.7.36 Improvement maintained.
Treatment. Up on couch.
Omit strychnine.
- 29.7.36 Convalescence continued uninterrupted.
Culture virulent.
Discharge delayed due to persistent + culture.
- 21.8.36 Culture virulent.
- 1.9.36 Discharged fit and well.

Disease. Severe faucial Diphtheria.

Date of Admission. 6.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad.

Period for throat to clean. 6 Days.

Date of Discharge. 26.6.36

Date of Death.

Bacteriological Examination.

6.5.36

Cultures +
Dick Test +

23.6.36)

24.6.36) -

25.6.36)

History of Present Illness.

Sudden onset. Last perfectly well
3.5.36

Sore throat.)
Bleeding from nose) 5.5.36

Headache.)
Glandular swelling) 6.5.36

Treatment.

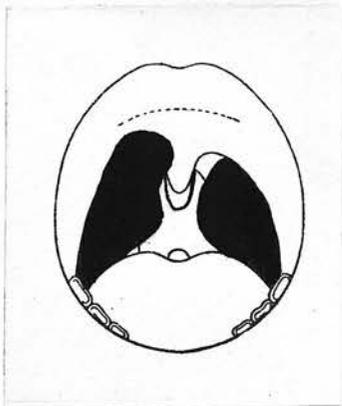
Syringe fauces with
chlorine water 4 hourly
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Mist A.S.A. m.7 P.R.N.

Previous Medical History.

Measles)
Whooping Cough) Infancy.

Condition on Admission.

Tongue furred. Throat injected.
Foetor marked. Membranous exudate
on both tonsils, extending to palate
on right side.
Glands enlarged and tender both sides
of neck.
Skin clear. Colour good.
Heart - regular. Sounds clear.
Lungs - breath sounds normal.
No Koplik's spots.
General condition - fair.



Date

- 6.5.36 Marked oedema of uvula. Tonsils covered with membrane, periadenitis ++ right side of neck.
Treatment. Adrenalin m.5 P.R.N.
- 7.5.36 Throat very oedematous. Membrane spread on to soft palate. Periadenitis right side of neck.
Skin clear. Colour and pulse satisfactory.
Heart - regular.
General condition - toxic.
- 12.5.36 Throat clean. Ulcerated.
Heart - regular. Tone fairly good.
- 19.5.36 Colour and pulse satisfactory.
General condition - better.
- 26.5.36 Improving.
- 30.5.36 Heart - regular.
Muscle tone improving. Colour and pulse good.
- 8.6.36 Circulation satisfactory. No paresis.
General condition - good.
- 12.6.36 Improving.
Treatment. 1 Pillow.
- 16.6.36 Palate active. Colour and pulse good.
Heart - regular.
Treatment. Sit up.
- 17.6.36 Treatment. Up.
- 26.6.36. Convalescence continued uninterrupted and patient discharged.

Treatment

Syringe the fauces
with chlorate water four
times a day, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000.

Patient's Medical History

Condition on Admission

Throat examination reveals an
acute tonsillitis with enlarged and
ulcerated tonsils. Membrane spread on
soft palate on left side. No
peritonsillitis present on right.
Heart sounds - regular. Tactile
fairly good.

Lungs - breath sounds normal.
Skin clear. No Koplik's spots.
General condition - fair to good.



Name Joseph Cawley

Sex M Age 6

Lab. No.

471

Disease. Severe faucial Diphtheria.

Date of Admission. 4.5.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad

Period for throat to clean. 4 Days.

Date of Discharge. 4.7.36

Date of Death.

Bacteriological
Examination.

4.5.36

Cultures +
Dick Test -

1.7.36)

2.7.36) -

3.7.36)

History of Present Illness.

Vomiting)
Sleepiness) 2.5.36Sore throat.)
Headache.) 3.5.36
Shivering.)

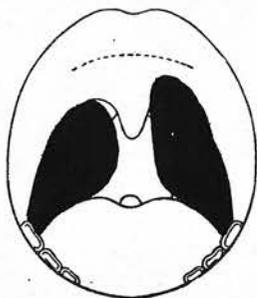
Treatment.

Syringe the fauces
with chlorine water. **4 hourly**
A.D.S. 40,000 units I.M.
Foultices to neck.
A.D.S. 50,000 units I.V.

Previous Medical History.

Measles 1935

Condition on Admission.

Throat membranous exudate on both
tonsils which are enlarged and
oedematous. Membrane extends on to
palate on left side. Glands
enlarged both sides of neck.
Periadenitis present on left.
Heart sounds - regular. Quality
fairly good.
Lungs - breath sounds normal.
Skin clear. No Koplik's spots.
General condition - fairly good.

Date

- 4.5.36 Extension of membrane on palate.
Treatment. Mist. A.S.A. m.6 P.R.N.
- 5.5.36 Membrane thickened over both tonsils. No further spread. Glands still enlarged.
Heart - regular.
Treatment. Paraldehyde 3i P.R.
- 8.5.36 Throat clean. Colour good. Pulse rapid and regular.
- 16.5.36 Colour and pulse deteriorated. Muscles soft.
Treatment. Camphor in oil $\frac{1}{2}$ cc P.R.N.
- 21.5.36 Slight aural discharge.
- 22.5.36 General condition improved.
Circulation seems better.
- 29.5.36 Colour and pulse satisfactory.
Ear discharge less.
- 5.6.36 Heart regular. Tone improving.
- 12.6.36 Palate active. Heart satisfactory.
Colour and pulse good.
Treatment. 1 Pillow.
- 19.6.36 Improvement maintained.
Treatment. Sitting up.
- 26.6.36 General condition good. Circulation satisfactory.
Muscle tone improved.
Treatment. Up.
- 4.7.36 Convalescence uninterrupted and patient discharged fit.

Treatment

Previous Medical History.

Syringomyelia
adhesive capsulitis
A.S.A. m.6
A.S.A. m.6
Mist. A.S.A. m.6

Condition on Admission

Throat sore. Throat pain over membrane over both tonsils and uvula. Thickening over uvula and uvula. Glands - enlarged and indurated on both sides of neck.
Skin clear.
Heart - rapid. Force clear and regular.
Lungs - breath sounds normal.
No Dühring's swellings or rashes.
General condition - poor.



Disease. Severe faucial Diphtheria.

Date of Admission. 8.4.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Petechiae 6.
Palatal Paralysis 37.

Period for throat to clean. 6 Days.

Date of Discharge. 15.6.36

Date of Death.

Bacteriological
Examination.

8.4.36

Cultures +
Dick Test -

10.6.36)

11.6.36) -

12.6.36)

Treatment.

Syringe fauces with
chlorine water 4 hourly
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Mist.A.S.A.m.5 4 hourly.

History of Present Illness.

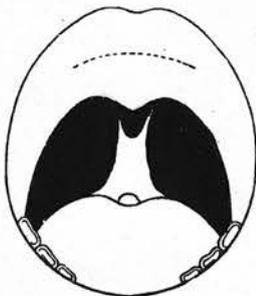
Sore throat 5.4.36

Vomiting)
Sleepiness) 6.4.36Shivering)
Glandular swelling) 7.4.36

Previous Medical History.

Measles.

Condition on Admission.

Tongue furred. Throat extensive
membrane over both tonsils and
uvula. Thickening and separating
with bleeding.
Glands - adenitis and periadenitis
++ both sides of neck.
Skin clear.
Heart - rapid. Sounds closed and
regular.
Lungs - breath sounds normal.
No Koplik's spots and no discharges.
General condition - poor.

Date

- 9.4.36 Membrane still present over both tonsils, separating. Glands still enlarged. Skin clear. Heart - rapid. Tone poor. Profuse nasal discharge. General condition - toxic. Treatment. Salines.
- 10.4.36 Bruising marked to-day on arms. Petechiae present. Still marked Rhinorrhoea. General condition - poor. Treatment. Mist A.S.A. m.5 P.R.N.
- 14.4.36 Throat clean. No further bruising. Heart sounds soft. Colour and pulse poor.
- 19.4.36 Colour and pulse still poor. Treatment. Camphor in oil, $\frac{1}{2}$ cc 4 hourly.
- 21.4.36 Palate active. Heart regular. Tone fair. General condition - rather better. Omit camphor in oil
- 28.4.36 Colour and pulse good. Improving.
- 5.5.36 Palate active. Colour and pulse good. Heart - regular.
- 10.5.36 Regurgitation of fluids. Palate moving. Colour and pulse good.
- 11.5.36 Palate sluggish. Nasal phonation. Heart - regular.
- 12.5.36 Palate more sluggish. Heart sounds closed and regular. General condition - fair.
- 17.5.36 Palate inactive. Marked dysphagia. Heart regular. Treatment. Nasal feeds. Atropine gr. $\frac{1}{100}$ P.R.N.
- 23.5.36 Palate active. Heart tone improving. Colour and pulse good. Treatment. Omit nasal feeds.
- 29.5.36 Improving. Treatment. 1 Pillow.
- 1.6.36 Palate active. Colour and pulse good. Treatment. Sit up.
- 8.6.36 Improvement maintained. Treatment. Up.
- 15.6.36 Convalescence continued uninterrupted and patient was discharged.

Disease. Very severe faucial Diphtheria.

Date of Admission. 10.1.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Albuminuria 18
Oedema of eyelids 24. Palatal paralysis

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 4.2.36

Bacteriological
Examination.

10.1.36

Cultures +
Dick Test +

History of Present Illness.

Headache 8.1.36

Sleepiness,)

Sore throat.)

Glandular swelling) 9.1.36

Vomiting. 10.1.36

Immunized
December 1935.

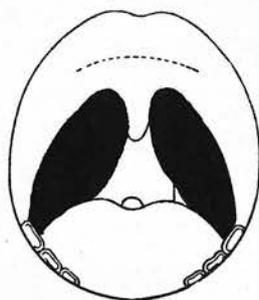
Treatment.

Syringe the fauces
with chlorine water. **4 hourly**
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Poultices to neck.
Mist. A.S.A. **mV** 4 hourly.

Previous Medical History.

Measles - Discharged from Monsall
3.1.36
Diphtheria Prophylactic given
whilst in Hospital.

Condition on Admission.

Tongue furred. Throat oedema of
fauces with extensive membrane over
both tonsils, to edge of soft
palate. Glands enlarged both sides
of neck, with a degree of
periadenitis.
Heart sounds - regular and rapid.
Tone fair.
Lungs - breath sounds normal.
No discharges.
General condition - fair.

Date

- 11.1.36 Membrane stripping from tonsils. Glands enlarged.
Colour and pulse poor.
Heart regular. Tone feeble.
Treatment. Mist.A.S.A.m.5 4 hourly.
- 16.1.36 Throat clean.
Heart irregular. Colour and pulse fair.
General condition - poor.
- 18.1.36 Vomited to-day. Pulse unsatisfactory.
Treatment. Omit food and salines.
- 19.1.36 No further vomiting.
Heart still irregular. Colour and pulse rather better.
Treatment. Omit Mist. A.S.A.
Light Diet.
- 21.1.36 Albumen + in urine.
Heart still irregular. Tone poor.
Oedema of face. Eyes puffy.
- 25.1.36 Oedema ++ of eyelids and face.
Slight intonation in speech.
Heart regular but tone poor.
- 30.1.36 Heart grossly irregular. Tone poor. Pulse poor volume.
Slight cyanotic tinge and peripheral circulation feeble.
- 1.2.36 Oedema of eyelids very marked.
Urine - albumen ++. Temperature unsettled.
Treatment. Argyrol 10% to eyes.
Foment eyelids 2 hourly.
- 2.2.36 Difficulty in swallowing.
Treatment. Nasal feeds.
Atropine gr. 1/100. P.R.N.
- 3.2.36 Oedema + of face and right eyelid still inflamed.
Eyelid seems fluctuant.
Treatment. Eyelid incised. Pus obtained.
Adrenalin m.5 P.R.N.
- 4.2.36 Chest - crepitations ++ bilaterally.
No localised dullness.
Palate immobile.
Eyelid sloughing. Eye appears satisfactory.
Heart irregular. Tone poor.
General condition - extreme.
Cardiac weakness increased. This was associated with chest complications and a periorbital abscess.
- 5.p.m. Died.



Disease. Severe faucial Diphtheria.

Date of Admission. 28.12.35

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea, Albuminuria ad.
Petechiae 7. Triple Rhythm 10.

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 8.1.36 7.45

D.M.

Bacteriological
Examination.

28.12.35

Cultures +
Dick Test +

History of Present Illness.

Sore throat. 25.12.35
Glandular swelling. 27.12.35
Nasal discharge. 27.12.35

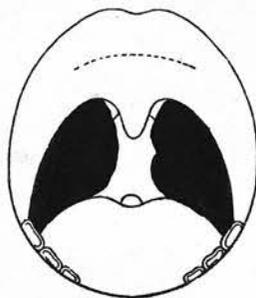
Treatment.

A.D.S. 2,000 units pre.ad.
Syringe fauces with
chlorine water 4 hourly.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Poultices to neck.
Mist. A.S.A. m.5 P.R.N.

Previous Medical History.

Measles - 1931.

Condition on Admission.

Throat - thick degenerate membrane
covering both tonsils, nares and
Nasopharynx.
Glands - enlarged both sides of
neck.
Heart - rapid and regular.
Chest - breath sounds normal.
Skin - clear. No Koplik's spots.
No discharges.
Very toxic.
Colour and pulse satisfactory.

Date

- 29.12.35 Throat - membrane over both tonsils, separating. Slight oedema of fauces. Glands - marked periadenitis. Skin - no petechiae. Profuse blood-stained nasal discharge. Albumen in urine. Heart - sounds soft. Pulse - rapid. Volume poor. Treatment. Mist A.S.A. m.6 4 hourly. Radiant Heat 4 hourly. Salines. Paraldehyde 3i P.R.
- 30.12.35 Throat cleaning. Glands subsiding. Heart - regular, sounds very soft. General condition - fair.
- 31.12.35 Throat - very much cleaner. Glands subsiding. Heart - tachycardia. Skin - petechiae and bruising. General condition - poor.
- 1.1.36 Throat - cleaning. Glands - subsiding. Heart - rapid. Tone poor. Colour and pulse - unsatisfactory. Skin - petechiae ++ General condition - extremely poor. Treatment. Pitrutrin .5cc 4 hourly. Adrenalin m.5 P.R.N.
- 3.1.36 Throat - clean. Glands - subsided. Heart - triple rhythm. Skin - bruising more marked. General condition - poor.
- 4.1.36 Vomiting. Heart - galloping. Skin - bruising. General condition - poor. Treatment. Omit fluids per os. Salines. Ice to suck.
- 5.1.36 No vomiting. Heart - triple rhythm. General condition - poor. Treatment. Milk and soda.
- 6.1.36 Heart - galloping. No vomiting. General condition - limp and poor. Treatment. Increase feeds slightly.
- 7.1.36 Vomiting again. Heart - galloping. Pulse imperceptible. Treatment. Salines only.
- 8.1.36 Colour and pulse extremely poor. Heart feeble. Triple Rhythm. General condition - unsatisfactory.
- 7.45 p.m. Died.

Disease. Severe faucial Diphtheria.

Date of Admission. 4.12.35

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis.

Period for throat to clean. 5 Days.

Date of Discharge. 7.2.36

Date of Death.

Bacteriological Examination.

4.12.35

Cultures +
Dick Test +

2.2.36)

3.2.36) N & T -

4.2.36)

History of Present Illness.

Gradual onset. Patient confined to bed since 1.12.35

Vomiting)
Sleepiness) 1.12.35
Sore Throat)
Headache.)

Glandular swelling in neck 2.12.35

Shivering 3.12.35

Treatment.

Syringe fauces with chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Poultices to neck.

Mist A.S.A. m.5 P.R.N.

Previous Medical History.

Whooping Cough)
Broncho-Pneumonia) 1933.

Measles 1934.

Condition on Admission.

Tongue furred. Throat, slight injection of fauces. Extensive membrane, extending on to palate from right tonsil. Left tonsil completely covered.

Glands - marked adenitis and periadenitis, both sides of neck.

Skin - clear. Distinct pallor.

Muscles limp.

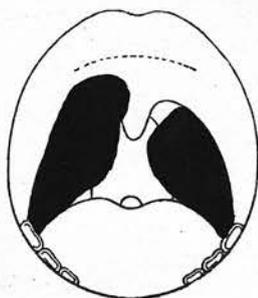
Heart - regular. 1st sounds short.

Tone fair.

Lungs - breath sounds clear.

No Koplik's spots and no discharges.

General condition - fair.



Date

Continued.

5.12.35 Membrane beginning to separate. Glands subsiding.
 Colour and pulse fairly good.
 General condition - fair.
Treatment. Salines.

9.12.35 Throat clean.
 Heart sounds - regular. Tone improved.
 General condition - better.

17.12.35 Adenitis improving.
 Colour and pulse satisfactory.
 General condition - fairly good.

30.12.35 Palate active. Heart regular. No paresis.
 Improving.

6.1.36 Progress maintained.

13.1.36 Colour and pulse satisfactory.
 Heart - regular. Tone good.
 Muscles seem firmer.

16.1.36 Treatment. 1 Pillow.

20.1.36 Progress maintained.
Treatment. Sit Up.

7.2.36 Convalescence continued uninterrupted and patient
 discharged well.

17.1.36
 18.1.36
 19.1.36

Treatment

Springe Ointment 4 hours
 with chlorine water
 S.S.S. 40, 600 with 1/2
 A.D.S. 40, 600 with 1/2
 Mist S.S.S. 1/2 4 hours
 Adrenalin 1/2 7.36

Physical History

Condition on Admission

Throat - extensive edema, swollen
 both uvulae and tonsils, red
 yellow exudate at the base, extending
 to 1/3 below.

Heart - enlarged both sides, more
 especially on the left.

Skin - no rash, no macular
 desquamation. Colour pink.

Pulse volume fair, easily
 compressible.

Heart - not enlarged, regular
 1st normal sound heard.

Lungs - breath sounds normal.

Stomach, rectum - normal discharge.
 No Koplik's spots.

General condition - fair.

Intelligence - normal.



Disease. Severe faucial Diphtheria.

Date of Admission. 19.11.35

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea and Adenitis ad. Enteritis.

Period for throat to clean. 6 Days.

Date of Discharge. 20.1.36

Date of Death.

Bacteriological

Examination.

19.11.35

Cultures +

Dick. Test -

17.1.36)

18.1.36) -

19.1.36)

History of Present Illness.

Sore throat - 17.11.35

Difficulty in breathing.)

Glandular swelling.)

Nasal Discharge.)

Pain in right ear.)

18.11.35

Treatment.

Syringe fauces 4 hourly
with chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A. M.7 4 hourly.

Adrenalin m.5 P.R.N.

Previous Medical History.

Whooping Cough.

Condition on Admission.

Throat - extensive thick membrane on both tonsils and over uvula, with an active edge at the base, extending to 1/3 palate.

Glands - enlarged both sides of neck, especially on the right.

Skin - no rash, no staining or desquamation. Colour good.

Pulse volume fair, easily compressible.

Heart - not enlarged, regular. 1st mitral sound impure.

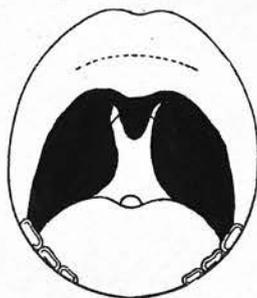
Lungs - breath sounds normal.

Nostril, right - purulent discharge.

No Koplik's spots.

General condition - fairly good.

Nutrition - satisfactory.



Date

Continued.

- 20.11.35 Throat - membrane over both tonsils and uvula.
Oedema of fauces less. Periaadenitis both sides of neck. Skin clear.
Heart - rapid and regular.
General condition - toxic.
Treatment. Mist A.S.A. m.5 4 hourly.
Brandy $\frac{3}{4}$ P.R.N.
Salines with paraldehyde $\frac{3}{4}$ P.R.N.
- 23.11.35 Throat - membrane completely separated. Glands subsiding. Rhinorrhoea less.
Colour and pulse fairly good.
General condition - fair.
- 25.11.35 Throat clean. Glands subsided. Urine clear.
Circulation satisfactory.
- 2.12.35 Throat clean. Glands nil. Skin clear.
Heart satisfactory.
General condition - good.
Treatment. Mist A.S.A. m.5 P.R.N.
- 9.12.35 Improving.
- 18.12.35 Improvement maintained.
- 22.12.35 Elevation of temperature. Tongue furred.
Vomited undigested food. Skin clear.
General condition - good.
Blood and mucous in stool.
Treatment. Barrier.
- 23.12.35 Stools still relaxed.
Treatment. Ol Recini
- 25.12.35 Colour poor. Stool normal.
Generally better.
- 27.12.35 Off Barrier.
- 30.12.35 Throat clean. Palate active.
Heart - 1st sound soft and regular.
Improving.
- 2.1.36 Improving.
Treatment. 1 Pillow.
- 5.1.36 Improvement maintained.
Treatment. 2 Pillows.
- 6.1.36 Throat clean - Palate active. Circulation satisfactory. No paresis. Knee jerks present.
General condition - good.
Treatment. Sit up.
- 9.1.36 Improvement maintained.
Treatment. Up.
- 20.1.36 Discharged home.
General condition - satisfactory.

Disease. Severe faucial Diphtheria.

Date of Admission. 18.7.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad Albuminuria ad
Cardiac Irregularity 22

Period for throat to clean. 4 Days

Date of Discharge. 17.10.36

Date of Death.

**Bacteriological
Examination.**

18.7.36

Cultures +
Dick Test -

13.10.36)
14.10.36) -
15.10.36)

Treatment.

Syringe fauces with
chlorine water.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Poultices.
Mist A.S.A.m.5 P.R.N.

History of Present Illness.

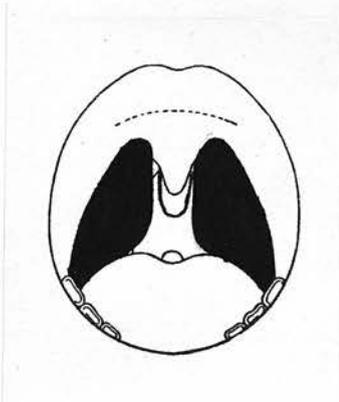
Sudden onset.
Headache.)
Sore throat.) 16.7.36
Glandular swelling.)

Previous Medical History.

Measles)
Chicken Pox) Infancy.
Whooping Cough)

Condition on Admission.

Throat injected. Tonsils enlarged,
oedematous and covered with membrane,
extending on to palate. Oedema and
enlargement of uvula. Foetor of
breath pronounced. Bilateral
adenitis and periadenitis of
cervical glands. Heart tachycardia.
Lungs - Breath sounds normal.
Skin clear. No Koplik's spots.
General condition - toxic.
Albumen in urine.



Date

Continued.

- 19.7.36 Still extensive membrane over both tonsils, which are oedematous. Bilateral bullneck.
Heart - rapid and regular. Tone fair.
General condition - toxic.
- 22.7.36 Throat clean. Colour and pulse - good.
- 27.7.36 Glands subsided. Heart regular.
General condition - improved.
- 3.8.36 Heart regular. Colour and pulse - good.
- 5.8.36 Pulse irregular at times.
- 10.8.36 Heart regular. Sounds of fair quality.
- 17.8.36 Palate active. Heart satisfactory.
General condition - improving.
- 22.8.36 Improving.
- 25.8.36 Phonation very slightly nasal. Palate active.
Treatment. Strychnine gr.1/200 B.I.D.
- 31.8.36 Palate active. Very slight nasal phonation.
Circulation good.
Treatment. 1 Pillow.
- 7.9.36 Phonation clear. Palate brisk.
General condition - good.
Treatment. Sit up.
- 11.9.36 Progress satisfactory.
Treatment. Get up. Omit strychnine.
- 20.9.36 Tonsils injected. Rise of temperature.
Tonsillitis.
- 17.10.36 Convalescence uninterrupted and patient discharged.
- Discharge was delayed on account of persistent + cultures.

Disease. Severe faucial Diphtheria.

Date of Admission. 5.4.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea, Albuminuria ad.

Right and left Otorrhoea 13. Gallop Rhythm 19
Nasal Phonation 26. Peroneal Paresis 56.

Period for throat to clean. 6 Days.

Date of Discharge. 3.7.36

Date of Death.

Bacteriological Examination.

5.4.36

Cultures +

Dick Test +

1.7.36)

2.7.36) -

3.7.36)

Treatment.

Syringe fauces with
chlorine water 4 hourly
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Adrenalin m.5 P.R.N.

History of Present Illness.

Sudden onset. Patient in bed since
2.4.36.

Sore throat and headache - 2.4.36

Glandular swelling)
Dyspnoea) 5.4.36

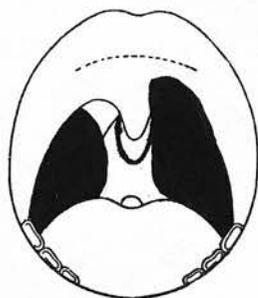
Previous Medical History.

Measles - 1932.

Whooping Cough - 1932.

Condition on Admission.

Tongue furred. Throat - extensive
membrane on tonsils, spreading from
left tonsil to cover a large area
of palate. Marked oedema of uvula
and pharyngeal wall. Foetor +++
Glands adenitis and periadenitis
left side of neck.
Adenitis right side of neck.
Nose moist. No membrane visible.
Heart regular. Sounds clear.
Tone fair.
Lungs - breath sounds normal.
Skin - clear.
Colour - good.
General nutrition - good.



Date

Continued.

- 6.4.36 Throat still oedematous. Membrane thickened over both tonsils and palate. Glands still enlarged. Heart - rapid. Tone poor. Albuminuria.
Treatment. Salines.
Radiant Heat.
Mist A.S.A. m.5 P.R.N.
- 7.4.36 Membrane separating. Colour and pulse poor. Petechiae present on chest. General condition -toxic.
- 11.4.36 Throat clean.
- 14.4.36 Left otorrhoea.
Heart sounds soft. Colour and pulse poor.
- 19.4.36 Still very drowsy.
Heart very rapid. Tone poor. Triple Rhythm.
- 20.4.36 Gallop rhythm continues. Pulse almost imperceptible.
- 27.4.36 Nasal phonation. Palate active.
Heart regular. Pulse improved.
- 4.5.36 Palate sluggish.
Heart tone improved.
- 11.5.36 Heart regular. Pulse satisfactory.
- 18.5.36 General condition improved.
Treatment. 1 Pillow.
- 24.5.36 Improvement maintained.
- 27.5.36 Peroneal paralysis both feet.
Treatment. Back splint and foot piece to both legs.
- 1.6.36 Still peroneal paresis present.
Heart satisfactory.
General condition improved during convalescence, and patient transferred to General Hospital for physiotherapy.
- 3.7.36



Disease. Severe faucial Diphtheria.

Date of Admission. 22.3.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis ad. Serum rash 9. Unconsciousness 30.
Palatal Paresis 33. Triple Rhythm.

Period for throat to clean. 7 Days.

Date of Discharge. 18.6.36

Date of Death.

Bacteriological Examination.

22.3.36

Cultures +
Dick Test -

13.6.36)

14.6.36) -

15.6.36)

History of Present Illness.

Vomiting)
Sleepiness)
Sore throat.) 21.3.36
Headache.)

Treatment.

Syringe fauces with
chlorine water 4 hourly.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.

Previous Medical History.

Measles)
Whooping Cough) In infancy.

Condition on Admission.

Tonsils oedematous, very enlarged.
covered with thin filamentous
membrane. Nasopharynx slightly
involved.

Glands enlarged and tender both
sides of neck.

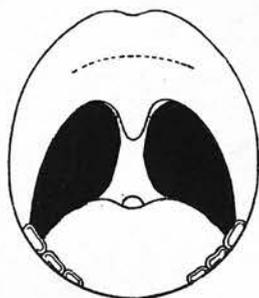
Heart sounds - regular. Sounds
closed and clear.

Lungs - breath sounds normal.

No Koplik's spots. No discharges.

Skin clear.

General condition - toxic.



Date

23.3.36	Membrane necrotic. Oedema of fauces marked. Glands - still markedly enlarged. Skin clear. Colour poor. General condition - toxic.
p.m.	Serum rash. <u>Treatment.</u> Adrenalin m.5 P.R.N.
30.3.36	Throat clean. Heart regular. Colour and pulse improved.
2.4.36	Pain in right hip - Arthritis.
6.4.36	Colour and pulse improved. Hip better.
13.4.36	Palate active. Heart regular. Improving.
19.4.36	Patient collapsed. Pupils widely dilated. Colour ashen. Semiconscious. Heart - triple rhythm. General condition - poor. Urine - nil. <u>Treatment.</u> Radiant Heat. Cardiac Pomentations. Adrenalin m.5 P.R.N. Pituitrin $\frac{1}{2}$ cc.
p.m.	Almost comatose, rational but relapses immediately afterwards.
20.4.36	Mucous collecting in throat. Heart irregular. Tone poor, pulse feeble. Coarse nystagmus present to the left. Temperature elevated. Reflexes normal. General condition - poor. <u>Treatment.</u> Suction. Lumbar puncture. 5ccs C.S.F. withdrawn, pressure normal. OE. No abnormal findings.
22.4.36	Palate sluggish. Voice nasal. Pupils react. No neck rigidity. General condition - still poor. <u>Treatment.</u> Nasal feeds. Atropine gr.1/100 P.R.N.
23.4.36	Still semi-comatose. Heart regular and rapid. Tone poor. Loss of power left arm. Sensation not impaired.
26.4.36	Still semi-conscious. Irritable moving all limbs except left arm.
28.4.36	Seems rational to-day - irritable, collecting mucous in pharynx. Colour and pulse satisfactory. Moving left arm slightly to-day.
30.4.36	Choking attack, due to collection of mucous in pharynx. <u>Treatment.</u> Suction. Elevate foot of bed.
2.5.36	Mucous less troublesome. Palate and pharangeal wall immobile. <u>Treatment.</u> Strychnine gr.1/200 B.I.D.
4.5.36	Palate moving. <u>Treatment.</u> Omit nasal feeds.
8.5.36	Colour and pulse good. Quite rational. No paresis
11.5.36	<u>Treatment.</u> Sit up.
18.5.36	Very weak in legs. Circulation satisfactory. No paresis. <u>Treatment.</u> Up. Omit strychnine.
18.6.36	Convalescence continued uninterrupted and patient discharged thoroughly fit and well.

Disease. Severe faucial Diphtheria.

Date of Admission. 1.3.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Nasal Phonation 18
Vaginal Discharge 19 Otorrhoea 28
Albuminuria 33

Period for throat to clean. 6 Days.

Date of Discharge. 27.4.36

Date of Death.

Bacteriological Examination.

1.3.36

Cultures +
Dick Test +

24.4.36)

25.4.36) -

26.4.36)

Treatment.

Syringe fauces with
chlorine water. 4 hourly.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Mist. A.S.A. m \times 4 hourly.

History of Present Illness.

Sudden onset.

Sore throat. 1.3.36

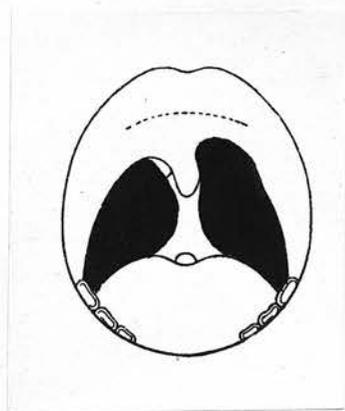
Vomiting) 27.2.36
Headache)

Previous Medical History.

Measles in infancy.

Condition on Admission.

Tongue furred. Throat injected.
Tonsils enlarged. Thick exudate
over both, but recent membrane on
1/3 soft palate of left side.
Marked foetor. Glands palpable in
neck. Tender left side.
Skin - herpetiform eruption left
side of face. No discharges.
No Koplik's spots.
Heart - regular. Sounds clear.
Lungs - breath sounds normal.
General condition - fairly good.



Date

- 2.3.36 Membrane still present over both tonsils. Slight
cedema. Glands periadenitis present both sides of
neck.
Heart tone fair.
- 3.3.36 Membrane separating.
- 11.3.36 Throat clean. Heart regular. Tone fair.
- 15.3.36 Regurgitation of food. Slight nasal intonation in
speech. Palate active. Colour and pulse fairly
good.
- 16.3.36 Profuse aural discharge right ear. Palate active.
Colour and pulse good.
Treatment. Barrier. Routine treatment to ear.
- 23.3.36 Very slight vaginal discharge.
- 30.3.36 Palate active. Heart regular.
Colour and pulse satisfactory.
Aural and vaginal discharge subsided.
General condition - good. Omit Mist. A.S.A.
- 6.4.36 Palate active.
Heart irregular. Tone improving.
General condition - better.
- 12.4.36 Improving.
Treatment. 1 Pillow.
- 16.4.36 Improvement maintained.
- 22.4.36 Muscle tone improving.
Heart regular. Pulse and colour satisfactory.
- 26.4.36 Walking well.
- 27.4.36 Discharged - well.

Treatment

Previous Medical History

Examination of the
 external ear, showing
 perforation of the
 A.R.S. 40, 0/10
 A.S.S. 20/20
 1937. A. 10/10

Condition on Admission

On admission, throat and tonsils
 were normal. Heart and lungs
 normal. Slight nasal intonation
 in speech. Regurgitation of food
 at the right side and regurgitation
 of food and mucus, followed.
 No Kowlik's signs. 2/10 pulse.
 20 discharge. Heart normal
 and regular. Muscle tone fair.
 Large - normal; colour normal.
 General condition - good, very good.



Disease. Severe faucial Diphtheria.

Date of Admission. 18.1.36

Day of disease on admission. Third.

Type of organism. Gravis.

Adenitis ad.

Complications. Slight facial paresis. 41.

Period for throat to clean. 7 Days.

Date of Discharge. 28.3.36

Date of Death.

Bacteriological
Examination.

18.1.36

Cultures +
Dick Test +

25.3.36)

26.3.36) -

27.3.36)

History of Present Illness.

Sore throat.)
Shivering.) 16.1.36Adenitis.)
Vomiting.) 17.1.36

Sleepiness 18.1.36

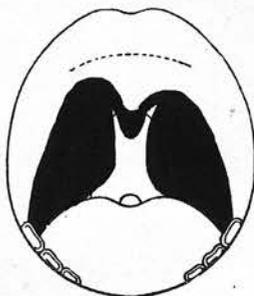
Treatment.

Syringe fauces with
chlorine water. **4 hourly**
Poultices to neck.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist. A.S.A. **m x** P.R.N.

Previous Medical History.

Bronchitis. 7 years ago.

Condition on Admission.

Tongue furred. Throat and tonsils
enlarged. Marked oedema and
congestion. Extensive membrane on
both tonsils, uvula and soft palate
on the right side and nasopharynx.
Adenitis and bullneck, bilateral.
No Koplik's spots. Skin clear.
No discharges. Heart sounds pure
and regular. Muscle tone fair.
Lungs - Breath sounds normal.
General condition - poor, very toxic.

Date

Continued.

19.1.36 Membranes thickened on tonsils and palate. Oedema of tissues less. Glands still enlarged. Heart regular. Skin clear. Urine clear. General condition - fair.
Treatment - Mist. A.S.A. m^{vii} P.R.N.

21.1.36 Throat cleaning.

23.1.36 Throat clean. Heart rapid. Regular. Tone poor. Pulse volume feeble.

30.1.36 Throat clean. Heart regular. Tone fair.

4.2.36 Colour and pulse fair. Heart regular.

11.2.36 Palate active.
Heart - grossly irregular. Tone poor.
General condition - fair.

18.2.36 Palate active.
Heart more regular. Tone better.

25.2.36 Throat clean. Palate sluggish.
Heart regular. Tone improved.
Colour and pulse good.

3.3.36 Palate still sluggish.
Heart satisfactory.

5.3.36 Right side of mouth drooping.
Treatment. Strychnine $\text{gr}/100$ B.ID.

10.3.36 Palate quite brisk. Facial tone improving.
Heart satisfactory.

12.3.36 Treatment. 1 Pillow.
Improving.
Treatment. Sit up.

16.3.36 Improvement maintained.
Treatment. Get up.

17.3.36 Palate face and heart satisfactory.
Muscle tone improving.
Treatment. Omit strychnine.

24.3.36 Improving.

28.3.36 Discharged quite well.



Disease. Severe faucial Diphtheria.

Date of Admission. 23.2.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Serum Rash ll.

Period for throat to clean. 7 Days.

Date of Discharge. 18.4.36

Date of Death.

Bacteriological

Examination.

23.2.36

Cultures +

Dick Test +

14.4.36)

15.4.36) -

16.4.36)

History of Present Illness.

Sore throat - 21.2.36

Vomiting - 22.2.36

Treatment.

Syringe fauces with chlorine water 4 hourly.

A.D.S.40,000 units I.M.

A.D.S.60,000 units I.V.

Poultices.

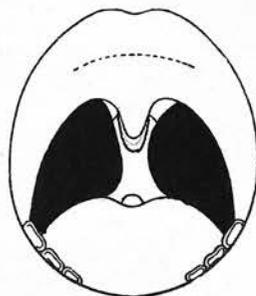
Mist. A.S.A. m.10 P.R.N.

Previous Medical History.

No previous illnesses.

Condition on Admission.

Tongue furred. Throat oedematous, injected fauces and soft palate. Tonsils large. Extensive membrane on both sides, with active spreading edge. Adenitis and periadenitis both sides of neck. Skin clear. Nose moist. Heart sounds regular, tone good. Lungs - no evidence of disease. Nutrition and general condition - fair.



Date

- 24.2.36 Throat oedematous with membrane over both tonsils.
Glands still enlarged.
Heart sounds closed and regular.
General condition - fairly toxic.
- 29.2.36 Throat clean of membrane. Glands subsided.
Colour and pulse good.
- 2.3.36 Generalised serum rash.
- 3.3.36 Colour and pulse good.
- 10.3.36 Throat clean. Heart regular.
Colour and pulse good.
- 17.3.36 Palate active. Circulation good.
- 24.3.36 Improving.
- 29.3.36 Speech clear. Palate active.
Heart muscle tone only fair.
- 31.3.36 No paresis.
Improving.
- 4.4.36 Improvement maintained.
1 Pillow.
- 7.4.36 Palate active. Colour and pulse good.
Sit up.
- 18.4.36 Convalescence uninterrupted and the patient was
discharged well.

14.3.36

15.3.36 -

16.3.36

Treatment

Syring 10cc 4/5

chlorine water 1/2 pint

1000-40, 2000

A.H.S. 60, 200

Dist. A.S.A. 2/1

Brandt 27 1/2

Physical History

Condition on Admission

On admission patient was ill, with high fever, 102.5 F. Throat inflamed, tonsils enlarged and coated with white membrane. Glands enlarged. Heart sounds closed and regular. No rales or wheezes. No tenderness of chest. No splenic spots. No lymphatic nodes. No skin eruptions. No oedema. No diarrhoea. No vomiting. No constipation. No urinary changes. No abnormal discharges. No abnormal reflexes. No abnormal signs of meninges. No abnormal signs of internal organs. No abnormal signs of nervous system. No abnormal signs of any other system. General condition - fairly toxic.



Disease. Severe faucial Diphtheria.

Date of Admission. 25.1.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis, Rhinorrhoea ad. Otorrhoea 14.

Period for throat to clean. 5 Days.

Date of Discharge. 17.3.36

Date of Death.

Bacteriological**Examination.**

25.1.36

Cultures +
Dick Test -

14.3.36)

15.3.36) -

16.3.36)

Treatment.Syringe fauces with
chlorine water 4 hourly.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist. A.S.A. M.7 P.R.N.
Brandy $\frac{3}{i}$ P.R.N.**History of Present Illness.**Gradual onset. Patient in bed since
21.1.36

Sore throat and headache 20.1.36

Shivering.)

Vomiting.)

Sleepiness.) 21.1.36

Glandular swelling.)

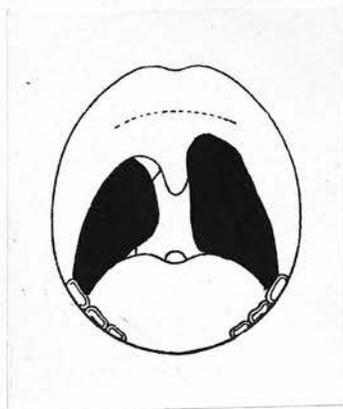
Nasal discharge 22.1.36

Previous Medical History.

Measles.)

Whooping cough.) In infancy.

Chicken pox.)

Condition on Admission.Patient well nourished boy - tongue
furred. Throat injected. Extensive
thick exudate on left tonsil,
spreading on to $\frac{1}{2}$ of soft palate.
Thick membrane on right tonsil.
Marked foetor. No oedema of tissues.
Glands palpable and tender on left
side of neck. Skin clear. Colour
good. Nose moist. No exudate seen,
No Koplik's spots.
Heart regular. Sounds of good
quality.
Lungs - breath sounds normal.
General condition - fair.

Name Harold Downs.

Sex M Age 10

Lab. No.
36

Disease. Severe faucial Diphtheria.

Date of Admission. 12.11.35

Day of disease on admission. Third.

Type of organism. Gravis

Complications. Serum Rash 10 Adenitis Rhinorrhoea ad

Period for throat to clean. 5 Days.

Date of Discharge. 10.1.36

Date of Death.

Bacteriological
Examination.

12.11.35

Cultures +
Dick Test -

5.1.36)

6.1.36) Cultures -

7.1.36)

History of Present Illness.

Last perfectly well on 9.11.35.

Was at School 8.11.35.

Vomiting on 10.11.35.

Went to bed on 11th.

Sleepiness, sore throat, headache and
nasal discharge.

Glandular swelling 12.11.35.

Treatment.

Syringe fauces 4 hourly,
with chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A. m \checkmark P.R.N.

Previous Medical History.

Pneumonia)
Whooping Cough) 1925

Measles 1926

Bronchitis 1928

Condition on Admission.

Tonsils oedematous, covered with
greyish white membrane, edge of which
is thin and extending on to soft
palate. Right Tonsil haemorrhage.

Tongue coated. Rhinorrhoea profuse.

Glands enlarged both sides of neck,
marked periadenitis.

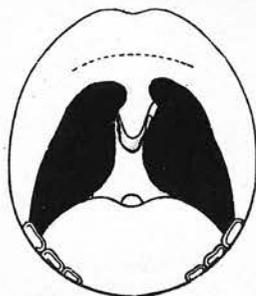
Heart - Sounds regular, quality fair.

Pulse - Poor volume.

Nutrition - Fair.

Muscle tone - Good.

General condition - Fairly toxic.



Date

Continued.

- 12.11.35 Throat - Membrane thickened, especially over right tonsil.. Oedema still present.
Glands - Subsided somewhat. Colour and pulse good.
Muscle tone fair. Urine clear.
General condition - fairly good.
Treatment. Mist. A.S.A. $m\bar{iv}$ 4 hourly. Salines.
Paraldehyde $\frac{3}{4}$ P.R. P.R.N.
- 13.11.35 Membranes still present on throat. Thickened - separating on right side.
Glands - still enlarged. Colour and pulse fair.
Muscles soft.
General Condition - poor.
- 17.11.35 Throat clean. Colour and pulse improved.
- 18.11.35 Throat ulcerated. Glands subsided.
Skin clear - no petechiae. Urine clear.
General condition - fair.
- 19.11.35 Circulation seems improved.
General condition - much better.
- 27.11.35 Palate active. Heart regular.
Improvement maintained.
- 3.12.35 Palate active. Glands not enlarged.
Heart regular, tone fair.
General condition - good.
- 10.12.35 No fresh developments. Improving.
- 15.12.35 Adenitis, right side of neck.
Treatment. Poultices. Omit Mist A.S.A.
- 17.12.35 Glands still enlarged in neck. No septic focus throat or mouth. Skin clear. Heart satisfactory.
No paresis.
General condition - good.
- 23.12.35 Improving.
- 26.12.35 Swelling in neck fluctuant.
Treatment. Neck incised. Pus obtained. Pack with strip gauze and foment.
- 27.12.35 Improving.
Treatment. 1 Pillow.
- 28.12.35 Neck improving.
General Condition - satisfactory.
- 31.12.35 Throat - Palate active. Heart satisfactory.
General condition - good. Glands healed.
Treatment. Sit up.
- 2.1.36 Throat - Palate active.
Heart - Sounds closed and regular. No paresis.
General condition - good.
- 10.1.36 Discharged home.
General condition - satisfactory.



Disease. Severe faucial Diphtheria.

Date of Admission. 11.1.36

Day of disease on admission. Fourth

Type of organism. Gravis.

Complications. Rhinorrhoea. Adenitis ad Otorrhoea 13.
Cardiac Irregularity.

Period for throat to clean. 5 Days.

Date of Discharge. 9.3.36

Date of Death.

**Bacteriological
Examination.**

11.1.36

Culture + pre.ad.
Dick Test +

Cultures -

22.2.36

23.2.36

24.2.36 & 8.3.36

Treatment.

A.D.S. 10,000 units pre.ad.

A.D.S. 30,000 units I.M.

A.D.S. 60,000 units I.V.

Poultices to neck.

Adrenalin $m \overline{vi}$ P.R.N.

Radiant Heat.

Salines.

Syringe fauces with
chlorine water. 4 hourly

History of Present Illness.

Vomiting, sore throat, shivering,
sleepiness and headache on 7.1.36.

Glandular swelling 8.1.36

Nasal Discharge 8.1.36

Epistaxis 11.1.36

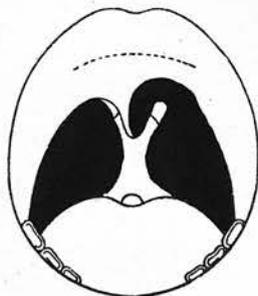
Previous Medical History.

Pneumonia in infancy.

Quinsy 1935.

Condition on Admission.

Tongue - dirty fur present. Throat
oedematous, injected. Covered
with thick loose membrane over
both tonsils and extending on to
left side of palate and uvula.
Foetor marked. Glands adenitis
and periadenitis both sides of neck.
Profuse nasal discharge with mem-
brane present in nose.
Heart - 1st sound soft, 2nd
accentuated. No murmurs.
Breath sounds normal.
General condition - toxic.



Date

Continued.

- 12.1.36 Throat very oedematous, clearing, dirty mucous collecting inside cheek. Glands enlarged. Profuse Rhinorrhoea. Colour and pulse poor.. Urine clear. Treatment. Radiant heat and salines. Mist A.S.A. mvi 4 hourly.
- 13.1.36 Oedema of throat subsiding, membrane beginning to clear.
- 14.1.36 Heart - slight irregularity.
- 14.1.36 Membrane clearing, thick inspissated mucous in pharynx. Colour and pulse weak.
- 16.1.36 Throat clean. Oedema subsided. Heart rapid and regular. General condition - fair.
- 17.1.36 Right otorrhoea. Treatment. Barrier. Swab ear dry. Omit Mist A.S.A.
- 21.1.36 Throat ulcerated. Heart - satisfactory.
- 30.1.36 Palate active. Heart regular. Colour and pulse good.
- 1.2.36 Complaining of pain in right hip. Nil detected on physical examination.
- 4.2.36 Improving.
- 11.2.36 Palate active. Heart regular. Tone good. Colour poor at times. Generally better.
- 18.2.36 Improvement maintained. Treatment. Omit stimulants. Syrup Triplex ३०० T.D.S.
- 21.2.36 Treatment. 1 Pillow.
- 27.2.36 Treatment. Sit up.
- 3.3.36 Progress satisfactory. Treatment. Up in clothes.
- 9.3.36 Discharged fit.



Disease. Severe faucial Diphtheria.

Date of Admission. 4.1.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Rhinorrhoea, Adenitis ad. Chorea ad.
Palatal Paresis 4. Albuminuria 8
Conjunctivitis.

Period for throat to clean. 6 Days.

Date of Discharge. 28.2.36

Date of Death.

Bacteriological Examination.

4.1.36
Culture +
Dick Test +
23.2.36) Throat
24.2.36) and
25.2.36) nose -

History of Present Illness.

Vomiting)
Sore throat.)
Headache.) 3.1.36
Shivering.)
Sleepiness.)
Glandular swelling) 4.1.36

Treatment.

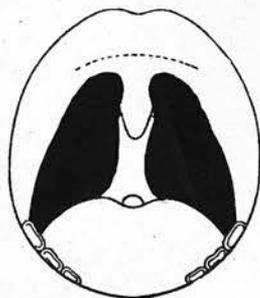
Syringe fauces with
chlorine water 4 hourly.
A.D.S. 24,000 units pre.ad.
(3rd).
A.D.S. 20,000 units I.M.
A.D.S. 60,000 units IV.)
4.1.36)
Mist A.S.A. m.10 P.R.N.

Previous Medical History.

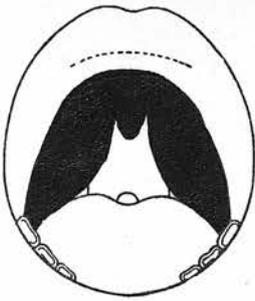
Patient suffering from chorea
since 13.12.35.
Rheumatism.
Measles.
Whooping Cough.

Condition on Admission.

Throat injected. Tonsils and 2/3
soft palate covered with membrane.
Tongue furred. Glands - marked
cervical adenitis.
Heart - very rapid.
Apical systolic murmur, transmitted
to axilla.
Chest - breath sounds normal.
Slight bilateral aural discharge.
Choreiform movement present.
General condition - good.



Date



- 4.1.36 Membranes spread over soft palate and uvula.
Oedema ++. Periadenitis marked both sides of neck.
Treatment. Poultices to neck. Salines.
Paraldehyde 3i P.R. P.R.N.
- 5.1.36 Membrane thickened.
Heart satisfactory.
- 6.1.36 Throat membrane not separated yet, thickening.
Colour and pulse good. Restful, and retaining
salines.
- 8.1.36 Throat cleaning. Slight nasal intonation in speech.
Conjunctivitis both eyes.
Treatment. Bathe eyes with boric lotion and
instil Argyrol 5%
- 10.1.36 Throat cleaned - ulcerated. Eyes improved.
Colour and pulse satisfactory.
- 11.1.36 Throat clean - colour cyanotic. Mitral systolic
bruit +. Pulse fair. Incontinence of urine.
No distension of bladder. Albuminuria.
Treatment. Radiant Heat 4 hourly.
Luminal gr. $\frac{1}{2}$ B.I.D.
- 12.1.36 Slight regurgitation of fluids. Palate active.
Rather more restless than usual. Grimacing.
- 16.1.36 Improving. Semi-solid diet.
- 27.1.36 Throat and palate sluggish.
Heart satisfactory. Pulse good.
- 2.2.36 Temperature swinging. Probably due to ear trouble.
Treatment. Mist Soda Sal. 3ii tds.
- 10.2.36 Palate active. Heart sounds closed and regular.
Choreiform movements less.
Improved.
- 17.2.36 Generally improved. Still blowing mitral systolic
murmur.
Treatment. 1 Pillow.
- 19.2.36 Improving.
Treatment. 3 Pillows.
- 28.2.36 General condition - satisfactory.
Cardiac lesion still present.
Treatment. Sit up.
Discharged home by ambulance under the care of
family Doctor.

Name Gladys Cohen.

Sex F Age 14

Lab. No.

65

Disease. Severe faucial Diphtheria.

Date of Admission. 21.11.35

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Rhinorrhoea Bullneck Adenitis ad Serum Rash 11
Otorrhoea 20

Period for throat to clean. 4 Days.

Date of Discharge. 17.1.36

Date of Death.

Bacteriological

Examination.

21.11.35

Cultures +

Dick Test -

7.12.35)

8.12.35) Cultures -

9.12.35)

History of Present Illness.

Gradual onset 3 days ago. Patient working complained of sore throat on 18.11.35, on returning home, 19.11.35, vomited. Shivering attack.

Complained of feeling drowsy 20.11.35. Glandular swelling, especially on right side of neck.

Treatment.

Syringe fauces with chlorine water.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Poultices to neck.

Mist A.S.A. ^{****}m ^{****}viii P.R.N.

Previous Medical History.

Measles in infancy.

Condition on Admission.

A well nourished girl - mentally very alert.

Tongue furred. Marked foetor present.

Throat. Degree of oedema of right peritonsillar tissues. Membrane on both Tonsils. Recent membrane spreading on to palate.

Glands. Bullneck. Right side very tender. Enlarged on left side. Not quite so marked as the right.

Skin, good colour, no rash.

Pulse, good volume, but very easily compressible.

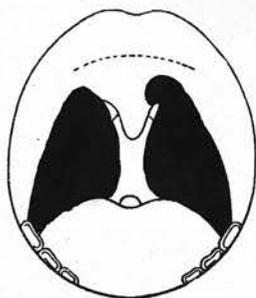
Heart not dilated, regular sounds of good quality.

Lungs - Breath sounds normal.

Discharges seropurulent from both nostrils.

Muscles, good tone.

General Condition. Fairly good.



Date	
21.11.35	Throat - oedema marked. <u>Treatment.</u> Salines.
22.11.35	Membrane over both tonsils. Extending on to soft palate right side. Foetor marked. Glands. Marked periadenitis. Right side more than left. Skin no petechiae. Heart sounds - closed and regular. Muscles limp. Urine clear.
23.11.35	Throat still very oedematous. Membrane separating. Glands still enlarged. Colour and pulse fairly good. Urine clear. General condition fair.
25.11.35	Throat - Oedema less. clean. Glands subsided. Colour and pulse good. Urine clear. Generally better.
29.11.35	Generalised serum rash. <u>Treatment.</u> Adrenalin $m\checkmark$ P.R.N.
2.12.35	Throat clean. Palate active. Heart sounds closed. Tone good. Colour and pulse good.
8.12.35	Right otorrhoea - Profuse purulent discharge.
9.12.35	Throat clean - palate active. Tonsils + Colour and pulse satisfactory. Ear still discharging. General condition good. <u>Treatment.</u> Swab ear dry 4 hourly.
18.12.35	Palate active. Heart regular. Colour and pulse good. No paresis. General condition improving.
30.12.35	No paresis. Muscles firmer. Improvement maintained.
3.1.36	General condition improved. <u>Treatment.</u> 1 Pillow.
6.1.36	Throat clean. Palate active. Heart satisfactory. No paresis.
9.1.36	<u>Treatment.</u> Sit up. Syrup triplex 3ii t.d.s. Improving. <u>Treatment.</u> Up on couch.
16.1.36	Throat clean..Palate active. Heart sounds closed and regular. Walks well. General condition satisfactory. Ear dry.
17.1.36	Cultures - Discharged to home

Diagnosis: [faint text]

Date of admission: [faint text]

Age at admission: [faint text]

Type of admission: [faint text]

Occupation: [faint text]

Place of birth: [faint text]

Date of discharge: [faint text]

Examination: [faint text]

Examination: [faint text]

Examination: [faint text]

Examination: [faint text]

APPENDIX 2.

Treatment. Pages 197 - 205.

Spring 1900
A.D.S. 40,000
A.D.S. 80,000
INTERMEDIATE SERIES GRAVIS ANTI-BACTERIAL SERUM TREATED CASES.

Pages 206 - 217.

INTERMEDIATE SERIES DIPHTHERIA ANTITOXIN SERUM TREATED CASES.

Tonsils enlarged and covered with thick membrane, uvula swollen and soft palate inflamed. Throat enlarged both above and below, marked hyperemia.

Skin - clear.

Heart's sound - regular but very soft.

Respiration - easy, but somewhat restricted only early.



(197)

Name Ronald Cauldwell

Sex M Age 3

Lab. No. 247

Disease. Very severe faucial Diphtheria.

Date of Admission. 25.1.36

Day of disease on admission. Third.

Type of organism. Intermediate.

Complications. Adenitis ad. Bradycardia 7. Heart Block 8.

Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 3.2.36

Bacteriological

Examination.

25.1.36

Cultures +
Dick Test +

History of Present Illness.

Last perfectly well on 21.1.36

Shivering)
Sore throat) 24.1.36

Treatment.

Syringe fauces with
chlorine water.

Poultices.

A.D.S.40,000 units I.M.

A.D.S.60,000 units I.V.

Previous Medical History.

Pneumonia, 1933.

Condition on Admission.

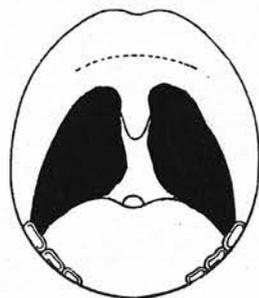
Tonsils enlarged and covered with
thick membrane, nasopharynx and 1/3
soft palate involved. Glands
enlarged both sides of neck, with
marked periadenitis.

Skin - clear.

Heart sounds - regular but very rapid

No Koplik's spots and no discharges.

Nutrition - good, but general
condition only fair.



Date

- 26.1.36 Throat cleaning, exudate on both tonsils.
No oedema. Glands subsiding. Heart satisfactory.
General condition - not too toxic.
- 29.1.36 Heart slow - tone poor.
Colour and pulse unsatisfactory.
General condition - deteriorated.
Treatment. Salines.
Camphor in oil $\frac{1}{2}$ cc) P.R.N.
Adrenalin m.5)
- 30.1.36 Throat cleaned and ulcerated.
Heart rate 40, irregular and tone poor.
Pulse feeble.
General condition - unsatisfactory.
Treatment. Radiant Heat.
Adrenalin 4 hourly.
Cardiac Fomentations.P.R.N.
- 1.2.36 Heart rate still 40. No pulsation in veins of neck
General condition - poor.
- 3.2.36 Heart still extremely slow.
Pulse imperceptible.
Condition extreme.
- 11.20 p.m. Died from complete heart block.

Treatment

Previous Medical History

Artificially induced
collapse seen.
resuscitated by mouth.
A.S.S. 20, 1936
A.S.S. 50, 1936
A.S.S. 40, 1936

Condition on Admission

Respiratory - unobstructed, normal
with spreading rales over
the whole chest, but no
rhonchi or wheezes.
Cyanosis - not present
Heart - small regular
Pulse 40.
A.S.S. 20, 1936
General condition - poor
Profound toxemia.



Disease. Severe faucial Diphtheria.

Date of Admission. 1.12.35

Day of disease on admission. Third.

Type of organism. Intermediate.

Complications. Serum Rash 9 Albuminuria 5 Adenitis and
Rhinorrhoea ad.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 10.12.35

1.30 a.m.

Bacteriological Examination.

1.12.35

Cultures +
Dick Test +

History of Present Illness.

Last perfectly well on 28.11.35 at school.

Bed on 29.11.35. Vomiting, sore throat and shivering.

Glandular swelling and difficulty in breathing 1.12.35

Treatment.

Syringe fauces with chlorine water.

Poultices to neck.

A.D.S. 20,000 units I.M.

A.D.S. 80,000 units I.V.

A.D.S. 40,000 units I.V.)
2.12.35)

Previous Medical History.

Scarlet Fever. May 1931.

Whooping Cough.

Measles.

Pneumonia.

Chicken Pox.

Condition on Admission.

Tonsils - oedematous, covered with thin spreading membrane, extending on to soft palate. Membrane in nasopharynx and nose.

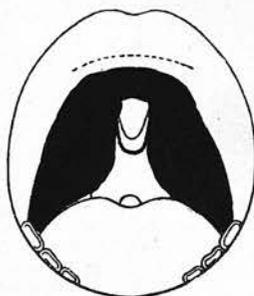
Glands - bilateral periadenitis, bullneck.

Heart - sounds regular, fair quality
Pulse soft.

Lungs - No evidence of disease.

General condition - Nutrition good.

Profound toxæmia.



Date

Continued.

- 2.12.35 Throat - extensive membrane over palate, oedema ++
Glands - bullneck persists.
Colour and pulse - poor.
General condition - toxic.
Treatment. Salines.
Mist A.S.A.m. 5 4 hourly.
Radiant Heat P.R.N.
- 3.12.35 Membrane - thickened and separating, marked
oedema and foetor.
Glands - not enlarged. Skin - clear.
Albuminuria.
General condition - poor.
Treatment. Paraldehyde 3i P.R.
Camphor in Oil lcc P.R.N.
- 6.12.35 General serum rash. Throat clean.
- 9.12.35 Colour - extremely poor.
Pulse - feeble.
Heart - Tone poor, grossly irregular.
- 9.12.35 Phonation - nasal. Feeling of nausea. NO actual
p.m. vomiting.
Pulse scarcely perceptible.
- 10.12.35 Died. Cardiac Muscle Failure.



Name Frank Harris.

Sex M Age 7

Lab. No.
110

Disease. Severe faucial Diphtheria.

Date of Admission. 29.11.35 9.40 p.m.

Day of disease on admission. Second.

Type of organism. Intermediate.

Complications. Bilateral periadenitis. Bullneck. Rhinorrhoea
Cardiac Failure

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 29.11.35

10.15 p.m.

**Bacteriological
Examination.**

29.11.35

Cultures +

History of Present Illness.

Vomiting.) 29.11.35
Sore throat.	
Headache.	

Vague sickness 28.11.35

Treatment.

Syringe fauces with
chlorine water.
Cardiac Fomentis.
Oxygen.
Atropine gr 1/100
Camphor in Oil lcc
Adrenalin m.5

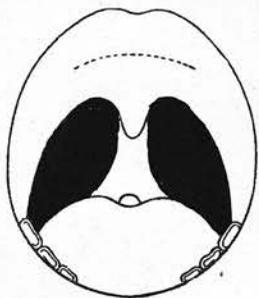
Previous Medical History.

Not known.

Condition on Admission.

Tonsils covered with dirty offensive
smelling membrane.
Glands - bilateral periadenitis,
bullneck.
Nose - nasal discharge profuse.
Mouth and tongue dry, covered with
sordes.
Heart - sounds very rapid, very poor
quality.
Lungs - Crepitations present
bilaterally.
General condition - Patient has
mongoloid facies - cyanotic - moribund

DIED .



Disease. Nasal & Faucial Diphtheria.

Date of Admission. 30.11.35

Day of disease on admission. Fifth.

Type of organism. Intermediate.

Complications. Nasal Discharge, Adenitis ad.
Cardiac Irregularity 8

Period for throat to clean. 3 Days.

Date of Discharge. 27.1.36

Date of Death.

Bacteriological**Examination.**

30.11.35

Cultures +
Dick Test +

22.1.36)

23.1.36) -

24.1.36)

History of Present Illness.Headache)
Sore throat) 26.11.35
Vomiting)
Adenitis.)

Croupy cough 29.11.35

Nasal discharge 25.11.35

Treatment.Syringe fauces with
chlorine water.

A.D.S.18,000 units pre.ad.

Poultices to neck.

A.D.S.40,000 units I.M.

A.D.S.30,000 units I.V.

Previous Medical History.Measles.)
Chicken Pox) In infancy.Immunised against Diphtheria
3 years ago.**Condition on Admission.**

Tongue furred. Throat injected.

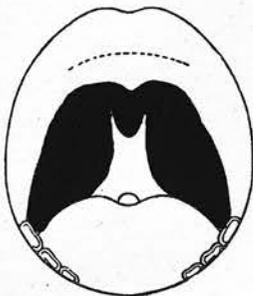
Tonsils enlarged, covered with
recent exudate, extending on to
uvula and palate. No Koplik's spots.
Foetor very marked.Glands - palpable in both submaxillary
regions.

Nasal discharge present.

Profuse purulent membrane in both
nostrils.Heart - regular. Sounds of good
quality.

Lungs - breath sounds normal.

General condition - fair.



Date

Continued.

- 1.12.35 Rhinorrhoea still profuse. Membrane separating on nose and throat. Periadenitis right side persists.
Heart sounds regular.
- 2.12.35 Throat clean. Glands subsided.
Heart irregular.
Treatment. Mist A.S.A.m.5 4 hourly.
- 3.12.35 Nasal discharge still present.
Heart more satisfactory. Colour and pulse good.
- 8.12.35 Relaxed stools. Blood and mucous +
General condition - fair.
Treatment.
Kaylene Oil. 3i T.D.S.
- 10.12.35 Improving.
- 17.12.35 Pupils dilated.
Treatment. Omit Mist A.S.A.
- 2.1.36 Throat clean. Palate active.
Circulation satisfactory.
- 6.1.36 Improving.
- 13.1.36 Improvement maintained.
Treatment. 1 Pillow.
- 16.1.36 General condition - good.
Treatment. Sit up.
- 27.1.36 Discharged.
General condition - satisfactory.



Name James Wood

Sex M

Age 11

Lab. No.
100

Disease. Severe faucial Diphtheria.

Date of Admission. 27.11.35 11.45 a.m.

Day of disease on admission. Third.

Type of organism. Intermediate.

Complications. Cervical on ad. Adenitis and Peradenitis.

Period for throat to clean. Dead before clean.

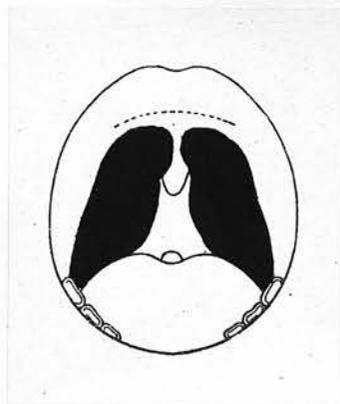
Date of Discharge.

Date of Death. 27.11.35
8.15 p.m.**Bacteriological**Examination.
27.11.35

Pre. ad. Swab +

History of Present Illness.Last at school on 25 11.35
Took to his bed that day.
Sore throat)
Headache.) 24.11.35Reported to have been
immunised at school,
1934.**Treatment.**Syringe fauces with
chlorine water.
Poultices to neck.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist A.S.A. m.6 P.R.N.**Previous Medical History.**

Measles in infancy.

Condition on Admission.A well nourished boy. Tongue furred.
Throat - injected, extensive membrane
on tonsils and palate. Edge spreading
Much post nasal mucous discharge.
Glands - enlarged on both sides of
neck. Marked peradenitis present.
Skin - clear.
Heart - regular, not enlarged.
Sounds of moderately good quality.
Lungs - breath sounds normal.
Muscles - tone fair.

Date

Continued.

27.11.35 Colour very poor. Cyanosed.
Pulse - imperceptible.
Restless condition - very toxic.
Bowels open several times since admission.
Stools appear normal.
General condition - much worse.
Treatment. Radiant Heat.
Brandy. 3i
Oxygen.

8.15 p.m. Pulse imperceptible.
Died.



Disease. Severe faucial Diphtheria.

Date of Admission. 5.2.36

Day of disease on admission. Third.

Type of organism. Intermediate.

Complications. Adenitis ad Tuberculosis of the Spine.
Facial paresis.

Period for throat to clean. 6 Days.

Date of Discharge. 9.5.36

Date of Death.

Bacteriological Examination.

5.2.36

Cultures +
Dick Test -

4.5.36)

5.5.36) -

6.5.36)

History of Present Illness.

In bed 2.2.36

Vomiting 3.2.36

Sleepiness)
Sore throat) 4.2.36

Glandular swelling 5.2.36

Treatment.

Syringe fauces with chlorine water.

A.D.S.40 000 units I.M.

A.B.S. 10 ccs I.M.

A.D.S.40,000 units I.V.

A.B.S. 10 ccs I.M.

Salines

Mist A.S.A.m.5 P.R.N.

Previous Medical History.

Pneumonia in infancy.

T.B. Spine, discharged 1935

Chronic Bronchitis.

Condition on Admission.

Thick membrane over both tonsils extending on to soft palate on left side.

Glands enlarged, both sides of neck.

Heart - rapid & regular.

Chest deformed.

Patient wearing spinal brace.

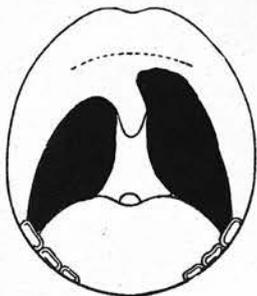
Breath sounds normal

Skin clear.

No Koplik's spots.

Nasal discharge present.

General condition - fair.



Disease. Very severe faucial Diphtheria.

Date of Admission. 19.2.36

Day of disease on admission. Fifth.

Type of organism. Intermediate.

Complications. Rhinorrhoea. Adenitis. Albuminuria ad
Petechiae 8

Period for throat to clean. Dead before clean.

Date of Discharge. Date of Death. 24.2.36

Bacteriological
Examination.
19.2.36

Cultures +
Dick Test -

History of Present Illness.

Last perfectly well on the 15.2.36
Confined to bed on 18.2.36
Epistaxis and nasal discharge.

Treatment.

Syringe fauces with
chlorine water 4 hourly.
Poultices to neck.
A.D.S. 40 000 units I.M.
Desensitise.
A.D.S. 60,000 units I.V.
Mist A.S.A. $m\check{v}$ P.R.N.
A.B.S. 1 cc I.V.
A.B.S. 10 cc I.M.
A.B.S. 9 cc I.P.

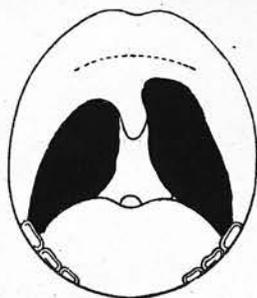
Previous Medical History.

Measles & Whooping Cough 1934
Bronchitis 1934.
Tonsillitis 1935.
Reported to have been immunised
against Diphtheria Jan. 1936.

Condition on Admission.

Throat. Both tonsils covered with
filmy membrane extending on to soft
palate on left side and buccal
mucosa.
Glands - periadenitis both sides,
more especially the left.
Nose excoriated. Profuse purulent
discharge.
Skin a few septic spots present.
Heart sounds - regular. Tone fair.
General condition - poor.

General condition poor after I.V.
Serum and consequently I.P. Serum
was considered advisable.



Date

- 20.2.36 Membrane still present on throat. No further spread.
Heart very rapid. Tone poor.
Urine - albumin trace.
Treatment. Salines
Paraldehyde P.R. 3i
p.m. Some epistaxis, developed extensive petechial rash.
Treatment. Adrenalin plugs if bleeding profuse.
- 21.2.36 Cyanosed. Pulse feeble.
Heart - irregular.
General condition feeble.
Treatment. Oxygen and Radiant Heat.
Strychnine gr. $\frac{1}{100}$ tds.
- 22.2.36 Throat cleaning with degree of haemorrhage.
Nasal discharge improving.
Colour cyanotic. Pulse imperceptible.
General condition deteriorated.
- 24.2.36 Died of
12.5 a.m. Cardiac Muscle Failure.

Treatment.

Springe Insects with
Adrenalin water,
Purified to 2000,
A. B. S. 98,000 units i.m.
A. B. S. 49,000 units i.v.
Dist. 1.012 of 2000,
A. B. S. 10 units i.m.

Previous Medical History.

None.
Respiratory system
Healthy. Slight cough
No epistaxis noted. No rash.
Heart regular. Tone fair.
Lungs - normal sounds & etc.
General condition - fair.
Profuse nasal discharge.



Disease. Severe faucial Diphtheria.

Date of Admission. 3.2.36

Day of disease on admission. Third.

Type of organism. Intermediaté.

Complications. Adenitis. Rhinorrhoea ad. Serum Rash 15

Period for throat to clean. 7 Days.

Date of Discharge. 15.4.36

Date of Death.

Bacteriological
Examination.

3.2.36

Cultures +
Dick Test -

6.4.36)

7.4.36) -

8.4.36)

Treatment.

Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 40,000 units I.V.

Mist A.S.A.m. 7 P.R.N.

A.B.S. 25 cc. I.M.

History of Present Illness.

Sore throat.

Indefinite onset a few days ago.

Vomiting.)
Adenitis) 2.2.36

Earache 3.2.36

Previous Medical History.

Measles.

Whooping Cough.

Recurrent attacks Bronchitis.

Condition on Admission.

Tongue congested. Throat inflamed.
Oedematous fauces. Adenitis and
periadenitis very marked both sides
of neck. Foetor ++

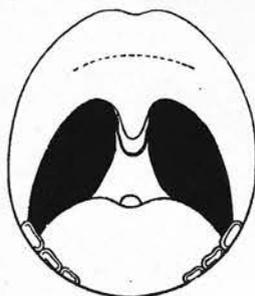
No Koplik's spots. No rash.

Heart regular. Tone fair.

Lungs - breath sounds normal.

General condition - fair.

Profuse nasal discharge.



Date

Continued.

4.2.36 Membrane present over both tonsils.
Glands still enlarged.
Heart - rapid & regular.

5.2.36 Throat still oedematous. Membrane present over
left tonsil. Glands still enlarged.
Rhinorrhoea less.
General condition - fairly toxic.

11.2.36 Throat cleaned. Oedema subsided.
Heart sounds closed and regular.

15.2.36 Generalised serum rash.

18.2.36 Colour and pulse satisfactory.
Improving.

25.2.36 Colour and pulse satisfactory.
Appears better.

3.3.36 Palate active.
Heart regular. Tone fair. Colour and pulse good.

10.3.36 No paresis. Circulation satisfactory.

16.3.36 Treatment. 1 P, llow.

17.3.36 Improvement maintained.

Treatment. Sit up.

18.3.36 Treatment. Up

2.4.36 General condition -, satisfactory.

12.4.36 Patient discharged well.

Treatment

4.2.36, 5.2.36, 11.2.36, 15.2.36, 18.2.36, 25.2.36, 3.3.36, 10.3.36, 16.3.36, 17.3.36, 18.3.36, 2.4.36, 12.4.36

Medical History

1. History of illness - 4 days.

2. Onset - 4.2.36.

3. Progress - 5.2.36, 11.2.36, 15.2.36, 18.2.36, 25.2.36, 3.3.36, 10.3.36, 16.3.36, 17.3.36, 18.3.36, 2.4.36, 12.4.36.

4. Present condition - 12.4.36.

5. General condition - fairly toxic.

6. Local condition - throat, tonsils, glands.

7. Systemic condition - heart, circulation, rash.

8. Treatment - 1 P, llow, Sit up, Up.

9. Prognosis - favourable.

10. Remarks - Patient discharged well.

11. Physical examination - Throat - injected, oedema, membrane, tonsils, glands.

12. Laboratory examination - Blood - normal, urine - normal, sputum - normal.

13. X-ray - normal.

14. Pathology - normal.

15. Microbiology - normal.

16. Immunology - normal.

17. Nutrition - normal.

18. Hygiene - normal.

19. Social history - normal.

20. Family history - normal.

21. Personal history - normal.

22. Past history - normal.

23. Present history - normal.

24. Future history - normal.

25. Summary - normal.

26. Conclusion - normal.

27. Recommendations - normal.

28. References - normal.

29. Acknowledgments - normal.

30. Appendix - normal.

31. Bibliography - normal.

32. Index - normal.

33. Glossary - normal.

34. Abbreviations - normal.

35. Symbols - normal.

36. Figures - normal.

37. Tables - normal.

38. Charts - normal.

39. Photographs - normal.

40. Diagrams - normal.

41. Maps - normal.

42. Plans - normal.

43. Sections - normal.

44. Stains - normal.

45. Cultures - normal.

46. Specimens - normal.

47. Results - normal.

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50. Conclusion - normal.

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89. Maps - normal.

90. Plans - normal.

91. Sections - normal.

92. Stains - normal.

93. Cultures - normal.

94. Specimens - normal.

95. Results - normal.

96. Discussion - normal.

97. Summary - normal.

98. Conclusion - normal.

99. Recommendations - normal.

100. References - normal.



Name Harry Bailey

Sex M Age 8

Lab. No.
162

Disease. Severe faucial Diphtheria.

Date of Admission. 19.12.35

Day of disease on admission. Fourth.

Type of organism. Intermediate.

Complications. Rhinorrhoea & Adenitis ad. Oedema of face.
Petechiae 6

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 22.12.35

Bacteriological
Examination.

19.12.35

Cultures +
Dick Test +

History of Present Illness.

Sudden onset. Patient in bed since
16.12.35

Vomiting. 16.12.35

Sore Throat. 17.12.35

Headache & cervical adenitis 18.12.35

Treatment.

Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A.m.6 P.R.N.

Adrenalin m.5 stat.

Blocks.

Salines.

A.B.S. 25 cc I.M.

Previous Medical History.

Measles)
Chicken Pox) Infancy.

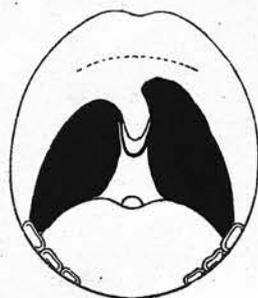
Condition on Admission.

Tongue furred.

Throat - injected. Extensive
exudate with a spreading edge on
left tonsil. Membrane on right
tonsil. No discharges.No Koplik's spots. Skin clear.
No rash.Small abrasion on right thigh and
knee.Glands - much enlarged and very
tender. Marked periadenitis,
especially on left side.Heart - regular. Sounds of good
quality.

Lungs - Breath sounds normal.

General condition -, very toxic.



Date

Continued.

- 20.12.35 Oedema of fauces. Membrane over both tonsils, extending on to soft palate on left side. Thickening. No separation. Glands - marked periadenitis left side of neck. Heart - sounds closed. Tone fairly good. Skin - clear. General condition - fair - toxic.
- p.m. Very restless.
- Treatment. Nепenthe. m.5
- 21.12.35 Throat - membrane separating. Oedema less. Heart - regular, rapid. Sounds very soft. Skin - petechiae present. Eyes - extremely puffy. Restless at times. Urine - no albuminuria. General condition - very poor.
- Treatment. Continue Salines. Paraldehyde 3i P.R. Mist A.S.A. m.6 4 hourly. Camphor in oil 1 cc P.R.N.
- 22.12.35 5.25 a.m. Died.

Disease. Severe faucial Diphtheria.

Date of Admission. 10.12.35

Day of disease on admission. Fourth.

Type of organism. Intermediate.

Complications. Rhinorrhoea & Adenitis ad Petechiae 6

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 17.12.35

Bacteriological Examination.

10.12.35

Cultures +
Dick Test -**History of Present Illness.**

Sleepiness.)
Sore throat) 6.12.35
Glandular swelling)
Last perfectly well and at
school 6.12.35
Not confined to bed until 7.12.35

Treatment.

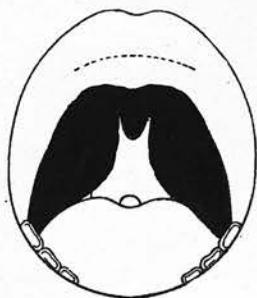
Syringe fauces with
chlorine water.
Poultices to neck.
A.D.S. 50,000 I.M.
A.D.S. 60,000 I.V.
Radiant Heat 4 hourly
Adrenalin 10 P.R.N. p.m.
A.B.S. 1cc No.1 I.V. (6.30)
A.B.S. 9cc No.1 I.M. "
A.B.S. 1cc No.1 I.V. (8.15)
A.B.S. 9cc No.1 I.V. (8.30)

Previous Medical History.

Tonsillitis.)
Measles) Infancy.

Condition on Admission.

Extensive thin spreading membrane
on both tonsils, fauces and soft
palate.
Tonsils both oedematous.
Profuse nasal discharge.
Glands - periadenitis bilaterally
Tongue - glazed. No Koplik's spots
Heart - Sounds regular - closed.
quality fair.
Lungs - No evidence of disease.
Skin - clear, excoriation of nose.
Colour - good.
Nutrition - fair.
General condition - toxic.



Date

Continued.

10.12.35 Treatment. Salines.

11.12.35 Throat - still very extensive membrane.
 Glands - still enlarged - bullneck.
 Skin - no petechiae.
 Colour and pulse - fair.
 Urine - clear.
 Restful. Taking fluids.
 General condition - remains toxic.

12.12.35 Throat - membrane separating over palate.
 Glands - adenitis subsiding.
 General condition - does not appear so toxic.

14.12.35 Throat - cleaning. Membranes separating with quite a degree of bleeding.
 Treatment. Weak H₂O₂ irrigations to throat.
 Glands - nearly subsided.
 Skin - petechiae present.
 Colour and pulse - fair.
 General condition - poor.

16.12.35 Petechiae still marked.
 Throat - cleaning.
 Colour and pulse - poor.
 General circulation - feeble.
 General condition - extreme.

17.12.35 Died.

Treatment.

Previous Medical History.

Admission - 12.12.35
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Disease. Severe faucial Diphtheria.

Date of Admission. 4.12.35

Day of disease on admission. Fourth.

Type of organism. Intermediate.

Complications. Rhinorrhoea & Bullneck ad Petechiae. 6
Albuminuria 5

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 10.12.35

Bacteriological Examination.

4.12.35

Culture + N & T
Dick Test +

History of Present Illness.

Gradual onset.
Sleepiness.)
Sore throat.) 30.11.35
Headache.)
Difficulty in breathing.
Profuse nasal discharge 3.12.35

Treatment.

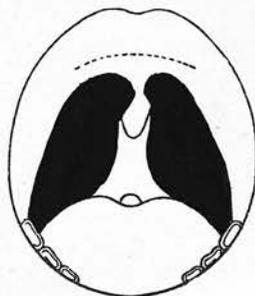
Syringe fauces with chlorine water.
Poultices to neck.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Mist A.S.A. m.8 P.R.N.
Brandy $\frac{3}{ii}$ P.R.N. p.m.
A.B.S. 1 cc No.1 I.V. (6.30)
A.B.S. 9 cc I.M. "
A.B.S. 1 cc No.1 I.V. (8.30)
A.B.S. 9 cc No.1 I.V. (8.45)

Previous Medical History.

Measles in infancy.
Pneumonia, 1930.

Condition on Admission.

A well nourished child.
Tongue - furred.
Throat - injected. Very extensive old membrane on tonsils. More recent membrane with active edge on palate.
Glands - marked adenitis and periadenitis on both sides of neck
Nose - bilateral purulent discharge
Extensive membrane on septum and both lateral walls.
Skin - clear.
Heart - sounds closed and regular.
Lungs - breath sounds normal.
Muscles - limp.
Colour - fair - pulse rapid.
General condition - toxic.



Date

- 5.12.35 Throat - still oedematous. Extensive membrane still present.
Glands - bullneck still present.
Nose - both nostrils membrane present.
Face - puffy. Eyes - sticky. Colour - poor.
Pulse - only fair.
Heart - regular and rapid.
Albuminuria.
General condition - very poor.
Treatment. Salines - 4 hourly.
Mist A.S.A.m.5 alternately with camphor in oil lcc 4 hourly.
Radiant heat - 20 mins 95° 4 hourly.
Irrigate eyes with boric acid 4%
Instil. m∇ 10%
Argyrol.
Paraldehyde 3ii P.R.
- 6.12.35 Petechial haemorrhage present.
No change in general condition.
- 7.12.35 Throat - membrane separating with haemorrhage.
Glands - still enlarged.
Skin - petechiae still present.
Rhinorrhoea +++
Albuminuria.
Heart - rapid and regular.
General condition - extremely poor.
- 8.12.35 Very restless. Toxic looking, throat cleaning.
Glands - still enlarged.
General condition - very poor.
- 10.12.35 Throat cleaning - very haemorrhagic.
Glands - still enlarged.
Heart - regular - rapid. Tone poor.
Urine - albumen.
Eyes - still puffy.
Drowsy, restless at times.
- 10.30 p.m. Died. Cardiac Muscle Failure.

Disease: _____
Date of Admission: _____
City of Residence: _____
Type of Residence: _____
Period for which treated: _____
Date of Discharge: _____

Bed No. _____
Classification: _____
Diagnosis: _____
Treatment: _____

APPENDIX 3.

Pages 218 - 223.

COMPLICATED GRAVIS SERIES.
ANTI-BACTERIAL SERUM TREATED CASES.

Pages 224 - 229.

COMPLICATED GRAVIS SERIES.
DIPHTHERIA ANTITOXIN SERUM TREATED CASES.

Throat - _____
Over both tonsils and arches.
Glands and lymphatics enlarged.
Etiology - _____
Skin - _____
Heart - _____
Lungs - _____
No suppuration.



Name June Harvey

Sex F Age 4

Lab. No.
748

Disease. Severe faucial Diphtheria.

Date of Admission. 26.7.36

Day of disease on admission. Fourth.

Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Petechiae ad.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 27.7.36

Bacteriological Examination.

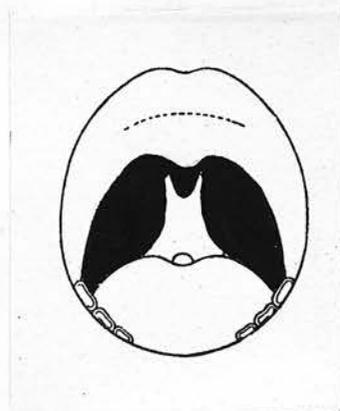
26.7.36

Cultures +
Dick Test -**History of Present Illness.**Glandular swelling)
Sore throat.) 22.7.38

Vomiting. 25.7.38

Treatment.Syringe fauces with
chlorine water.
A.D.S. 8,000 pre.ad.
A.D.S.40,000 units I.M.
A.D.S.60,000 units I.V.
Radiant Heat.
Salines.
Mist. A.S.A.m.5 4 hourly.**Previous Medical History.**

None known.

Condition on Admission.Tongue furred. Throat, membrane
over both tonsils and uvula.
Cedema and foetor very marked.
Glands - periadenitis, both sides
of neck.
Skin - bruising.
Heart - rapid. Sounds poor.
Tone feeble.
Lungs - breath sounds normal.
No Koplik's spots.
Nasal discharge ++
Muscles exceedingly limp.
General condition - very poor.

Date

27.6.36 Still very extensive membrane on throat.
 Glands - markedly enlarged.
 Heart sounds very soft - tachycardia.
 Nasal discharge profuse.
 Still extensive bruising.
 General condition very poor.
 Patient's condition deteriorated and she
 1.10 a.m. died of Cardiac muscle failure.

Bacteriological

History of Present Illness

Examination

10.7.36

10.7.36

10.8.36

11.8.36

10.8.36

11.8.36

Treatment

Previous Medical History

Syringe feeds with
 saline water.
 Antitoxin to cover.
 A.S.S. 40,000 units 10.7.
 A.S.S. 40,000 units 11.7.
 Met A.S.S. 40,000 units 11.7.

10.7.36

Condition on Admission

Temp 38.2°C.
 Throat - slightly inflamed. Some
 large, membranous patches over arch
 separating on left.
 Glands - enlarged on both sides of
 neck, particularly on left.
 Skin clear.
 Heart - clear.
 Lungs - clear.
 General condition - bad.
 No Koplik's spots - no diarrhoea.
 No dyspnoea, rales, or crepitations.



Disease. Severe faucial Diphtheria.

Date of Admission. 19.7.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Adenitis ad Albuminuria. 8

Period for throat to clean. 6 Days.

Date of Discharge. 14.9.36

Date of Death.

Bacteriological Examination.

19.7.36

Cultures +
Dick Test -

9.9.36)

10.9.36) -

11.9.36)

Treatment.

Syringe fauces with chlorine water.

Poultices to neck.

A.D.S.40,000 units I.M.

A.D.S.40,000 units I.V.

Mist A.S.A.m.5 P.R.N.

History of Present Illness.

Sore throat.) 17.7.36
Headache.)

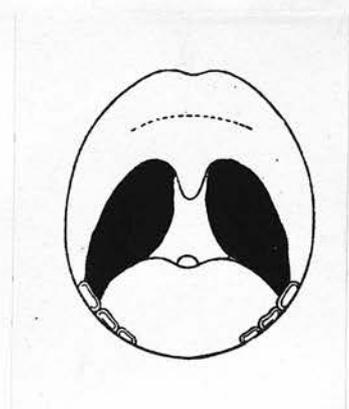
Vomiting.) 18.7.36
Adenitis.)

Previous Medical History.

Measles, 1935.

Condition on Admission.

Tongue furred.
Throat - slightly injected. Tonsils large, membranous exudate over both. Separating on left.
Glands - enlarged on both sides of neck, particularly on left.
Skin clear.
Heart) Clear.
Lungs) Clear.
General condition - fair.
No Koplik's spots. No discharges.
No dyspnoea, recession, hoarseness.



Date

Continued.

20.7.36 Membrane over both tonsils. Slight oedema of tissue.
Glands still enlarged in neck. Skin clear.
Heart - regular. Colour and pulse good.

25.7.36 Throat clean. Colour and pulse satisfactory.
Glands - subsided.

28.7.36 General condition better.

3.8.36 Heart - regular. Colour and pulse good.
General condition - improving.

13.8.36 Colour and pulse satisfactory. Heart regular.
Muscle tone improving.

17.8.36 General progress satisfactory.
Palate active. No paresis.

21.8.36 Colour and pulse good.
Generally improved.

30.8.36 Heart regular. Muscle tone improving.
Treatment. 1 Pillow.

31.8.36 Progress maintained.
Convalescence continued uninterrupted

14.9.36 Patient discharged.

Name Mary Betty Halliday

Sex F

Age 5

Lab. No. 566

Disease. Severe faucial Diphtheria.

Date of Admission. 2.6.36

Day of disease on admission. Third.

Type of organism. Gravis.

Complications. Otorrhoea. 22 Adenitis.

Period for throat to clean. 5 Days.

Date of Discharge. 1.8.36

Date of Death.

Bacteriological Examination.

2.6.36

Pre.ad. swab +

Cultures +
Dick Test +

26.7.36)

27.7.36) -

28.7.36)

Treatment.

Syringe fauces with chlorine water.
Poultices to neck.
A.D.S.30,000 units I.M.
Tepid Sponge.
Brandy.
A.D.S.60,000 units. I.V.
Mist A.S.A. m.5 P.R.N.

History of Present Illness.

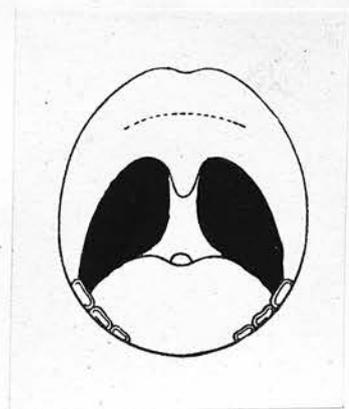
Sore throat.)
Headache.)
Shivering.) 31.5.36
Adenitis.)
Sleepiness 1.6.36

Previous Medical History.

Measles 1933.
Chicken Pox 1934
Mumps 1935
Under treatment for "Nerves" for 1 month.

Condition on Admission.

Tongue - clean.
Tonsils - enlarged, extensive membrane with active edge over right tonsil and anterior pillar. Small speck on left.
Glands - enlarged in neck, particularly on right side.
Heart)
Lungs) No evidence of disease.
General condition - fairly good.
No Koplik's spots.
No discharges, no rash.



Date

Continued.

3.6.36 Membrane necrotic over right tonsil. New membrane over left, extending on to Anterior Pillar.
Glands - enlarged both sides of neck.
Bruising of skin.
Heart - rapid and regular.
General condition - toxic.

7.6.36 Throat clean. Glands subsided.
Heart - rapid and regular.
Colour and pulse poor.

15.6.36 Colour and pulse fairly good.
Heart regular.

24.6.36 Heart sounds fairly good.
Pulse soft.
General condition - fair.
Right Otorrhoea.

1.7.36 Palate active. Speech clear. Heart regular.

6.7.36 Circulation seems satisfactory.

12.7.36 Colour and pulse good.
Heart regular.
Treatment. 1 Pillow.

20.7.36 Improvement maintained.
Treatment. Sit Up.

1.8.36 Convalescence continued uninterrupted and patient discharged.

Treatment

Previous Medical History

Chronic tonsillitis
Acute tonsillitis

Chronic tonsillitis
Acute tonsillitis

Condition on Admission

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt. 100, Wt. 150, Ht. 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

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Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.

Temp 100.4, Pulse 120, RR 20, BP 120/80, Gt 100, Wt 150, Ht 5' 6", Age 25, Sex M, Race W, Religion C, Marital S, Occupation Student, Address 123 Main St, City, State, Country.



Name Albert Blizzard

Sex M Age 4

Lab. No.

416

Disease. Severe faucial Diphtheria.

Date of Admission. 31.3.36

Day of disease on admission. Second.

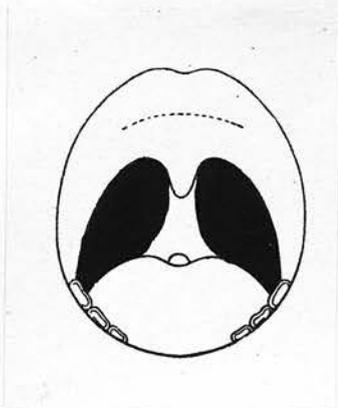
Type of organism. Gravis.

Complications. Adenitis. Rhinorrhoea ad Serum Rash 10
Cleft palate. Triple Rhythm

Period for throat to clean. 6 Days.

Date of Discharge.

Date of Death. 20.4.36

Bacteriological Examination.31.3.36
Cultures +
Dick Test +**History of Present Illness.**Sore throat.)
Shivering)
Headache.) 30.3.36
Adenitis.)
Drowsiness.)**Treatment.**Syringe fauces with
chlorine water.
A.D.S. 40,000 units I.M.
A.D.S. 60,000 units I.V.
Poultices to neck.
A.B.S. 10 ccs I.M.
Adrenalin m.5 P.R.N.**Previous Medical History.**1934. Epileptic fits.
Right hemiplegia.
Naevus on left temple.
Bilateral Internal Strabismus.**Condition on Admission.**Tongue furred. Throat - large,
oedematous, Tonsils, with extensive
membrane over both and anterior
pillar. Congenital malformation of
palate.
Glands - adenitis, and periadenitis
both sides of neck. No Koplik's
spots. Nose moist.
Heart - regular - sounds closed.
Tone fairly good.
Lungs - breath sounds normal.
General condition - poor.
Mentally defective.

Name Thelma Kelly

Sex F Age 4 $\frac{1}{2}$ Lab. No.
242

Disease. Severe faucial Diphtheria.

Date of Admission. 29.1.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. Bullneck. Rhinorrhoea.
Cardiac Muscle Failure.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 30.1.36

Bacteriological Examination.

29.1.36

Cultures +
Dick Test -**History of Present Illness.**

Patient in bed on 28.1.36

Vomiting and sore throat 28.1.36

Glandular swelling 29.1.36

Treatment.Syringe fauces with
chlorine water.

A.D.S. 40,000, units I.M.

A.D.S. 60,000 units I.V.

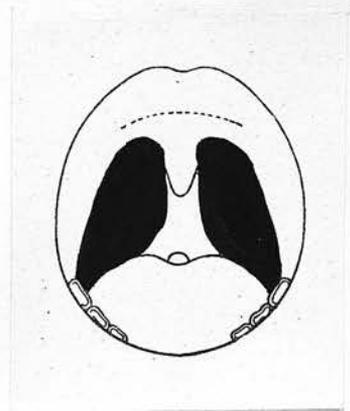
Poultices.

A.B.S. 10 ccs N_o.1 I.M.**Previous Medical History.**

Measles, 1935

Condition on Admission.

Tonsils covered with thin film
of membrane, extending on to soft
palate, oedema of tissues.
Glands - Bullneck. Tongue coated.
Heart sounds - rapid, regular.
Very poor tone.
Lungs - breath sounds clear.
Skin - clear.
No Koplik's spots.
Profuse rhinorrhoea.
General condition - very toxic.



Disease. Severe faucial Diphtheria.

Date of Admission. 19.2.36

Day of disease on admission. Second.

Type of organism. Gravis.

Complications. T. B. Spine ad. Adenitis. Haemorrhage from
Albuminuria ad. bowels.

Period for throat to clean. 4 Days.

Date of Discharge. Date of Death. 24.2.36

Bacteriological Examination.
19.2.36

Cultures +
Dick Test -

History of Present Illness.

Has been in bed for past 4 years.

Sore throat 18.2.36

Treatment.

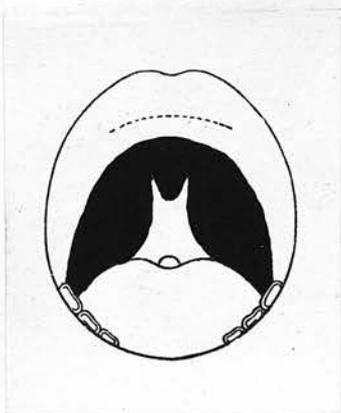
Syringe fauces with chlorine water.
A.D.S. 24,000 units pre.ad. IM
A.D.S. 20,000 units I.M.
A.D.S. 60,000 units I.V.
A.B.S. 10 ccs No.1 I.M. (8.30)
A.B.S. 10ccs. No.1 I.M. (20.2.36)^{P.M.}

Previous Medical History.

T.B. Spine for last 4 years.
T.A.M. 1 cc on 10.2.36
T.A.M. 1 cc on 17.2.36

Condition on Admission.

Tonsils enlarged. Uvula and tonsils covered with membrane, separating on the right side. Glands enlarged both sides of neck. Heart - sounds closed and rapid. Lungs - clear. No Koplik's spots. Patient nursed on frame for T.B. Spine - Discharging sinus right hip. Urine - albumen + 7 parts Esbach.



Date

20.2.36 Extensive membrane over both tonsils, uvula and soft palate.
Glands not markedly enlarged.
Heart - rapid.
Comfortable in frame.
General condition - poor.

22.2.36 Throat clean, ulcerated.
Heart rapid. Tone poor.
General condition fair.
Treatment. Mist A.S.A.m.5 4 hourly.
p.m. Haemorrhage P. R. About 4 ozs.
Foecal matter present. Pulse fair.
Nothing palpable on digital examination.
Treatment. Tinct: Opii m.5 4 hourly.
20ccs Calc.Gluconate.
10% I.V.

23.2.36 No further bleeding P.R.
Colour extremely pale.

24.2.36 Heart rapid, regular. Malaena+
No more haemorrhage.
Seems very lethargic and lost interest in life.
Very ill.

25.2.36 Pulse feeble.
General condition - extreme.

10.40 p.m. Died. Due to combination of tuberculosis and Diphtheria.

Page 120 - 121

ATYICAL GROUP BACILLI

BACTERIAL GROUP BACILLI

Disease
 Date of Admission
 Day of Discharge
 Type of Discharge
 Complications
 Part of the body
 Date of Discharge

Examination
 History of Present Illness
 Physical Examination
 Laboratory Examinations
 Pathological Findings
 Treatment

APPENDIX 4.

Pages 230 - 235.

ATYPICAL GRAVIS SERIES
ANTI-BACTERIAL SERUM TREATED CASES.

Case No. 1
 Date of Admission
 Date of Discharge
 Type of Discharge
 Complications
 Part of the body
 Date of Discharge
 Examination
 History of Present Illness
 Physical Examination
 Laboratory Examinations
 Pathological Findings
 Treatment



Disease. Severe faucial Diphtheria.

Date of Admission. 25.11.35

Day of disease on admission. Third.

Type of organism. Gravis Atypical.

Complications. Rhinorrhoea. Severe adenitis ad Oedema face 5
Petechiae 6 Obstruction and tracheotomy 6
Albuminuria. Anuria.

Period for throat to clean. Dead before clean.

Date of Discharge.

Date of Death. 28.11.35

Bacteriological
Examination.

25.11.35

Cultures +
Dick Test +

History of Present Illness.

Sudden onset.

Vomiting)
Headache) 23.11.35

Sleepiness 22.11.35

Sore throat.)

Glandular swelling) 24.11.35

Nasal discharge)

Treatment.

Syringe fauces with
chlorine water.

Poultices to neck.

A.D.S. 40,000 units I.M.

A.D.S. 60,000 units I.V.

Mist A.S.A.m.6 P.R.W.

Blocks. Salines.

Paraldehyde. 3†

A.B.S. 15 ccs No.1 I.P. (6.0)

A.B.S. 10 ccs No.1 I.M.

A.B.S. 10 ccs No.1 I.M.)

27.11.35)

Previous Medical History.

Measles)
Chicken Pox) 1934.

Condition on Admission.

Patient stuporose, tongue furred.

Throat - membrane with active
edge, covering both tonsils,
uvula and adjacent $\frac{5}{8}$ soft palate.Uvula and tonsils oedematous and
enlarged. Thick purulent
discharge from nose.Glands - markedly enlarged both
sides of neck.

Skin - clear.

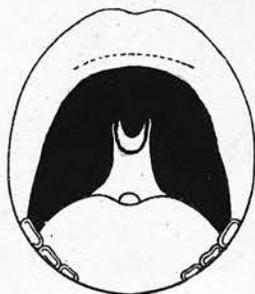
Heart - regular not enlarged.

Sounds closed.

Muscles - limp.

Lungs - breath sounds normal.

General condition - poor.



Date

Continued.

26.11.35 Throat - oedema still marked. Membrane not definitely separating
Glands - still marked periadenitis both sides of neck.
Skin - clear.
Heart - rapid and regular.
Rhinorrhoea ++
General condition - exceedingly toxic.

27.11.35 Throat - still membrane present. Drowsy.
Foetor marked.
Albumen present in urine.

28.11.35 Oedema of face very severe. Eyelids closed.
Pulse imperceptible.
Nose - obstructed and bleeding.
Heart - rapid, tone poor.
Urine - suppression.
Extensive petechial haemorrhage chest and buttock.
General condition - extreme.
Treatment. Urine and fluid chart.
Salines 4 hourly.
Radiant Heat.
Tracheotomy.

Patient obstructed.

6.45 p.m. Died.

Treatment.

Saline 4 hourly.

Radiant heat.

Tracheotomy.

Urine and fluid chart.

Extensive petechial haemorrhage.

General condition - extreme.

Nose - obstructed and bleeding.

Pulse imperceptible.

Oedema of face very severe.

Eyelids closed.

Albumen present in urine.

Foetor marked.

Drowsy.

Throat - still membrane present.

Exceedingly toxic.

Rhinorrhoea ++.

Skin - clear.

Glands - still marked periadenitis.

Oedema still marked.

Membrane not definitely separating.

Throat - oedema still marked.

26.11.35

Name Kathleen Flanagan

Sex F Age 7

Lab. No. 18

Disease. Severe faucial Diphtheria.

Date of Admission. 5.11.35

Day of disease on admission. Fifth.

Type of organism. Gravis Atypical.

Complications. Rhinorrhoea. Adenitis ad Albuminuria 8
Heart Block 10

Period for throat to clean. 5 Days.

Date of Discharge.

Date of Death. 15.11.35

Bacteriological Examination.

5.11.35

Cultures on ad. T +
N +

Dick Test -

History of Present Illness.

Glandular swelling in neck since 31.10.35

Vomiting and sore throat 5.11.35

Treatment.

Syringe fauces with chlorine water.

A.D.S. 40,000 units I.M.

Adrenalin 5 P.R.N.

Mist A.S.A.m 6

A.D.S. 60,000 units I.V.

Rectal Salines.

Poultices to neck.

A.B.S. 10 ccs I.M. (9.30 a.m)
6.11.35.

Gravis A.B.S. 10 ccs Batch No. 1 I.V. (6.30 p.m)

1 cc given IV before remainder of dose.

Previous Medical History.

Measles)
Chicken Pox) Infancy.

Hare Lip operation - 1 1/2 yrs old.
Bronchitis every winter.

Condition on Admission.

Patient - ill nourished and undersized.

Throat - extensive membrane, especially on left side of fauces. Membrane covering both tonsils and spreading on to palate. Edge on palate seems active.

Glands - marked bilateral bullneck.

Heart - regular, sounds of moderate quality.

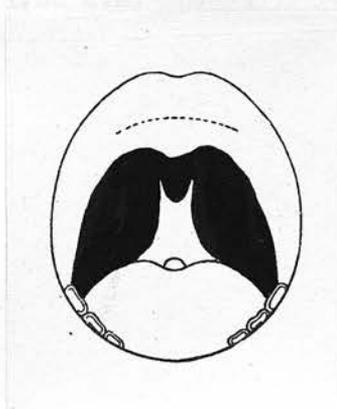
Pulse - poor volume.

Lungs - Breath sounds normal.

Skin - few septic spots on face.

Muscles - very limp.

General condition - marked toxæmia.



Date

- 6.11.35 Throat - very oedematous - membrane over both tonsils and uvula.
Glands - still enlarged both sides of neck.
Skin - clear. Heart - marked tachycardia.
Nose - rhinorrhoea ++ Urine - clear.
Muscles - limp.
General condition - extremely toxic.
Treatment. Paraldehyde 3i P.R. S.O.S.
- 6.30 p.m. 1 hour after serum, collapsed, pallor and cyanosis, shivering, dyspnoea, thready pulse.
- 7.11.35 Throat - oedema less, membrane well thickened.
Glands - subsided right side of neck, left side still enlarged.
Heart - rapid and regular. Tone fair.
Nose - rhinorrhoea less.
Toxaemia does not seem quite so marked to-day.
- 8.11.35 Throat - membrane separating.
Glands - adenitis disappearing. Restful.
Pulse - 152.
Urine - albumen acetone present yesterday.
Vomited T this morning.
- 9.11.35 Passed a good night. Tonsils still swollen.
Slight enlargement of liver. Dullness.
Colour good. Pulse 120 - regular.
- 10.11.35 Throat - clean. Tonsils ulcerated.
Glands subsided, Less albumen.
1.30 p.m. Pulse reported irregular.
Heart block - 2 to 1 present. Palate sluggish.
- 11.11.35 Throat clean. Glands - nil.
Skin - clear. No petechiae.
Heart - irregular. Pulse at the wrist - 124.
Urine - loaded with albumen. Palate active.
Restful and drinking well. Colour reported poor at times.
General condition - limp.
Treatment. Radiant heat 20 minutes at 95°
Mist A.S.A.M.4 alternately with
Camphor in Oil $\frac{1}{2}$ cc Q.H.
- 12.11.35 Pulse - irregular.
Pallor and albuminuria.
- 13.11.35 Heart irregular. Albuminuria less.
Treatment. Continue Salines.
- 14.11.35 Heart irregular. Cyanosis present.
Muscles - extremely limp.
General condition - very poor.
- 15.11.35 Cardiac pain and vomiting.
Pulse scarcely perceptible.
1.30 a.m. Died.



Disease. Very severe faucial Diphtheria.

Date of Admission. 12.11.35

Day of disease on admission. Fourth.

Type of organism. Gravis Atypical.

Complications. Adenitis Fullneck ad Rhinorrhoea ad Laryngeal obstruction. Tracheotomy. 4

Period for throat to clean. Dead before clean.

Date of Discharge. Date of Death. 13.11.35.

Bacteriological Examination.
12.11.35

Cultures +
Dick, Test -

Treatment.

Syringe fauces with chlorinewater.
Poultices to neck.
A.D.S. 8,000 11.11.35
A.D.S. 80,000 units I.M.
A.D.S. 80,000 units I.V.
Brandy $\frac{3}{ii}$ 4 hourly
Mist A.S.A.m6 P.R.N.
A.B.S. 9 cc No.1. I.M.
A.B.S. 1 cc No.1. I.V.
A.B.S. 1 cc Batch No.1 I.V.)
A.B.S. 9 cc Batch No.1 I.M.)
9.45 a.m)

History of Present Illness.

Child last quite well and went to school on 8.11.35.
Confined to bed with sore throat 9.11.35.
Vomiting.)
Sleepiness) 10.11.35
Glandular swelling)

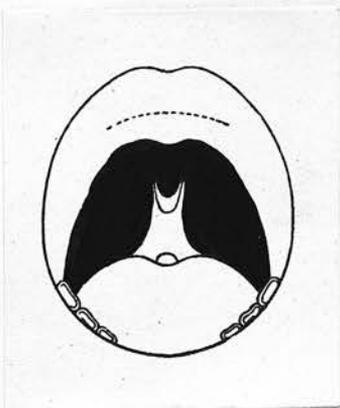
Headache.)
Nasal Discharge) 11.11.35

Previous Medical History.

Measles in infancy.

Condition on Admission.

A well nourished child.
Tongue coated and dry. Fauces covered with membrane and intensely oedematous. Soft palate covered with membrane and is intensely oedematous.
Glands - periadenitis both sides of neck.
Heart - first sound soft.
second sound accentuated.
Pulse - volume poor.
Lungs - No adventitious sounds.
Nose - No rhinorrhoea, but ant. nares slightly excoriated.
Child extremely toxic.
Slight stertor in breathing.
No Koplik's spots.
General condition - poor.



Date

12.11.35 Membrane still present on palate and fauces, thickened.
Restless.

9.45 a.m. Treatment. Salines.
Paraldehyde 3i P.R.
Radiant Heat.

8.30 p.m. Very restless, cyanosed, breathing obstructed, pulseless.
Treatment. Tracheotomy.
I.C. Adrenalin lcc.
Strychnine gr.1/60

13.11.35 Patient obstructed between the second I.V. and the last I.M. injection, passed from asphyxia livida to pallida before tracheotomy could be performed. Artificial respiration for 20 minutes after tracheotomy. Patient semi-conscious and died at 4.30 a.m. next morning.

PRESCRIPTIONS.

- I.V. - Anti-bacterial serum
- I.V. - Morphine 1/60
- I.V. - Morphine
- I.V. - Intravenous Injection
- I.V. - Intravenous Injection
- I.V. - Intravenous Injection
- Mixt. A.S.A. - Atropine 1/60
Strychnine 1/60
Belladonna 1/60
Aqua dest. ad. 1/60
- I.V. - Morphine 1/60

ABBREVIATIONS.

A.B.S.	-	Anti-bacterial Serum.
A.D.S.	-	Diphtheria Antitoxin.
Bdy.	-	Brandy.
I.M.	-	Intramuscular Injection.
I.P.	-	Intraperitoneal Injection.
I.V.	-	Intravenous Injection.
Mist. A.S.A.	-	Atropine sulph. gr. $\frac{1}{200}$ Strychnine hydrochlor. gr. $\frac{1}{100}$ Sol. adrenalin hydrochlor. $\frac{1}{1000}$ m.5 Aqua dest. ad. m.10.
N.& T.	-	Nose and Throat.

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