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## Digitisation notes:

- Double pagination of p.13 wrong in original: should read p.12 and p,.13

THE TREATMENT OF ASTHMA

BY

CAUTERISATION OF THE NASAL SEPTUM

A THESIS FOR THE

M.D. DEGREE

1916.

SUBMITTED BY *Alan Stewart* A.S. BOYD .

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## I N T R O D U C T I O N .

The additions to our knowledge of diseases and their treatment within the last few years have been most impressive. And yet, to the mind of the General Practitioner, it is at times galling to find that, in the course of his daily labours he may be brought to bay with a well known condition, which defies all efforts for amelioration. He turns to his books and consults the highest and most recent authorities to find in many instances conflicting theories, and advice which may prove to be ineffective.

No better example of such dilemma is to be found than in the treatment of the condition known as spasmodic Asthma.

Our knowledge of this disease has made but little advance even in recent years, and especially so in regard to the etiology and the treatment thereof.

It is however universally agreed to be a neurotic affection. It is not a specific entity. But like the conditions of headache, vomiting etc., it may be produced by a variety of cause. One factor however appears to be present in a large number of cases viz., an abnormally sensitive condition of the nasal mucuous membrane.

The recognition of this has led to an important advance in the treatment, that is, the cauterisation of the nasal mucuous membrane.

In the ordinary course of private practice I used to have most discouraging results in my treatment of this disease until this method was brought to my notice, I have since 1905 practised this treatment in such cases as came under my care.

My results have been so satisfactory that, in the present Thesis I propose to deal more particularly with this form of treatment. No apology is necessary for dealing with a subject of such importance, and it is hoped that any contribution to the literature on this subject will be helpful.

### ETIOLOGY OF ASTHMA .

In the year 1670 Willis wrote that asthma was a spasmodic condition due to spasm of the air tubes; and from that time to the present day the views of most writers appear to vary between spasm of the bronchial muscles and a turgescence of the mucosa as the chief <sup>Cause</sup> of the disease.

As an example of the writings of recent authors, Fleming in "A" short Practice of Medicine" states - "that asthma is due to a spasm of bronchial tubes, is beyond question, but there is much

difference of opinion as to how this is brought about," and he adds, - A vase motor paresis is a favourable <sup>the</sup> theory, but there is nothing to prove its existence."

The advance in knowledge of this subject gained in 245 years would therefore appear to be a recognition of the fact that bronchial spasm, hyperaemia and turgescence of the mucosa etc., are mere characteristics of the disease. The true cause remaining obscure.

All recent writers however appear to agree that in a majority of cases of bronchial asthma a strong neurotic element exists, and that heredity is an important factor is undoubted.

Much confusion of opinion has been brought about by the non-recognition of the distinction between the existing causes of the asthmatic condition which are numerous, and vary in almost every asthmatic subject; and ~~that~~ <sup>the</sup> true cause of the disease which must remain constant producing as it does, a similar train of effects in all cases. This remarkable variation in the exciting causes of asthma is well known. The emanations from animals such as cats or horses may throw one asthmatic subject into a most violent paroxysm and may have no unfavourable action on another who may be prone to the conditions only in certain localities etc. etc.

It has long been known that asthma is sometimes associated with intra nasal disease and special attention has been directed to the causal connection between nasal disease and asthma since Voltolini's classical case of asthma which he cured by the removal of nasal polipi (Voltolini Krankheit en der Nase Breslau 1888).

I fully admit that certain nasal lesions may act as the sensory exciting cause of a reflex which manifests itself as an asthmatic paroxysm. But in my experience I have seen so many typical asthmatic conditions in patients who had <sup>no</sup> ~~an~~ intra nasal abnormality, that I am forced to the conclusion that intra nasal disease must merely occupy the position of one of the exciting causes in the asthmatic condition.

Nearly all authorities however, recognise that some connection does exist between asthma and the nose; and it is not difficult to understand that if such connection exists, the diseased intra nasal condition will be more prone to peripheral irritation than that which is normal, and so it may be found that a very large proportion of asthmatics may suffer from some nasal abnormality.

The exciting causes of asthma are therefore peripheral and act on the central nervous system predisposed as it may be by heredity to the

instability which gives rise to asthmatic conditions.

The true cause of asthma being therefore central and common to all cases however peripherally produced, the complaint is due, in all probability to some disturbance of some morbid condition of the Respiratory centre or Vaso motor centre, or both these centres, the one being interdependent with the other.

I have corroborated the observations by Francis that a remarkable fall in the blood pressure takes place as a result of nasal cauterisation; and many writers, notably Weber have thought that the Vaso motor nervous influence plays a very prominent part in the symptoms of asthma.

Dr. Pierre Bonnier in La Revue writes on the Direct Action on the Nerve Centres. He gives some remarkable results of nasal cauterisation in various affections, and suggests that the nasal mucous membrane is to be looked upon as a telephonic exchange board, and we have to learn where to insert the pin in order to get connection with the various nerve centres.

What a profound effect is produced on the asthmatic condition in many instances by intra nasal cauterisation is beyond dispute; and Dr. Bonnier's explanation would seem to indicate that an effect is produced on the Respiratory or Vaso motor centre, re-establishing by peripheral stimulation the equilibrium

which has been temporarily lost. This morbid condition of the centres is responsible for the condition of asthma whatever its exciting causes may have been, and therefore all asthma is fundamentally the same and is to be treated in the same way.

TREATMENT BY CAUTERISATION OF NASAL SEPTUM.

In 1905 my attention was first directed to this method of treatment. At that time it was difficult in this country to obtain surgical appliances locally; and my early cases were operated upon in the most primitive manner. I improved <sup>ised</sup> a cautery, the handle of which was an empty mauser cartridge to which I fitted a steel shank, shouldered and finished at the end with a small round bulb. The steel was heated to a white heat in the stove and rapidly used, before it had time to cool, as a nasal cautery. The performance of the operation under these circumstances was laborious and tedious, but the results were quite satisfactory. And in one respect the experience gained has been profitable, because from subsequent observation of other cases treated with the usual galvano cautery, I find that good results are more readily obtained when the cautery is applied at a dull red heat, then when a bright white heat is used.



THE METHOD OF CAUTERISATION .

The operation is extremely simple and painless. The nasal septum being cocainized. A thin light line is drawn with the point of a galvano-cautery across the nasal septum from a point opposite to the middle turbinated body, forwards and downwards for a distance of from quarter to half an inch, as above stated.

The best results are obtained when the cautery is heated to a dull red heat rather than when heated to a bright white heat. And a light delicate touch appears to be far more effectual than that obtained by a severe and deep burn.

The right side is first cauterised in this manner and after an interval of a week or ten days the left side is similarly heated. Both sides are thus treated alternately at intervals of one week, or longer, if necessary to permit of healing of the previous scar, until distinct improvement in the asthmatic condition is brought about.

Improvement may occur immediately after the first application of the cautery. In such a case I usually allow an interval of ten days to elapse. I then cauterise the opposite side and after another ten days interval, the first side is again cauterised. If

complete relief is now obtained, I desist from further cauterisation and in several cases no further treatment has been required.

Certain cases appear to obtain complete relief after one cauterisation e.g. Case No.11 was operated on once and five years later reported never to have had an asthmatic attack since date of operation Case No.15 obtained complete relief from first attendance but unfortunately has been lost sight of.

In other cases favourable results are not so rapidly brought about, and in such the discretion of the operator must be employed as to the interval allowed between each cauterisation.

In very persistent cases where four or five cauterisations have failed to obtain the desired result, great patience and perseverance may be required. And I believe that in such cases the best results are obtained by cauterising at intervals of one month. Such cases, so treated for a term of one or even two years, even in my experience, show very marked improvement, and I believe in most cases, <sup>may</sup> he completely cured.

Of the total number of 60 cases recorded the results summarised are as follows :-

Complete Relief	16.
Improved	30

No improvement 4

Unreported results 10.

Those cases reported as completely relieved have been carefully observed, and in several of them the good result has been maintained for 10 years.

Many of the cases classified as improved are practically cured. But where the smallest degree of asthma has persisted they have been entered under this classification. In this country even more than in European Countries one experiences an extraordinary difficulty in persuading patients to persevere in a systematic course of treatment, and this even in instances where they acknowledge to have received benefit. And I feel persuaded that but for this unfortunate circumstance, a considerable number of the 30 cases recorded as improved, might have been completely relieved and possibly my 4 cases of failure might have been improved.

It is unfortunate that in the course of a general practice and especially one in South Africa where I believe the disease is somewhat less prevalent than in Europe - the occurrence of cases is necessarily limited and no very great weight of numbers can be produced which might lead to more valuable conclusions. The results, however appear to me to be extremely satisfactory and there are one or two other points of some interest to be noted.

The relation of intra nasal abnormality to these cases is as follows :-

Enlarged Turbinateds & Deflection of Septum	9
Enlarged Turbinateds only	13
Deflection of nasal Septum only	13
No intra nasal abnormality	25

It will be seen from the above figures that 25 cases out of 60 exhibited no intra nasal lesion. This hardly bears out the statement made by Bosworth of New York that a majority ~~e~~ if not all cases of asthma have some obstructive lesion of the nasal cavity.

Enlarged Turbinateds appear to be the most usual complication. But there is no~~t~~ <sup>a</sup> reason for supposing that this lesion is responsible for the asthmatic condition in view of the fact that a greater proportion of cases - showing equally typical asthmatic manifestations - exhibit no intra nasal abnormality.

The enlargement of the turbinated bodies so frequently found as an intra nasal complication may be an effect gradually brought about by the irritation produced by the turgescent mucous membrane in repeated attacks of long standing cases, and not an exciting cause.

THE RELATION OF SEX .

From the above tables it will be seen that the proportion is 22 males to 38 females. The usual experience is the reverse of this, but the numbers are insufficient to make the observation of importance.

In conclusion I am led by my experience in the above noted cases, and in a large number of cases unrecorded to believe that the treatment of asthma by nasal cauterisation is a method likely to obtain permanent success and requires only to be generally well known to become universally practised.

B I R L I O G R A P H Y .

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BALL. Intra nasal disease and asthma Practitioner  
1899.

BRODIE & DIXON The Pathology of Asthma. Trans. of  
the Path. Sec. London 1903 Vol.54

H.A.FRANCIS Nasal Treatment of Asthma B.M.J.  
1902.

HAVILLAND HALL Asthma considered specially in  
relation to nasal disease. Lond.  
1890.

D.I.LEECH "Asthma" Encyclopedia & Dictionary  
Med. and Surgery Green's.

SCHMIEGELOW Asthma considered specially in re-  
lation to nasal disease Lond. 1890.

S.WEST The relation of Asthma to other  
diseases. Prac. 1891 XLVI - 197.

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TABULATED LIST OF CASES OF SPASMODIC ASTHMA TREATED BY  
NASAL CAUTERISATION.

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1. NAME. E.W., Female, 39.  
PRESENT CONDITION; Enlarged Turbinateds-Severe  
type - 12 years.  
TREATMENT AND DATE May 1st. 1905, Cauterised 6  
occasions-alternate sides  
of septum  
RESULT A gradual improvement.  
REMARKS Reported 1914 very great  
improvement; but having left  
the district, unable to  
proceed with treatment.
- 
2. NAME C.V., Female age 40.  
PRESENT CONDITION; Severe spasms; 2 or 3 days  
duration with only partial  
intermission. No nasal  
abnormality.  
TREATMENT AND DATE May 1905. Attended 3 occ-  
asions cauterised.  
REMARKS. Reported Jan.15 "never had  
asthma again."
- 
3. NAME H.S., Male, age 47.  
PRESENT CONDITION Normal. Severe attacks  
very frequent duration- 23  
years.  
TREATMENT AND DATE March 1905. Attended 7  
times - cauterised.  
RESULT Complete relief  
REMARKS Last seen in Jan. 1915.
-

4. NAME A.M., Male, age 55.  
PRESENT CONDITION No abnormality. Severe - duration 3 years.  
TREATMENT & DATE Sep. 1905. Two attendances - cauterised.  
RESULT Reported great improvement.  
REMARKS Native patient not seen since 1905.
- 
5. NAME J.O., Female, age 45.  
PRESENT CONDITION Enlarged turbinateds - severe - duration 7 years.  
TREATMENT & DATE September 1905 - 4 attendances.  
RESULT Great Improvement.  
REMARKS. Reported in 1915 only one attack 1905 - following influenza.
- 
6. NAME A.P., Female, age 48.  
PRESENT CONDITION Enlarged turbinateds.  
TREATMENT & DATE August 4th.1905. Cauterised 4 times.  
RESULT Complete relief  
REMARKS Reported 1913.
- 
7. NAME A.P., Female, age 65.  
PRESENT CONDITION Deflected Septum, enlarged Turbinateds, duration many years.  
TREATMENT AND DATE August 21st.1905. Cauterised 4 times.  
RESULT Complete relief.  
REMARKS Reported in 1907 no further attack, died that year from appendicitis.
- 
8. NAME F.C., female, age 19.  
PRESENT CONDITION Deflected Septum; enlarged turbinateds. Duration 4 years.  
TREATMENT & DATE Cauterised 7 times both sides of Septum on each occasion.  
RESULT Complete relief.  
REMARKS Reported 1915, free from asthma. Mother and sister suffered from asthma. This case yielded more



slowly than case 21 in which there was no nasal disease.

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9. NAME H.D., Male, age 53.  
PRESENT CONDITION Advanced pulmonary phthisis - asthma 3 years. Deflection nasal septum.  
TREATMENT & DATE 5th. September 1905. Cauterised 6 times.  
RESULT Improved as far as asthma was concerned.  
REMARKS This case is useful in showing that the asthmatic condition improved in a condition of phthisis.
- 
10. NAME A.S., Female, age 35.  
PRESENT CONDITION Malarial fever - complicated with asthma. Very severe. No abnormality.  
TREATMENT & DATE 28th. September 1905, 1 attendance - cauterised.  
RESULT No improvement.  
REMARKS Patient died from pneumonia shortly after attendance.
- 
11. NAME H.B., Male, age 20.  
PRESENT CONDITION No nasal disease, duration from childhood.  
TREATMENT & DATE 30th. September 1905. One attendance. Cauterised.  
RESULT Complete Relief.  
REMARKS Reported 1910.
- 
12. NAME W.T., Male, age 66  
PRESENT CONDITION Deflected septum - duration 24 years.  
TREATMENT AND DATE 14th. October 1905. Cauterised 3 times. (Report)  
RESULT Report improved.  
REMARKS No report since November, 1905.
-

13. NAME E.L., Female, age 55.  
PRESENT CONDITION No nasal disease. Aortic murmur.  
TREATMENT & DATE Cauterised twice.  
RESULT Slight improvement.  
REMARKS No report since 26th. October, 1905.
- 
14. NAME J.B., Male, 70.  
PRESENT CONDITION No nasal disease, duration 10 years.  
TREATMENT & DATE 5th. December, 1905. Cauterised twice within a week.  
RESULT Complete relief.  
REMARKS Reported 1912.
- 
15. NAME J.P., Male, age 26  
PRESENT CONDITION Deflected Septum. Duration 3 years.  
TREATMENT & DATE 18th. December, 1905. Cauterised one time left side.  
RESULT Complete relief.  
REMARKS Appeared to obtain immediate relief.
- 
16. NAME M., female, age 45.  
PRESENT CONDITION Deflected Septum - 20 years.  
TREATMENT & DATE Jan. 1906. Cauterised 5 times.  
RESULT Slight improvement.  
REMARKS DIED OF PNEUMONIA February 1906.
- 
17. NAME T.S., Male, age 27.  
PRESENT CONDITION Right turbinated greatly enlarged 15 years.  
TREATMENT & DATE 19th. January, 1906. Cauterised 5 times.  
RESULT Greatly improved  
REMARKS No report since March, 1906.
-

18. NAME W.R., Male, age 21.  
PRESENT CONDITION Right turbinated greatly enlarged 15 years.  
TREATMENT & DATE Feb. 7th. 1906. Cauterised once.  
RESULT No report.  
REMARKS No report. Native.
- 
19. NAME B., Female, age 40.  
PRESENT CONDITION Enlarged turbinateds, duration from childhood.  
TREATMENT & DATE 7/2/06. Cauterised once.  
RESULT No report.  
REMARKS No report. Native.
- 
20. NAME T.M., Male, age 30.  
PRESENT CONDITION No nasal disease. 17 months.  
TREATMENT & DATE 28/2/06. Cauterised once.  
RESULT No report.  
REMARKS No report. Native.
- 
21. NAME J.M., Female, age 26.  
PRESENT CONDITION No nasal disease - four months.  
TREATMENT & DATE Cauterised three times.  
RESULT Complete relief.  
REMARKS Sister of case No.8. In this case where no nasal disease relief was sooner obtained.
- 
22. NAME S.B., Male, age 35.  
PRESENT CONDITION No nasal disease - 15 years.  
TREATMENT & DATE 23rd. March 1906, Cauterised twice.  
RESULTS Great improvement.  
REMARKS No report since April, 1906.
-

23. NAME P.B., Male, age 69.  
PRESENT CONDITION Deflected Septum. R. Turbina-  
ted enlarged 25 years.  
TREATMENT & DATE 24/6/06. Cauterised three  
occasions.  
RESULT Improved.  
REMARKS Died cancer of stomach 1907.
- 
24. NAME B., Female, age 39.  
PRESENT CONDITION Enlarged turbinateds - many years  
TREATMENT & DATE 11/4/06, Cauterised twice.  
RESULT Complete relief.  
REMARKS Reported 1913.
- 
25. NAME N., Male, age 36.  
PRESENT CONDITION. Left turbinated enlarged.  
TREATMENT & DATE 18/4/06, Cauterised 5 times.  
RESULT Complete relief.  
REMARKS Reported 1913
- 
26. NAME V., Male, age 27.  
PRESENT CONDITION Deflected Septum, right turbina-  
ted large 2 years.  
TREATMENT & DATE 10/5/06. Cauterised seven times  
RESULT States he has derived little, if  
any benefit. No improvement.  
REMARKS Refuses to persevere - 1915,  
still has asthma; not improved.
- 
27. NAME N.P., Male, age 7.  
PRESENT CONDITION No nasal disease. Duration 3  
months.  
TREATMENT & DATE March 1911 - Cauterised 3 times.  
RESULT Complete relief.  
REMARKS Reported 1913.
- 
28. NAME M.S., female, age 45.  
PRESENT CONDITION Deflected septum, five years.  
Treatment & Date 21/5/13. Cauterised twice.  
RESULT No improvement.  
REMARKS Refused further treatment.
-

29. NAME S.A.W., Female, age 32.  
PRESENT CONDITION Enlarged Turbinateds.  
TREATMENT & DATE 23rd. August 1912. Cauterised  
twice.  
RESULT (Some relief) - improved.  
REMARKS Lost sight of.
- 
30. NAME A.D.B., female, age 55.  
PRESENT CONDITION Enlarged right turbinated.  
TREATMENT & DATE 5/9/12. Cauterised four times.  
RESULT Improved.  
REMARKS No further report.
- 
31. NAME B., Female, age 21.  
PRESENT CONDITION Normal. 6 years.  
TREATMENT & DATE 20/9/12. Cauterised four times.  
RESULT Improved.  
REMARKS No further report.
- 
32. NAME S., female, age 64.  
PRESENT CONDITION Enlarged turbinateds 15 years.  
TREATMENT & DATE. 21/9/12. Cauterised five times.  
RESULT Improved.  
REMARKS No report since 30/12/12.
- 
33. NAME A., female, age 48.  
PRESENT CONDITION No nasal disease. One month.  
TREATMENT & DATE 22/9/12. Cauterised four times.  
RESULT Complete relief  
REMARKS 1914 No further attack.
- 
34. NAME J.A., Male, age 27 .  
PRESENT CONDITION No nasal disease. One year.  
TREATMENT & DATE 7/9/12. Cauterised once.  
RESULT Improvement.  
REMARKS Refused further treatment.
-

35. NAME G.A.W., Female, age 33.  
PRESENT CONDITION Enlarged turbinateds - deflected septum. 3½ years.  
TREATMENT & DATE 1/9/12. Cauterised twice.  
RESULT No improvement.  
REMARKS No further record.
- 
36. NAME C.B., female, age 40.  
PRESENT CONDITION Deflected Septum.  
TREATMENT & DATE 11th. October, 10th. December, Cauterised, 2/1/14 Cauterised, 21/1/14.  
RESULT Improvement.  
REMARKS Feels improved after each attendance; if she would attend regularly would do well, possibly.
- 
37. NAME H.C., Male, age 37.  
PRESENT CONDITION No nasal disease - 5 years.  
TREATMENT & DATE 10/3/10. Cauterised six times.  
RESULT Complete relief.  
REMARKS Reported 1913.
- 
- /38 NAME M.R., Female, age 20.  
PRESENT CONDITION Deflected Septum @ 18 months.  
TREATMENT & DATE 12/3/13, Cauterised three times.  
RESULT Improved.  
REMARKS Reported February, 1914.
- 
39. NAME E., Female, age 29.  
PRESENT CONDITION Nose normal, 17 years.  
TREATMENT & DATE 18/4/13. Cauterised twice.  
RESULT Improved.  
REMARKS -----
- 
40. NAME Z.P., Male, age 25.  
PRESENT CONDITION Nose normal. One year.  
TREATMENT & DATE 1910. Cauterised 4 times.  
RESULT Great improvement.  
REMARKS Reported December 1913.
-

41. NAME H.C., Female, age 23.  
PRESENT CONDITION Deflected Septum - from childh-  
cod.  
TREATMENT & DATE 6/5/13. Cauterised once.  
RESULT -----  
REMARKS No further report.
- 
42. NAME M.R., Female, age 41.  
PRESENT CONDITION Nose normal - two years.  
TREATMENT & DATE 22/5/13. Cauterised once.  
Result Improvement.  
REMARKS Reported 1914.
- 
43. NAME M.J., Female, age 40.  
PRESENT CONDITION Enlarged turbinateds - 10 years.  
TREATMENT & DATE 27/5/13. Cauterised.  
RESULT No report.  
REMARKS -----
- 
44. NAME J.S., Female, age 18.  
PRESENT CONDITION Nose normal. 3 months.  
TREATMENT & DATE 4/6/13 - Cauterised twice.  
RESULT Improved.  
REMARKS -----
- 
45. NAME R.H., Male, age 14.  
PRESENT CONDITION Enlarged turbinateds.  
TREATMENT & DATE 8th. August, 1914. Cauterised  
once only.  
RESULT Great improvement.  
REMARKS -----
- 
46. NAME J.M., Female, age 21.  
PRESENT CONDITION Nose normal.  
TREATMENT & DATE 30/2/13. Cauterised three times.  
RESULT Great improvement.  
REMARKS 2/2/14. reported.
-

47. NAME M.M., Female, age - .  
PRESENT CONDITION Normal.  
TREATMENT & DATE 7th. August, 1913. Cauterised  
three times.  
RESULT Complete relief.  
REMARKS 2nd, February, 1914, last reported.
- 
48. NAME H.R., Female, age 50.  
PRESENT CONDITION Enlarged turbinateds.  
TREATMENT & DATE 2/9/14. Cauterised three times.  
RESULT Improved.  
REMARKS No report since 6th. October, 1914
- 
49. NAME C.V., Female, age 56.  
PRESENT CONDITION Enlarged turbinateds.  
TREATMENT & DATE 8/9/13, Cauterised three times.  
RESULT Improved.  
REMARKS -----
- 
50. NAME E.O., Female, age 45.  
PRESENT CONDITION Enlarged turbinateds - Deflected  
TREATMENT & DATE septum. 39 years.  
RESULT 3rd. October, 1914.  
REMARKS No report.  
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- 
51. NAME W.D., Male, age 43.  
PRESENT CONDITION Nose normal.  
TREATMENT & DATE 13/11/13. Cauterised four times  
RESULT Improved.  
REMARKS Native reports 1915.
- 
52. NAME A.D.P., Female, age 28.  
PRESENT CONDITION Nose normal.  
TREATMENT & DATE 19/11/14. Cauterised left side.  
RESULT No report.  
REMARKS -----
-



53. NAME R.J.C., Female, age 26.  
PRESENT CONDITION Deflection - 9 years.  
TREATMENT & DATE 25/11/13, Cauterised three times  
RESULT Improved.  
REMARKS -----
- 
54. NAME J.N., Female, age 52.  
PRESENT CONDITION Enlarged turbinateds - deflec-  
tion - 2 months.  
TREATMENT & DATE 19/12/13, Cauterised three times  
RESULT Improved  
REMARKS -----
- 
55. NAME H.W., Female, age 43.  
PRESENT CONDITION Enlarged turbinateds & deflec-  
tion - 28 years.  
TREATMENT & DATE 19/1/14. Cauterised both sides  
RESULT No report.  
REMARKS -----
- 
56. NAME E.K., Male, age 25.  
PRESENT CONDITION Deflection.  
TREATMENT & DATE 22/1/14. Cauterised once.  
RESULT No report.  
REMARKS -----
- 
57. NAME C.S., MALE, age 10.  
PRESENT CONDITION Nose normal - 3 years.  
TREATMENT & DATE 27/3/14. Cauterised three times  
RESULT Great improvement  
REMARKS -----
- 
58. NAME F.S., female, age 4.  
PRESENT CONDITION Nose normal - 10 months.  
TREATMENT & DATE 27/3/14. Cauterised three times  
RESULT Great improvement.  
REMARKS This case is sister of case 57  
hereditary tendency - reported  
June, 1914, no attack.
-

59. NAME G.S., female, age 33.  
PRESENT CONDITION Deflection - constant severe  
asthma 5 years.  
TREATMENT & DATE 10/3/14. Cauterised eight times  
RESULT Remarkable improvement.  
REMARKS Although not absolutely free  
she considers herself cured and  
refuses further treatment  
January, 1915.

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60. NAME A.F., Female, age 45.  
PRESENT CONDITION Normal - 2 years - not severe.  
TREATMENT & DATE 30/3/14. Cauterised four times.  
RESULT Complete relief  
REMARKS Reported January, 1915.

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