I only mention it here as curious and rare. We need not wonder that the clot found in the sinus during the operation had not shown itself by any symptom. The coagulum was fresh and benign, was not infected and not purulent, and therefore did not occasion metastases. Delay in the operation would certainly have brought it about.

THE TREATMENT OF GOITRE BY REMOVAL.

As Practised by Mr. James Berry, F.R.C.S.Eng.,
Surgeon to Royal Free Hospital.

Mr. Berry recently brought before the Surgical Section of the Royal Society of Medicine the report of 274 additional cases of goitre treated by removal during the last six and a half years, this being a continuation of the series previously published, the total now amounting to 400. The following extracts from his remarks contain in terse form the expression of some very important views entertained by him.

The operations were performed upon 268 patients whose ages ranged from 12 to 73 years. More than three fourths of the patients came from country districts.

The reasons for operation were: Dyspnœa in 177 cases (64·5 per cent.); deformity, 33 cases (12 per cent.); discomfort and dyspnœa, mostly with minor degrees of dyspnœa, 47 cases (17·1 per cent.); malignancy, papilliferous tumours, etc., 10 cases (3·6 per cent.), suspected malignancy, dysphagia, increase in size, 7 cases (2·5 per cent.). No degree of dyspnœa with which the author is acquainted is too severe to permit of an operation for the removal of goitre. It is in cases of most severe dyspnœa that operation can do most good, and should be most strongly urged. The author has never refused to operate on any non-malignant cases on the ground of the dyspnœa being too severe. The cases recorded include all degrees of severity of dyspnœa, up to and including one case in which the patient was unconscious from asphyxia before operation was begun. Tracheotomy, as a means of treating non-malignant goitre, however severe the dyspnœa, is to be condemned. No case has thus been treated in the last six and a half years. Dyspnœa from goitre is always due to direct pressure on the trachea, and has little or nothing to do with irritation of recurrent laryngeal nerves. The trachea is compressed and displaced

by goitre according to definite and fixed rules, a knowledge of which is important for operative purposes.

Operation for deformity alone should (with rare exceptions) be undertaken only in cases of encapsuled tumours.

The 203 cases of encapsuled tumour included 106 solid adenomata, 94 cystic adenomata, 2 pure cysts and 1 hydatid cyst: the 71 cases of non-encapsuled tumour included 26 parenchymatous, 28 adeno-parenchymatous, 17 papilliferous and malignant. The transition of solid adenomata into cystic adenomata on the one hand, and into fibrous tumours on the other hand, is mentioned. Hæmorrhage into the softer forms of adenoma is a common occurrence, and is often the cause of severe and sudden dyspnœa, and occasionally of death by suffocation.

The situation of the goitre as regards the sternum is a matter of much importance, substernal and intra-thoracic goitre usually causing much dyspnœa: in such cases operation is generally urgently demanded, and as such tumours are nearly always encapsuled, they are, as a rule, best removed by enucleation. The danger of bilateral goitres with high degrees of dyspnœa in young subjects with soft and easily compressible tracheas is pointed out. Seven cases of intra-thoracic non-malignant goitre are found in the series, one of them, a remarkable case of bilateral intra-thoracic goitre.

The operations performed are divided broadly into two classes, those of intra-glandular enucleation and its modifications, and those of extra-capsular extirpation and its modifications. Thirty-two of the 274 operations were performed upon both sides of the neck at the same time.

Encapsuled tumours expand and thin the overlying gland, but never break through it. They are generally best treated by intra-glandular enucleation. The modification known as resection-enucleation is, however, the operation of choice for most encapsuled tumours, and the author now performs this operation in nearly all cases of encapsuled tumours, except when the latter are quite small.

General and uniform enlargements of the gland are, as a rule, best treated by internal remedies. Severe dyspnœa not yielding to medicinal treatment demands operation. When operation is required it should be extirpation, or its modification, resection-extirpation. Pure enucleation and pure extirpation are now rarely performed in the author's practice. Extirpation is, however, the only operation recommended for the removal of malignant disease. In per-

forming extirpation, the main superior thyroid artery and vein should be tied early: special care should be taken to tie inferior thyroid veins securely. Ligation of the main inferior thyroid artery has been practically abandoned in favour of tying its branches separately in front of the nerve.

Discussing points common to all forms of thyroid operations, it is considered that if due care be exercised in the method of administration a general anæsthetic may generally be given with safety. General anæsthesia should never be deep if stridor is present. In five cases only in this series was no general anæsthetic employed. The position of the patient should be that of semi-recumbency. A curved, transverse incision, very low down in the neck, is the one now almost invariably employed. Infra-hyoid muscles are generally divided high up in the neck, and subsequently sutured. The author attaches much importance to keeping the exposed wound covered up with wet gauze as far as possible throughout the operation. Drainage is employed more frequently than formerly, except in cases of small tumours. The drainage tube is almost invariably removed after eighteen to twenty-four hours. Very fine silk, boiled immediately before use, is used for all ligatures and sutures except those of the skin.

After operation patients sit up in bed from the beginning, and get up on the second or third day. Stitches are removed on the fourth day, and most patients are quite well by the middle of the second week, or sooner. Complications of any kind are very rare. Occasionally blood collects in the wound, and may have to be let out.

Neither cachexia strumipriva nor tetany has occurred in any case. In no case is it ever necessary, in the author's opinion, to remove the whole gland, although very extensive operations are often required. All patients are asked to report themselves periodically after operation.

Three cases of innocent goitre ended fatally, two of them from heart failure shortly after operation, on patients extremely ill before operation. The third death was on the eleventh day from pleurisy; this case was complicated by accidental laryngotomy during removal of a very large goitre with displaced and soft trachea.

Malignant disease is but rarely seen at a period when it is suitable for operation, and the results of operation are most unsatisfactory. Only seven cases out of a large number seen were submitted to operation. Three were advanced cases in which operation was undertaken only in the hope of temporarily relieving

urgent and severe symptoms; one of these was intra-thoracic; all three died. In the other four the tumour was movable, and there seemed a reasonable prospect of effecting a complete removal of the disease; all the wounds healed quickly, but in three of them recurrence took place sooner or later, and one only (a comparatively recent case) is still in good health without recurrence.

It will be seen that no *genuine* cases of exophthalmic goitre have been treated by removal. The list, however, includes several cases of goitre with palpitation, tremulousness, and other symptoms often found with simple goitre. These cases are by many classed as incomplete cases of Graves' disease (the so-called "formes frustes"). The author believes that the advisability of removal of the goitre of true Graves' disease is still an open question. The risk of operation in such cases is undeniably very grave; the ultimate benefits are by no means certain or lasting. Those who appear to have had fairly satisfactory results in the removal of goitre in cases of genuine Graves' disease are apparently extremely careful in the selection of the cases they submit to operation. On the other hand, operations in cases of so-called "formes frustes" yield excellent results, as might be expected.

Detailed statistics of a long series of operations upon genuine exophthalmic goitres, giving exact condition of each patient before and some time after operation, are much wanted.

Mr. Berry arrives at the following conclusions: Operations for innocent goitre as a rule yield admirable results and afford complete relief from all symptoms. The operation is, however, a delicate one, and should not be undertaken lightly or without due attention to important details. Special attention should be paid to anæsthesia and asepsis, to the careful arrest of all hæmorrhage (especially venous), to the recurrent nerve, and to the drainage of the wound for a short time.

In most operations it is best not to remove that portion of the goitre that lies next to the œsophagus, recurrent nerve, and side of the trachea. The patient should be encouraged to be up and about within a very few days of the operation.

The appended table presents in *résumé* many points of interest brought out in Mr. Berry's communication.

Sex . .	Males	36 operations on 32 patients	274 operations on 268 patients.
	Females	238 „ „ 236 „	

I.—Age.

	Under 15.	15—19.	20—29.	30—39.	40—49.	50—59.	60—69.	Over 70.	Total.
Operations . .	6	19	61	92	59	29	7	1	274
Patients . .	6	19	60	91	59	25	7	1	268

II.—Chief Reason for Operation.

	Cases.
Dyspnœa	in 177
Deformity	„ 33
Discomfort or deformity, mostly with minor degrees of dyspnœa	„ 47
Malignancy, papilliferous tumour, etc.	„ 10
Suspected malignancy	„ 3
Dysphagia	„ 1
Increasing size	„ 3
	274

III.—Nature of the Goitre.

	Cases.	Cases.
Encapsuled—		
Solid adenoma	in 106	
Cystic adenoma	„ 94	
Pure cyst	„ 2	
Hydatid cyst	„ 1	
	——	203
Non-encapsuled—		
Parenchymatous	„ 26	
Adeno-parenchymatous	„ 28	
Papilliferous	„ 10	
Malignant	„ 7	
	——	71
		274

IV.—Nature of the Operation.

	Innocent goitre.	Malignant goitre.
Enucleation.		
Enucleation (simple)	107	1
Resection-enucleation	92	0
Evidement	3	0
Enucleation and evidement	2	0
Resection-enucleation and enucleation	4	0
	208 (with 1 death)	1 (with 1 death)
Extirpation.		
Extirpation (simple)	19	6
Resection-extirpation	33	0
Resection	1	0
Resection and extirpation	1	0
Extirpation and enucleation	2	0
Resection-extirpation and enucleation	1	0
Resection-extirpation and resection-enucleation	2	0
	59 (with 2 deaths)	6 (with 2 deaths)

Total	Innocent goitres	267 (with 3 deaths)	274.
	Malignant „	7 („ 3 „)	

V.—Healing of Wound.

	In 267 non-malignant cases.	In 7 malignant cases.
(1) Immediate healing by primary union	232	3
(2) Primary union, except in track of drain; healing in from 10 days to 3 weeks	11	1
(3) Secondary union after drainage and gauze packing; healing in from 12 days to five weeks [4 of these intra-thoracic (Nos. 182, 243, 248, 254), 1 operation during insensibility from asphyxia (No. 136)].	7	–
(4) Apparent primary union; late mild suppuration after leaving hospital, home, etc.; eventual complete healing	8	–
(5) Mild suppuration, chiefly superficial, stitch abscesses, etc., in hospital or home; healing in from a few days to 2 months	5	–
(6) Rather profuse suppuration and sinus for several weeks, then complete healing	1	–
(7) Died	3	3
	267	7

A STUDY OF THIRTY-SIX SUCCESSIVE CASES OF OPTIC NEURITIS. NASAL ACCESSORY SINUS DISEASE PRESENT TWENTY-SIX TIMES.

Treatment of the Sinuses followed by Improvement of the Ocular Condition in Fifteen Cases, including therein Three Bilateral Cases Restored to Normal.

By Henry Manning Fish, M.D.,
Chicago.

(*Continued from page* 643, *Vol. XXII.*)

Case 33.—*Bilateral Optic Neuritis appearing at the Menopause; Amaurosis.*

In July (?), 1906, Mrs. M——, aged about fifty, was seen in consultation with Dr. Grant Huston, of Joliet. There had been trouble at the menopause and the patient had undergone an abdominal operation, the nature of which was not determined. Some form of paralysis ensued, accompanied by atrophy of each optic nerve. Exitus three months later.

Case 34.—*Bilateral Optic Atrophy; Amaurosis; due to Basilar Tumour.*