SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF LARYNGOLOGY.

November 2, 1928.

President—H. BELL TAWSE, F.R.C.S.

Laryngofissure for Epithelioma. Case shown Six Years after Operation—Sir ST CLAIR THOMSON, M.D.—Patient, male, aged 86, was previously shown on 4th May 1923, six months after operation. (*Journ. of Laryng. and Otol.*, vol. xxxviii., September 1923, p. 479).

First seen in October 1922, the right vocal cord was replaced, except for a small portion posteriorly, by an irregular, pink, fleshy growth. Cord moved freely, but clinical appearances were typical of malignant disease; it had been diagnosed by the late Dr Permewan of Liverpool. Patient had smoked all his life and still smokes three to four ounces a week.

Usual laryngofissure on 21st October 1922; thyroid ala removed; tracheotomy tube left in for only seven hours; on same evening patient swallowed easily and was out of bed next day playing chess. He returned to Wales eighteen days after the operation.

The chief interest lies in the age of the patient and the absence of shock. It was only after careful consultation that it was decided to operate, Dr Frederick Price having reported fibroid degeneration of the myocardium, arterial disease, probably a rather dilated aorta and attacks of angina during the last five years.

It is now six years since the operation, and the patient, though 86 years of age, has followed the hounds every winter until last season, when he told me that he would still gladly do so, but found it difficult to mount.

Mr LIONEL COLLEDGE said that besides the accurate diagnosis, faultless technique and ceaseless vigilance later, there was also another factor regulating success or failure, and that was the histological character of the growth. Sir St Clair had given to him the slides from all his cases submitted to thyrotomy, and, of these, sixty were suitable for this investigation, being from cases in which patients had survived the operation and had lived long enough to show whether they could be considered cured, or whether a recurrence had taken place. Examination of these slides had been carried out absolutely independently of the clinical history on the lines indicated by Dr Broders, of the Mayo Clinic, who had begun his investigations in epithelioma of the lip. Dr Broders divided epitheliomata into four classes, depending on the degree of differentiation of the cells of the tumour. Grade 1 was the least malignant, showing about 25 per cent.

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of undifferentiated cells. Grade 2, with about half the cell undifferentiated, was next in severity. Grade 3 showed from 50 per cent. to 75 per cent. of these cells, while Grade 4, the most malignant, showed from 75 per cent. to practically all cells undifferentiated. Special attention is paid to the amount of keratinisation and the number of mitotic figures.

He (Mr Colledge) found it difficult to draw a sharp line between Grades 2 and 3, and therefore, as Broders suggested, for some regions he had classified the tumours into three groups, with the results shown in the table. When he came to examine the history of the only recurrence in Grade 1 he thought the case was one which Sir St Clair would not now have submitted to laryngofissure, as it was so advanced. In the intermediate group of this series there were 26 per cent. of recurrences, and in the third group 72 per cent. recurrences. The conclusion was inevitable,

Grade.	No. of Cases.	Recurrences.	Percentage of Recurrences.
1 . . .	15	1	6·6 per cent.
2 . . .	18	7	26 per cent.
3 . . .	16		
4 . . .	11	8	72 per cent.

that if a piece of growth removed showed that the tumour belonged to Grade 4, laryngofissure would be scarcely justifiable, and some other form of treatment was indicated. It explained why, in some cases, when Sir St Clair had been doubtful about the prognosis, as, for example, when the growth was extensively subglottic, the patient, nevertheless survived. A case in point was that of the Admiral, now well known to members of the Section, who was operated upon ten years ago for a fairly extensive subglottic growth. He belonged to Grade 1, and this explained why he had survived so long without recurrence.

Professor M. HAJEK (Vienna) said that one must operate in such cases as early as possible, and, remembering that the cancer was probably more diffuse than was suspected, a wide sweep should be made. In the present case he saw no vocal cord, but there was a thickening in that position, a ragged appearance which might be taken for granulations or for tuberculous infiltration, but Sir St Clair had proved it to have been cancer. He (the speaker) did not feel sure that it was perfectly healed. Some attributed a good deal of significance to these subsequent thickenings of the cord ; an enlargement which might be merely hypertrophy, but also might indicate some deep recurrence of the disease. If laryngofissure with excision of the cord was performed, the case should be seen every month or two in view of possible recurrence.

Dr JOBSON HORNE (by way of illustrating the frequency of errors by the most experienced observers in the diagnosis of epithelioma of the vocal cords, and also the importance of the histological aspect of the subject to which Mr Colledge was giving attention) cited the following extract from the article on malignant growths of the larynx by Sir Felix Semon in Sir Clifford Allbutt's *System of Medicine** :—

"Out of thirty-three patients on whom thyrotomy was performed by one

* *System of Medicine*, edited by Sir Clifford Allbutt, K.C.B., 1908, Vol. iv., Part II., 251.

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of us (F. S.) for presumably intrinsic malignant growths, in eight the diagnosis was either found to have been at fault or remained doubtful."

That is approximately 25 per cent. of errors in cases in which thyrotomy had been performed. In the present day, perhaps, some of that 25 per cent. would be in Grade 1 of malignancy.

Mr ERIC WATSON-WILLIAMS said that it was now generally advised that no biopsy should be made before operation. But this work of Mr Colledge showed that important information might be obtained from histological examination: one might learn to distinguish growths suitable for operation, growths for which operation involved considerable risk of recurrence, and growths which would be better treated by radiation or otherwise owing to the great chance of recurrence after operation. If so, we should have to revert to preliminary removal of a portion before deciding on our line of treatment.

Dr J. S. FRASER asked what was the average age of the patients in the several groups classified according to the degrees of malignancy. In 20 cases of intrinsic cancer of the larynx he had found that cancer which occurred in younger subjects—aged from 35 to 50—was apparently of a more dangerous nature than that in older patients.

Sir ST CLAIR THOMSON (in reply) said that clinically the age of the patient had little to do with the prognosis. Some of the rapid recurrences had been among elderly people, while some of the younger patients had done very well. Sometimes a very limited case would surprise him. Hence he was looking forward to the result of this scheme of histological investigation; it would, as Mr Watson-Williams said, necessitate histological examination by an expert beforehand. What Professor Hajek had said repeated what he (Sir St Clair) himself had recommended, namely, that after the operation the patient should be inspected once a month for at least a year by the surgeon who had operated. Two colleagues had asked him if his case did not show a recurrence? It did not; what could now be seen was only compensatory hypertrophy and scar tissue, which he (the speaker) had been watching for six years. By watching cases the eye was in time trained to distinguish between actual recurrence and hypertrophy or scar tissue formation, which had sometimes caused needless alarm.

Mr LIONEL COLLEDGE (in reply) said that he had been able to follow Dr Broders's directions precisely because that gentleman had kindly sent him a box of graded slides, and he wished to take the opportunity of ackowledging this courtesy. In reply to Mr Watson-Williams, he (the speaker) believed that in the Mayo Clinic, epithelioma of the tonsil, if found to be in Grade 4, was regarded as inoperable, quite apart from any clinical consideration, and treatment was by radium or X-rays. There were parts of the body in which epithelioma of Grade 1 did not occur, and that explained why cancer appeared to be more malignant in some parts than in others. The value of biopsy might thus be extended beyond a matter of plain diagnosis. He had not yet calculated the average age of the patients in the various grades. The investigation showed that cancer of the larynx was not always of such a benign form as had been thought. In the whole series the recurrences numbered 25 per cent., but in Grade 4 the recurrences reached 72 per cent.

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Complete Occlusion of the Choanæ—C. A. S. RIDOUT, M.S. —Male, aged 16, was sent to hospital with suggested diagnosis of adenoids as the cause of nasal obstruction. He has never breathed through the nose. Adenoids were removed when he was aged 2; tonsils and recurrent adenoids removed when he was aged 9. Otherwise he has always had good health. Family history is negative.

On examination, nasal passages and mucous membrane of turbinals and septum have a rugose and leathery appearance, and lately there has been purulent accumulation.

Posterior rhinoscopy shows complete occlusion of both choanæ by a whitish membrane. Radiograph shows frontal sinuses and antra of normal size.

I propose to remove the end of the vomer, and any other bone in the vicinity of the membrane to try to secure a free air-way.

Mr FRANK ROSE said this condition was uncommon, but he had seen several examples. What had impressed him about cases of congenital occlusion of the choanæ was that none of the patients he had examined had ever had adenoids. Was Mr Ridout quite sure that there were adenoids when he had first operated on the child?

Dr JOBSON HORNE said the case illustrated how well one could get on in life with even both nasal choanæ completely occluded. The man, moreover, had no impairment of hearing, in fact he had had to pass severe tests of hearing to obtain his present position. The case further suggested that occlusion of the choanæ by membrane might be a safeguard against worse nasal troubles. Treatment in the first place should not be too drastic. Before the removal of a part of the vomer he would prefer perforation of the membranes and plugging of the posterior nares, his intention being to prevent the last state from being worse than the present.

Mr HAROLD BARWELL said that in some of these cases the partition was hard thick, and bony, and so not easily removed. To avoid recontraction at the original site he would remove the posterior part of the vomer, so throwing the choanæ into one large cavity, as recontraction of such a cavity was less likely to occur than in the case of a smaller opening. None of these complete occlusions were accompanied by deafness; it was the partial obstructions which seemed to lead towards catarrhal disease spreading up the Eustachian tubes.

Mr J. F. O'MALLEY said that a few years ago he had showed an example of this condition, with empyema of the right antrum. The fact that there was no through ventilation of the nose might give this boy trouble, and therefore an attempt to give him a clear passage was well worth while. With regard to the effect of the choanal obstruction on the voice resonance, he thought any operation would be useless.

Mr A. J. WRIGHT said that it was essential to take away a portion of the vomer. The mistake of trying to remove existing or non-existing adenoids could be avoided by the simple precaution of testing in all cases to see whether there was any nasal respiration. Adenoids never caused total obstruction. It was curious that these mouth-breathing cases did not

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show the typical changes in the facial skeleton naturally associated with adenoids, thus suggesting that total obstruction did not cause marked changes in either the facial skeleton or the chest; such changes were caused by breathing through an obstructed air-way.

The question of the recovery of the sense of smell was interesting. Some years ago he had shown two sisters with this condition, and after operation one had recovered the sense of smell, but the other had not.

Sir JAMES DUNDAS-GRANT said a remarkable point was the good development of this patient. A girl with this condition whom he showed some years ago was a poor miserable specimen, and after the operation she brightened up and developed, and her mentality showed such improvement that she was able to become a teacher. She had previously been operated on for "adenoids" but naturally without benefit. Removal of the posterior part of the septum was first suggested by Sir Charters Symonds; it was an essential part of the procedure. The operation could be conveniently carried out; a finger being inserted into the nasopharynx for a guide, while the gouge was used through the anterior naris. In cases with complete occlusion he had found the nasal cavity in front filled up with a starchy-looking material.

Mr L. GRAHAM BROWN said that if there was congenital occlusion by a membrane one would expect the membrane to be smooth, but in this case a dimple or depression could be seen, and this suggested that the occlusion was cicatricial.

Mr RIDOUT (in reply) said he could not remember whether there had been adenoids. When the patient had come to him last September there was thick, starchy, purulent material in the nose.

Chronic Dacryocystitis treated by Mosher's External Operation—HERBERT TILLEY, F.R.C.S.—Male, aged 70; six years ago the left eye began to "water," and three years ago "began to discharge a yellow matter." An ophthalmic surgeon prescribed injection of a solution of argyrol; this alleviated but did not cure the symptoms. About two years ago the suppuration increased, and an operation was performed. A second operation was performed two months before I saw the patient.

On Examination (12th June 1928).—The region round the laryngeal sac was swollen and tender. The free discharge of pus necessitated a frequent change of dressings, and consequently an external bandage. An external fistula surrounded by granulations led into the suppurating sac; some conjunctivitis was present. Nasal sinuses were normal, but the anterior half of the left middle turbinal had been removed.

Operation (2nd July 1928).—General anæsthesia; incision from immediately below inner end of eyebrow, downwards in front of internal palpebral ligament, curved slightly outwards and downwards in front of the lower inner angle of floor of orbit. Sac was exposed from above and everted from natural position in front of the lacrymal crest. The

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lacrymal bone in front of crest and neighbouring portion of ascending process of maxillary was removed so that a wide opening into the nasal cavity was made. Inner half of lacrymal sac was then removed, and margins of outer half placed in the borders of the naso-lacrymal opening. Fine external sutures closed the skin wound.

Rapid and complete recovery took place.

The advantages over the West operation were obvious, as every step of this operation was visible, and it was easy to see the inner wall of the sac and remove as much as appeared to be necessary.

Mr H. BELL TAWSE (President) said that he had operated by West's method in several instances, but the result had been so unsatisfactory that he had now discontinued it.

Mr HAROLD BARWELL said he also had found a difficulty about West's operation; the difficulty lay in making a sufficiently large opening to remain permanently. His cases had usually shown improvement for about twelve months and had then relapsed. He had been performing the Mosher operation, in conjunction with Mr R. R. James, with good results. He had varied the procedure for one of his early cases, as the duct had seemed to be in a suppurative condition, and in that case he had cut the inner wall of the duct away, making a long grooved opening into the nose, so as to establish drainage of both sac and duct.

Mr GEORGE WILKINSON said he had always considered West's a useful operation, giving fairly good results. In the present case the canaliculus had been slit up. Was this done before or at the time of the operation; did Mr Tilley think it a necessary procedure? In West's operation the cases did not seem to do well if the canaliculus had been slit beforehand.

Mr TILLEY (in reply) said that the three or four operations of slitting the canaliculus had been performed before he (the speaker) had seen the patient.

Frontal Pain, with Absence of the Frontal Sinus. Operation. Cure — HAROLD KISCH, F.R.C.S. — Patient, 'bus-conductor, aged 26, has suffered for seven years from severe and gradually increasing pain in the region of the right frontal sinus. There was no obvious disease in the nose, but a skiagram showed absence of the right frontal sinus. A general medical, neurological and ophthalmic examination revealed no cause for the pain. At the patient's urgent request an exploratory examination of the right frontal region was undertaken. The frontal sinus was represented by a narrow chink, but the ethmoidal cells were well developed, and the mucous membrane of these cells was thickened and reddish in colour. No pus or fluid was present. The bone in the frontal region was normal in texture and showed no increased vascularity.

Mr J. F. O'MALLEY said that the problem of the symptoms in relation to the finding seemed a difficult one. He had had patients complaining of frontal pain, but X-ray examination had not revealed any sinus trouble.

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The cause of the pain was pressure of the middle turbinate in the upper part of the nose. If his judgment was correct in this case, removal of the middle turbinate might give relief. In this case the removal of bone necessary to demonstrate the position of the frontal sinus must have given relief from long pressure caused by the middle turbinate.

Mr KISCH (in reply) said that he had tried to exclude the middle turbinal before operating by shrinking it up with cocain, but the pain had not been relieved.

Lymphosarcoma of Tonsils.—W. M. MOLLISON, M.Ch.—M. G., female, aged 48, came to Guy's Hospital, 25th September 1928, complaining of sore throat during the past three weeks.

Teeth were removed twelve months previously; since then constant sore throat.

The tonsils were ulcerated and covered with exudate which extended on to the anterior pillar and uvula. There was an enlarged, tender mass of glands in the left side of the neck. Smears from the tonsils showed large numbers of Vincent's organisms. Wassermann reaction (two tests) was negative. No tubercle bacillus present in sputum. Mercury and potassium iodide were administered and the tonsils were painted daily with 15 per cent. silver nitrate solution.

At the present date (about ten weeks since the onset) the condition of the throat is unaltered.

The condition was found, on histological examination, to be lymphosarcoma, and the patient was treated by deep X-ray therapy. Within a few days the growth was only half its former size. The swelling of the glands of the neck has also disappeared.

Mr T. B. LAYTON said it was difficult to criticise such a case as this when it was only seen after apparent recovery, but he suspected that it was of the type to which Professor Hajek had referred in his Semon lecture. The result was so striking that he wondered whether the pathologist was correct in calling the condition lymphosarcoma. The difference as seen under the microscope between lymphosarcoma and some of the less usual forms of inflammation was so slight that there was a possibility of error even on the part of the most skilled microscopical anatomist. This case might have been one of an unusual form of inflammation and not a neoplasm. If it had really been a neoplasm, the result of his deep X-ray therapy was most striking.

Dr JOBSON HORNE said he agreed that it was difficult to express an opinion upon the nature of the disease of the tonsils after exposure to deep X-rays. The clinical appearances did not suggest sarcoma. In the past "sarcoma" of the tonsil had been a pitfall for the morbid histologist.

Mr MOLLISON (in reply) said that Dr Nicholson was the pathologist, and he did not doubt that the diagnosis was correct. No result had been produced by antisyphilitic treatment and the patient was becoming worse. No new growth responded more rapidly to deep X-rays than sarcoma.

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Royal Society of Medicine

Chronic Subglottic Laryngitis in a Child—W. M. MOLLISON, M.Ch.—A girl, aged 15, attended hospital in November 1927, on account of earache. Tonsils and adenoids were considered to be the cause and were removed. Subsequently, hoarseness developed and slight subglottic thickening was observed.

Later the arytænoids became swollen and are now so greatly swollen as to hide all but the anterior halves of the cords. Wassermann reaction was ±, and a course of novarsenobillon was given without affecting the local appearance.

Sputum was not obtainable.

SIR JAMES DUNDAS-GRANT said thyroid treatment might be tried; in some of these cases the condition proved to be localised myxœdema.

Dr BROWN KELLY suggested that this might be an instance of diffuse hyperplasia due to congenital syphilis. He had written a paper on the subject in 1906.* The outstanding features were diffuse hyperplasia affecting the larynx and sometimes also the pharynx. This might be symmetrical and unaccompanied by ulceration. The underlying disease was congenital syphilis, although no other sign of that diathesis might be evident. The hyperplasia did not respond to antisyphilitic treatment. There was a great tendency for the tissue to become rapidly œdematous, and in a large proportion of the cases œdema was responsible for the death of the patient.

Left-sided Headaches, relieved by Operation on the Right Posterior Ethmoid Region—T. B. LAYTON, D.S.O., M.S.—L. M., girl, aged 16. Shown in June 1927 (*Journ. of Laryng. and Otol.*, vol. xlii., November 1927, p. 775). Subsequently the left ethmoid was removed through external incision, and then double intranasal maxillary sinus operation performed. Headaches cured on the right side, but persisted on the left.

July 1928.—Left side of nose appeared relatively clean and healthy; on right side mucous membrane and middle turbinal region still swollen and boggy. X-ray examination: left sinuses clear; right posterior ethmoidal and sphenoidal suggested disease. Operation (local anæsthesia): removal of piece of posterior end of middle turbinal, with a view to subsequent exploration of sphenoidal sinus; some pus escaped. Two weeks later, further operation (local anæsthesia): removal of more polypoid membrane at posterior end of middle turbinal. Operation (September) stopped owing to blood obscuring the view. Headaches had disappeared next day and have not returned to date.

Cystic Tumour of Pharynx—J. A. GIBB, M.D.—Patient, male, aged 74. For ten years has complained of slight discomfort on the

* *Glasgow Medical Journal*, November 1906

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right side of throat but no difficulty in swallowing or breathing, and no change in voice.

There is a large swelling apparently originating in the lateral wall of the pharynx and causing the right half of the epiglottis to be folded inwards and backwards towards the mid-line.

On palpation the tumour is cystic.

Tumour of Base of Tongue—W. H. JEWELL, M.D.—M. A. S., female, aged 40, was (1914) first seen at hospital complaining of difficulty in breathing and swallowing, due to a tumour of the base of the tongue in much the same position as the present one. As the symptoms had not been urgent and there was a doubt as to there being a sufficiency of thyroid in the neck, operation was not advised at that date.

In 1920 at another hospital the tongue had been split and the removal of the tumour attempted. Respiration and swallowing were better for twelve months afterwards, notwithstanding the great difficulty she had in moving her tongue during that period.

May 1928, patient returned to me at hospital complaining of difficulty in breathing and swallowing becoming much worse during the past two years.

There is a globular tumour of about the consistence of thyroid gland on the dorsum of the tongue in the vicinity of the foramen cæcum. It is about the size of a small walnut, but varies slightly; no evidence of thyroglossal tract in neck.

Mr HERBERT TILLEY advised puncture of the swelling with a fine trocar as a possible help in diagnosis. If no fluid came out it would remind him of a case which Sir Felix Semon showed many years ago, in which a swelling of similar appearance proved to be a fatty tumour. The case seen to-day would, he thought, turn out to be a cyst. Professor Hajek said he thought it might be a thyroid tumour, and he advised a subhyoid operation which he had employed in three or four such cases. He also enjoined that special care should be taken during the removal of the tumour not to perforate the pharyngeal mucous membrane, and thus endanger septic infection of the wound.

Mr NORMAN PATTERSON said that some years ago he had shown a somewhat similar case. It had been diagnosed as a cystic tumour, but proved to be an angioma. He therefore agreed that the swelling in this case should be punctured.

Sir JAMES DUNDAS-GRANT said he had treated such a case by transfixing near the base of the projecting part with two needles, beneath which he placed an écraseur, and then slowly detached the tumour. There had been no great hæmorrhage, and sufficient thyroid tissue had been left for functional needs.

Mr H. BELL TAWSE (President) said he thought Mr Jewell's case

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should be left alone. The condition did not seem to be causing much trouble.

Dr E. B. BARNES said he had had a similar case in a child who had already been operated upon, and had had a recurrence. He had obtained a view of the tumour from the mouth and had removed it with a diathermy needle. When he saw the patient again, eight months later, there was no recurrence.

Mr A. R. TWEEDIE said he had shown a similar case two years before and had been advised to leave it alone. Nothing adverse had happened since.

Mr GIBB (in reply) said that he had shown the case partly for diagnosis. The tumour did not arise from the epiglottis. The pedicle was spread out wide, and one could pass the finger round it.

Mr JEWELL (in reply) said that the patient now complained of difficulty in respiration which made it necessary for her to be propped up with a bolster and three pillows at night; she also complained of the return of her food if she attempted to take solids. She requested that something should be done to relieve her. Following her operation in 1920, it was said to have been necessary to give thyroid extract for a long time. He did not think it would be advisable to carry out subhyoid pharyngotomy for fear that myxœdema might result. He proposed to use diathermy or the cautery.

Tumour of Carotid Body—H. LAWSON WHALE, F.R.C.S.—Male, aged 54, was admitted to hospital, May 1928, with a swelling of the neck.

Wassermann reaction was negative. Repeated examinations, including two endoscopies, failed to reveal any primary focus. Provisional diagnosis: primary neoplasm of lymphatic glands. At operation, the mass was found to be so extensively adherent as to be inoperable. A portion was removed for microscopic examination. The pathologist (Dr Rickwood Lane) reported "endothelioma of the carotid body."

Ten days later, two cartridges of radium were inserted for twenty hours.

Pathological Report (24th May 1928).—The tumour consists of areas of hyaline tissue in which are numerous spaces containing blood and capillaries with prominent endothelium, surrounding masses of cells originally polygonal in shape, but becoming spindle-shaped from pressure and evolution. In these are capillaries and more spaces containing blood, particularly in the central parts. The tumour is an endothelioma, possibly a carotid body tumour.

Mr T. B. LAYTON said that twenty years ago he had seen an identical case. He had taken the section to the late Mr J. H. Targett, who was then an acknowledged authority upon microscopic morbid anatomy, and he vividly remembered what he had said: "This tumour is certainly

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epithelial in nature and if no primary tumour can be found I suppose we must class it as branchiogenous." The speaker thought this report might also apply to the section of the case under discussion and he saw no reason to class it as an endothelioma.

Were they, however, sure there was no primary growth? He suspected that the tumour in the neck would prove to be secondary to a carcinoma of the sinus pyriformis. Already on that side there was mucus at the opening of the sinus which was not present on the other side, and this might be the first symptom of such a tumour. In the other case to which he had referred the patient had died eighteen months after the operation from dysphagia almost certainly due to a carcinoma of the pharynx, though no post-mortem evidence had been obtainable.

Sections of Tonsils, one of which formed a Large Tumour filling the Pharynx—LESLIE POWELL, M.B.—Patient, male, aged 59, had during the past year noticed swelling of throat without symptoms.

First seen 17th August 1928, with difficulty in swallowing, thick speech, constant clearing of throat and slight wasting. Left tonsil enormous, covered with epithelium except tip, which was ulcerated, apparently from friction with the other side of the throat; base of tonsil not fixed and general substance firm but not hard; glands not enlarged. Right tonsil moderately enlarged and of similar consistence. Wassermann reaction was negative.

26th September 1928.—Operation of tonsillectomy. The left tonsil being so large was removed piecemeal before enucleating; no excessive bleeding; tonsillar fossa normal; convalescence uneventful.

Both tonsils consisted mainly of a homogeneous friable mass of the colour and consistence of honeycomb. Pieces could be punched out without any tearing; no pus or caseation; suggestion of localised Hodgkin's disease was made.

Pathological Report (by Dr S. Keith).—(i) Left tonsil (that is the larger one) contains many crypts full of unorganised débris. There is chronic inflammation, but not more than is common in any tonsil.

(ii) Right Tonsil.—The crypts in this tonsil contain purulent material. The tonsil as a whole shows signs of moderate infection.

FURTHER REPORT ON CASE PREVIOUSLY SHOWN.

Membrane on Palate, Pharynx and Larynx—W. M. MOLLISON, M.Ch.—(Shown at the meeting held February 1928, *Journ. of Laryng. and Otol.*, vol. xliii., May 1928, p. 356.) The patient, a man aged 63, has completely recovered.

This case is, however, very obscure, and the suggestion has been made that the condition was a malignant growth covered by a yeast on the surface. One application of deep X-rays was given, but so far as could be seen without effect. There is now no trace of the membrane left anywhere.

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Dr A. E. PETERS asked whether any serological test had been made, and whether there was any acquired immunity.

Mr M. VLASTO said he would like to know whether Mr Mollison had asked a dermatologist for a diagnosis.

Mr MOLLISON (in reply) said that he had not shown the patient to a dermatologist, because he (the patient) had not appeared at the out-patient department for a long time. The Wassermann reaction had been negative on two occasions. The only bacteriological finding was a yeast grown from the surface of the membrane on two occasions ; he regarded the case as an unusual one of thrush.

PROCEEDINGS OF THE FIFTIETH ANNUAL CONGRESS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

May 1-3, 1928.

President—Dr D. BRYSQN DELAVAN.

(*Abstracted by Dr A. Logan Turner from Dr Charles J. Imperatori's Report.*)

What is the Relation of the Thyroid Gland to the Larynx?—Dr William V. Mullin, Cleveland, said: Enlargements of one or both lobes of the thyroid may cause distortions of the larynx, and may produce, of course, the so-called sabre trachea. It may push the larynx upwards or to one side, or pull it downwards, but this has practically no effect on the voice.

Simple adenomas of the thyroid gland have absolutely no effect on the larynx or on the voice, unless we have the so-called enlargements or finger-like projections of one lobe into the pharynx, behind the larynx; sometimes we see them passing into the pharynx and dropping down over the top of the larynx.

Individuals with hyperthyroidism have hoarseness and a weak voice, but this is due to a condition of the intra- and extra-laryngeal muscles that is likened to the tremor in the hands and to the general muscular weakness throughout the body.

I believe that the recurrent laryngeal nerve bears a far more intimate relation to the œsophagus than it does to either the larynx or the trachea.

It seems that an enlargement of the thyroid gland, no matter how large, whether it extends backwards or downwards, as a substernal thyroid or intrathoracic thyroid, does not exert direct pressure on the recurrent laryngeal nerve in pre-operative conditions sufficient to cause paralysis. I have not seen one case of laryngeal paralysis that could not be accounted for by some condition in the mediastinum, and not

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