operation. The auditory and facial nerves were separated and the former divided. Convalescence was complicated only by the diabetes, which for a short time became difficult to control, but the patient was able to sit up on the fifth day.

As a result of the operation the tinnitus is almost completely abolished, the patient sleeps well and his mental condition is much improved.

FURTHER REPORT OF CASES PREVIOUSLY SHOWN.

Acute Lateral Sinus Thrombophlebitis treated by Operation, with Preservation of Tympanic Membrane (previously shown February 1928).—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.

Temporosphenoidal Abscess in a Young Woman (previously shown March 1924).—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.

Right-sided Cerebellar Abscess and Thrombosis of Lateral Sinus and Jugular Bulb. Operated on in November 1905, and shown at a Meeting of the Otological Society on 5th February 1906.—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.

Complete recovery took place and the patient served in the R.F.A during the whole of the European War.

When recently tested: Rotation to both sides was followed by nystagmus, but no past-pointing, falling or giddiness.

Caloric test (cold air) to test the *right* horizontal canal, produced no nystagmus after one and a half minutes, no giddiness or past-pointing. When applied to test the *left* horizontal canal, there was slight nystagmus in twenty-eight seconds, no past-pointing but slight tendency to fall to left. With the galvanic test to each side there was nystagmus.

SCOTTISH SOCIETY OF OTOLOGY AND LARYNGOLOGY

WESTERN INFIRMARY, GLASGOW

November 29, 1930

President—G. EWART MARTIN

Some Endoscopic Experiences—G. EWART MARTIN.

WHEN it was suggested at the Summer Meeting of the Scottish Oto-Laryngological Society, that I should give a short account of some endoscopic cases I thought it would be more interesting to give a short resumé of the case records of one or two curious cases requiring endoscopic diagnosis and treatment.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Society of Otology and Laryngology

This section of our specialty is still in its infancy. It is recognised as a separate specialty in America, where Bronchoscopic Clinics have been established at many of the hospitals. In our country the use of the endoscope in diagnosis and treatment of chest and œsophageal conditions is not generally known or recognised by the general practitioner, consequently we see few cases compared with clinics in America or on the Continent, and our experience is, therefore, limited; in Edinburgh, however, cases are now being referred to us almost every waiting-day, and many of them are interesting and unusual. The latter, with our limited experience, may not be unusual in the large clinics, but they are none the less worth recording so as to initiate a discussion and thus gain further knowledge.

Œsophagoscopy. — One need not recount the various foreign bodies removed from the œsophagus. The removal of a halfpenny or a penny from the œsophagus is at least a weekly occurrence; sixpences, shillings, and two shillings are rare; we can boast of only one half-crown. Tooth plates, fortunately, are not so common; we have had ten during the last seven years, including a complete upper denture.

Among uncommon cases of foreign bodies one must refer to an interesting case where the comb part of a safety razor was removed from the œsophagus.

Case 1.—The patient, who was in detention, had swallowed his safety razor hoping for his removal into hospital. The handle and cover (of the ordinary Gillette type) had passed into the stomach, but the comb part had stuck in the œsophagus. Faced with the problem of its removal we knew that the stomach had to be opened to remove the other two parts; we could, therefore, either remove the foreign body by the mouth or continue its passage into the stomach. The comb part was fixed into the mucous membrane on either side of the œsophagus. This was freed with difficulty and then, with the use of adrenalin to shrink the mucous membrane on either side of the œsophagus below the foreign body, and with the use of protectors on either side of the comb, we were able to get the foreign body into the stomach, from which it was removed along with the other two parts the following day. The patient made an uneventful recovery.

I had the misfortune to see an aneurysm burst into the œsophagus at the finish of an endoscopic examination. The specimen of this was shown to the Society some three years ago.

Case 2.—The patient came up to the department looking extremely ill and complained of sudden complete difficulty in swallowing which he stated came on six days previously. The radiological report stated that there was probably a tumour at the lower end of the œsophagus.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

As is our custom in any of these cases, we asked a physician to examine the patient; he reported that as far as he could make out from a superficial examination there was no aneurysm. The patient was then examined with an œsophagoscope; the œsophagus seemed to end blindly, but did not suggest a stricture or neoplasm. The œsophagoscope was withdrawn but the "blind end" of the œsophagus seemed to follow the instrument upwards and then burst with a fatal result. The post-mortem revealed an aneurysm of the thoracic aorta which had invaded the œsophageal wall, its sac extending 2 ins. up the œsophagus and downwards into the stomach. One can console oneself with the thought that if a gastrostomy had been performed there would have been a similar tragedy.

We had recently a case of congenital shortening of the œsophagus. This case was undiagnosed until the patient was 63 years of age.

Case 3.—Mrs B., aged 63, gave a history of attacks of pain over the lower part of the chest, lasting for a day or two at a time. While in hospital as the result of an accident she had a severe attack of what she called indigestion. This lasted for several days with some sickness, but she noticed that the pain was very much less after she had been sick. While in hospital she was X-rayed and the condition was thought to be a hernia of the stomach. She was sent to us for an œsophageal report. On examination it was found that the œsophagus was only 35 cm. in length (she was a normal-sized woman) instead of being 38 to 39 cm. The cardiac sphincter was easily detected and on passing the tube through it one came on normal stomach mucosa, perhaps not so brightly coloured as usual; 3 cm. lower down one could easily make out the hiatus of the diaphragm, opening and closing on respiration. Below this the stomach mucosa showed normal coloration. There were no signs of any neoplasm or ulceration. The condition was one of congenital shortening of the œsophagus with the stomach partly in the thoracic cavity.

Lately we have had a great many cases referred to us of paresis of the œsophagus due to a basal lesion. Feeding in these cases is always a problem, and one would like at a future date to initiate a discussion on "Difficulty in Swallowing" with this factor in view.

Bronchoscopy.—The endoscopic examination of the lower air passages is almost of more interest than the examination of the œsophagus. Unfortunately, we are finding that the superficial examination of the chest produces an erroneous diagnosis. For example, cases diagnosed as bronchiectasis may bronchoscopically show no signs of any dilatation of the bronchi but are merely cases of chronic bronchitis or peri-bronchial fibrosis.

May one mention here that lipiodol, unless injected under pressure, sometimes confuses the radiological diagnosis.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Hæmoptysis.—In the diagnosis of diseases of the chest the bronchoscope is being more generally recognised as a useful agent.

The causative factor in cases of obscure hæmoptysis can only be discovered by a complete bronchoscopic examination. Let me illustrate this by four cases.

CASE 4.—Mrs. R., aged 50, had her first attack of hæmoptysis when 18 years old; this lasted for a week. The chest was apparently clear although an occasional pleuritic rub was detected. The second attack occurred twelve years later after the birth of her second child, and from that time attacks have come on at varying intervals, usually when the patient is tired or run-down. For the following four years she remained well. During the four months previous to examination she had two or three attacks, coughing up a mouthful of blood at a time. On many occasions physical examination showed the chest to be clear although early tubercle was diagnosed and the patient was sent to Switzerland for treatment. Repeated X-ray examination showed an apparently normal chest. She had no warning of the onset of the hæmoptysis, although she noticed that the attack came on after turning quickly to the left or on stretching out her right arm.

Nothing was discovered in the nose, nasopharynx or larynx; the tracheal rings as far as could be seen were normal. Her teeth have always been thoroughly overhauled.

Bronchoscopic examination was carried out. The trachea as far as the bifurcation was absolutely normal, but at the carina there was a large angioma passing from the anterior wall of the trachea crossing over the carina and extending downwards $\frac{1}{4}$ in. into the right bronchus. The lower bronchi on both sides were absolutely normal.

It was decided, as the attacks of bleeding had been less frequent of late to leave the nævus alone and not to treat it by diathermy, as it was felt that a scar in this region would cause contraction of the right bronchus and might set up spasms of coughing.

CASE 5.—Mrs. B., aged 63, had noticed for three months a slight, occasional blood-stained sputum. This became more marked and she consulted her doctor who could find nothing in the chest. Sometimes a week would elapse without any blood-staining and then the condition would recur daily. In consultation with her doctor she was seen by a medical specialist who could detect nothing in the chest; he suggested an examination of the nose, nasopharynx, pharynx and mouth, and that an X-ray should be taken of the chest. These regions were found to be perfectly healthy. Her dentist reported that the teeth and gums were healthy, but that there was a slight varicosity of the veins at the back of her tongue from which it was thought that the bleeding might come. The radiologist reported that he could find no area of increased

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

density or shadowing suggestive of lung or bronchial focus to account for the bleeding. The heart showed no evidence of change. Stereoscopic examination showed nothing abnormal in the chest.

It was decided to examine her bronchoscopically. On passing the bronchoscope the trachea was found to be normal and there was nothing in the left bronchus. In the right bronchus, just above the epiarterial bronchus a small mass about half the size of a pea was found. This bled very readily; it was removed with difficulty, and sent for examination and reported to be a carcinoma. The patient was immediately given deep X-ray therapy; this was continued for a year, the patient showing no signs of any loss of weight or difficulty in breathing. Masses of tissue have been coughed up from time to time. At first they were reported as necrotic tissue but latterly as a bronchial carcinoma. She was screened at various times and no definite shadow was ever found in the upper part of the right lung. A month ago she developed an attack of influenza followed by broncho-pneumonia and death. Post-mortem revealed fibrosis of the upper part of the right lung associated with malignant changes.

Case 6.—Mr. S., aged 59, gave a history of a cold with soft cough for a few days. Later blood-stained, slightly frothy sputum was expectorated. There was no history of nasal trouble, no difficulty in breathing through the nose and no history of epistaxis. His doctor could find nothing in the chest, but every now and then the patient coughed up blood-stained sputum. On examination there was nothing pathological in the nose, and no signs of any bleeding point on the gums, in the nasopharynx, or pharynx.

The bronchoscope was passed and over the tracheal rings, just above the bifurcation of the trachea, there were one or two blisters very similar in appearance to the blisters seen in an influenzal otitis and which have been described in the nose in cases of influenza. The patient was put to bed, salicylates were prescribed. The condition cleared up completely with no further return of bleeding.

Case 7.—H. H., aged 38, gave a history of being shot through the chest when in France; there was very profuse hæmoptysis (from the mouth) for a week. Recovery was complete. He remained perfectly well for four years when he had another slight hæmorrhage and again seven years later he had an alarming hæmorrhage. Radiological examination showed a bullet lodged in the lung. Bronchoscopic examination disclosed the bullet lying across the carina between the two bronchi going to the medial and posterior part of the lower lobe in the right side and partially occluding the bronchi going to the upper part of the lower lobe. Movement was perfect and the lining of the bronchi seemed perfectly normal. Evidently a quick movement of the diaphragm caused a slight rotation of the bullet, with

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

the consequent minute cleavage of the mucosa of the bronchus going to the posterior part of the lower lobe; this gave rise to slight bleeding. As removal of the bullet would mean a very extensive operation it seemed, under the circumstances, unnecessary.

Cough.—Cough as a symptom without any accompaniment is common and its reason obscure. In support of this let me mention two illustrative cases.

CASE 8.—M. M'G., aged 34, gave a history of cough since the age of 18, coming on in spasms, with very little sputum but often with occasional hoarseness. Physical examination of the chest was normal. The scanty sputum was examined on many occasions for T.B. with negative results. Radiological report of the chest was negative. Bronchoscopic examination: on passing the bronchoscope between the vocal cords the trachea at first seemed normal but irritation of the bronchoscope set up a spasm of coughing. It was then seen that the whole of the midline of the trachea posteriorly embodying the muscular trachealis where cartilage was deficient, was raised on coughing in a collar-stud formation and pressing forwards on the anterior wall of the trachea; when the spasm disappeared the trachea returned to normal. This was noticed the whole way down the trachea and also in the upper half of the right bronchus. The left bronchus was normal. Lipiodol was injected. The X-ray showed a perfectly normal bronchial tree on both sides. Breathing exercises and a strychnine tonic produced considerable improvement.

CASE 9.—Mr. M'K., aged 52, had been troubled with a slight irritating cough for many years, but lately he had noticed that he had been coughing up a considerable amount of sputum. Physical examination of the chest was negative. X-ray examination showed a slight fibrosis on both sides. On bronchoscopic examination the left lung was found to be absolutely normal. On the right side, the epiarterial bronchus was normal, as was also the opening into the bronchus to the middle lobe; the two bronchi to the anterior lateral part of the lower lobe were also normal, but the bronchus to the posterior part of the lower lobe was blocked by a gland pressing in from without. On expiration there was a complete blockage of the bronchus. On inspiration there was a small chink. On dilatation it was found that beyond the position of the gland there was a large cavity amounting to a bronchiectasis. A portion of the carina opposite this bulging gland was punched out so as to allow of better aeration.

The patient has very much improved and has been examined twice since the operation. There has been no increase in the size of the gland. Coughing has disappeared except for a slight morning and night cough.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Foreign Bodies.—Foreign bodies in the bronchus fortunately are rare. Why are they more common in the States than in this country? Probably the answer to this is that the examining physician more often considers the possibility of a foreign body and consequently asks for a further radiological and bronchoscopic examination. During last year we have had three cases of a tooth in the bronchus, and two cases of the usual penny squeaker.

For bronchoscopic examination a local anæsthetic is sufficient; in children under the age of 8 years even cocaine in unnecessary, and in no case have we ever used a general anæsthetic.

Dr. HARPER: I have had great pleasure in hearing of two cases of hæmorrhage from the lung which did not turn out to be tubercular. The majority of cases which are sent to us for examination of the throat and nose with a view to finding a cause for some blood which has been coughed up, turn out to be cases of tubercular disease or malignant disease of the lung. The fact that Dr. Martin has found cases which do not fall into either category, makes one a little more hopeful, and one would certainly suggest bronchoscopic examination where no physical signs can be found to account for the bleeding from the chest.

With regard to the question of the relative number of cases of foreign bodies in the lung in America and in this country, I am sure that many cases are not diagnosed here. We have had three cases in which the patients were suffering from pneumonia of a septic character and who were brought to us with a vague history of having swallowed a foreign body. In two of them we were able to remove a foreign body from the lung and the patients recovered. I would like Dr. Martin to tell us his method of injecting lipiodol under pressure and also how he drains the abscess cavity.

Dr. ADAM: I would like to ask one or two questions. In this case of ruptured aneurysm, did the radiograms taken beforehand show the presence of an aneurysm? With regard to hæmoptysis—bronchoscopy should always be done where hæmorrhage cannot be referred to tubercle. Is it Dr. Martin's idea that pulmonary tumour always originates in a bronchus? With regard to lipiodol, has he tried the injection simply by letting it drip down behind the larynx? Lastly, has he tried phrenicectomy for bronchiectasis and, if so, what was the result?

The PRESIDENT (in reply): I quite agree with Dr. Harper that all cases of hæmoptysis of unknown origin should be bronchoscoped. To-day I have only recorded "picked cases" out of many others. In reply to Dr. Harper's question about the bullet in the lung: this bullet was in the tissue of the lung, not in the bronchus. Its removal would necessitate an extensive thoracoplasty, although Jackson of Philadelphia about a year ago reported the removal of such a foreign body using magnetic fixture through a bronchoscope.

I hope I have made it clear in the reported aneurysm case that we passed an œsophagoscope only after the physician and radiologist had eliminated, to their satisfaction, the question of the presence of an aneurysm. Thoracic aneurysm I understand is not common. Dr. Adam asked me about our

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

method of lipiodol injection. We have found in many cases of bronchiectasis that the use of lipiodol by the intra-oral method has not given us a definite outline of all the cavities that might be present. The trans-thyroid method, using a fine needle passed through the crico-thyroid membrane, we have found entirely misleading. We have combined the use of lipiodol with our first examination. The bronchoscope is passed and the bronchi examined and if there is any suspicion of any cavitation which cannot properly be viewed through the bronchoscope we have injected lipiodol into that area using a 20 c.c. syringe and a long cannula passed through the bronchoscope, the patient then being immediately X-rayed. We have adopted this method even for a radioscopic examination of both bases.

In the treatment of bronchiectasis we rely on frequent aspiration through the bronchoscope. In the majority of cases we found the pus so thick and tenacious as not to allow of proper aspiration. In these cases we inject through a double cannula about 10 c.c. of boracic lotion which loosens the pus and allows of its aspiration. In certain cases, especially where the right middle lobe has been affected, *e.g.* lung abscess affecting that area, one must necessarily use the lower lobe as a sort of cesspool, and it is in these cases that we hope to have the co-operation of the thoracic surgeon. The removal of the lower lobe would result in a perfect cure. Frequent inversion does not entirely empty the chest cavity. In the act of coughing there is a contraction of the bronchus above the cavity; this continual contraction ultimately forms a permanent constriction and leads eventually to a further ballooning of the cavity. In these cases the only method of clearing out the cavity is by dilatation of the stricture and aspiration. All cases of bronchiectasis should be taught postural drainage, but whenever there are the slightest signs of stagnation (shown by the return of the bad odour of the breath) the cavities should be aspirated. Dr. Connal, Jr., asked me about the case of the safety razor; we improvised the shields for the comb of the razor from a thin copper spatula, sliding it down through a dilating œsophagoscope.

Dr. ADAM: I quite agree with Dr. Martin with regard to treatment. I would like to point out in favour of frequent inversion that in the lower animals, when bronchiectasis occurs, you never find pus in the bronchial cavities, owing to their horizontal posture preventing stagnation.

CASE 1. **Congenital Cervical Fistula**—G. B. BRAND, M.B.—R. T., male, aged 26. Seen 10.11.30. Cyst on left side of neck all his life. Compression forces creamy yellow pus into the pharynx in the region of the upper part of the left posterior faucial pillar. There is also a very small remains of a cyst on the right side of the neck which leaks occasionally on the skin surface.

CASE 2. **Congenital Cervical Fistula**—G. B. BRAND, M.B.—Nurse, J. L., female, aged 28. First seen 4.6.30. History of fistula in the right side of the neck with cystic formation. On pressure, creamy yellow pus can be expressed into the pharynx in the region of the upper part of the right posterior faucial pillar. Had been operated on by various surgeons on thirteen occasions, but the

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

condition still persisted. At the last operation, the inferior end of the cyst including the fistula in the neck had been closed but the cystic condition persisted. On 5th June 1930, a catheter was passed from the fistulous opening in the posterior pillar into the cyst and, after withdrawing the pus, some lipiodol was injected. X-ray photographs shown. On 12th June the cyst was dissected out by Mr. Mailer. Patient was anæsthetised through the Davis gag, and the sac of the cyst was hooked into the wound by means of a probe passed from the pharynx into the sac. No difficulty was encountered and convalescence was uninterrupted.

Dr. BRAND: I would like to apologise for the absence of No. 1. No. 2 has had a sad experience. She has now been operated upon thirteen times in attempts to get rid of this fistula. On the last occasion a very well-known surgeon, who has had a large experience of these conditions, managed to dissect it upwards into the region of the large vessels in the neck, but he found so much difficulty that he stopped the operation there. My colleague, Mr. Mailer, sent her to see me at the beginning of June 1930, as he wondered if anything further could be done because her health was suffering from the large quantities of pus that could be squeezed from a cyst-like swelling in the neck. As the result of the previous operations, the sac seemed to be closed below, but, in view of the difficulties experienced in the previous dissections, Mr. Mailer was unwilling to attempt a further dissection. I remembered seeing Dr. Chevalier Jackson giving great help to a general surgeon in Philadelphia in a case of œsophageal pouch by passing an œsophagoscope into the pouch and lifting the pouch into the wound which the surgeon had made in the neck, and I thought it possible to try this method in the present case. I passed an ordinary blunt antral cannula into the sac from the pharynx, withdrew some of the pus by suction, and injected some lipiodol. X-ray of this showed that the lower end of the sac seemed to be completely closed. I then suggested to Mr. Mailer that, if he would attempt a dissection, I would hook the sac into the wound, and he agreed. The patient was put under ether anæsthesia with a Davis gag which steadied the neck. The cannula was introduced from the pharynx into the sac and the sac hooked up into the wound. The dissection proved to be comparatively easy, and the sac was completely removed. Patient has had no trouble since.

Dr. BROWN KELLY congratulated Dr. Brand and Mr. Mailer on the excellent result. The patient had been shown to him a year ago. At that time by merely turning her head to the side she could force a considerable amount of pus into the mouth through the minute internal opening, while the external opening, situated 1½ in. above the right sternoclavicular articulation, together with the lower part of the tract, were closed. A complete fistula of this description was probably best explained as a persistent thymopharyngeal duct.

CASE 3. **Acute Mastoiditis without Perforation of Tympanic Membrane**—GAVIN YOUNG, M.B.—W. N., aged 6. T. and A. removed by another surgeon in 1927; nasal obstruction

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

persisted caused by severe septal deflection; submucous resection, 7.3.30; after dismissal, seen at O.P.D., complaining of earache, L., and showing reddened M.T.; ten days later, M.T. still intact, but slightly reddened, but left mastoid tender and swollen; cortical mastoid operation, with uneventful recovery.

Dr. J. P. STEWART: I would like to ask about the bacteriology in this case and about the character of the pus obtained from the mastoid. It looks like a case of streptococcus mucosus.

Dr. LEITCH asked what were the operation findings in the mastoid; and whether a "Wilde's incision" as recently described in the *Journal of Laryngology and Otology*, or even a paracentesis, would not have been equally successful here.

Dr. GAVIN YOUNG (in reply): The mastoid was full of pus, very definitely a mastoid abscess. No swab was taken and I do not know what the organism was. With regard to Dr. Leitch's question, I do not think I ought to raise the question of Wilde's incision at all at this late point in the afternoon. I do not think, however, a Wilde's incision would have been sufficient. With regard to Dr. Martin's question, paracentesis was done. There was not sufficient indication for it when the boy appeared at the Dispensary ten days before operation. I have to tell the Meeting that I missed a case of acute mastoiditis when, if there was a perforation, it was a very minute one and it passed several weeks later into the hands of another surgeon, just within the past few days. The condition is not very uncommon.

CASE 4. **Unusual Abscess associated with Mastoiditis**—GAVIN YOUNG, M.B.—J. McG., aged 53, cortical mastoid operation, L., in another institution, June 1930; admitted W.I., 15.8.30, severe pain and swelling in neck, L., condition simulating Bezold's abscess; suggestion of fullness of pharynx, left mastoid cavity opened (W.S.S.) pus evacuated from antral region, tip cells unhealthy, but no sign of sinus into neck; 18.8.30, neck still tender, much pus in wound, wound re-opened, tip removed, deep dissection under cervical fascia, internal to carotid sheath, no abscess found; pus found to be welling up from Eustachian opening, dura of middle fossa widely exposed, lateral wall of pharynx searched; source of pus not determined. 20.8.30, died. P.M. refused.

Case No. 4. Dr. GAVIN YOUNG: I would like to know if anyone could tell me where the pus had come from. It quite definitely welled up from the Eustachian opening and I have not the least notion now where it came from. At one time I thought it was coming through the floor of the tympanum from the neck, but quite definitely it was not, it was coming through the Eustachian opening.

Dr. J. S. FRASER: Dr. Dan McKenzie has written on the question of abscess in the pharynx associated with middle-ear suppuration, and recommends that after the radical mastoid operation has been completed

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

the inner end of the anterior bony wall of the meatus should be removed in order to drain the abscess into the radical mastoid cavity. Was there no pus pointing in the pharynx? I would suggest that if there was an abscess in the pharynx, and if this was opened at the same time, one would obtain very free drainage. If Dr. Young has another case he might try the method suggested by Dr. Dan McKenzie.

Dr. GAVIN YOUNG (in reply): There was a little fullness in the pharynx at the time of the first examination. I opened it but there was no pus. It cleared up within two or three days.

CASE 5. **Temporosphenoidal Lobe Abscess following C.S.O.M.** —GAVIN YOUNG, M.B.—J. G., aged 26, admitted 17.6.29. Severe pain over left mastoid, and headache not localised; history of shivering attacks and vomiting, semi-conscious; T. 102-8, P. 96, R. 24.—C.S.O.M., L., with much tympanic disorganisation; right ear normal.

Cortical operation: mastoid full of pus; sinus bathed in pus, but apparently healthy; pus tracking into mastoid abscess through dura from large T.S. lobe abscess; drained through packing led through Souttar's tube; showed some amnesia later which cleared gradually; radical operation 5.8.29. Dismissed 14.8.29.

CASE 6.—**Brain Tumour, involving 8th Nerve.**—Mrs. A., aged 49, admitted to Mr. Roy Young's wards, W.I., 6.10.30; headache and vomiting of eleven months' duration.

Severe occipital headaches passing over right temporal region; drowsy; metallic taste right side of mouth; weakness, loss of weight; vomiting, sometimes with nausea, giddiness, especially on bending head backwards; occasional diplopia or blurring of image; numbness and formication occasionally present over right side of face; for ten months, progressive deafness, R., with tinnitus worse when headache was worst.

Examination.—No delay in cerebration; right handgrip slightly weaker than left, no other motor disturbances; some diminished sensation over area of distribution of second and third divisions of 5th nerve; complete loss of corneal sensation in right eye; tendency to stagger to R. on walking; no dysdiadokokinesia or intention tremor; marked nerve deafness, R.; Schwabach (256), forty-five seconds; rotation to L., nystagmus disappeared in thirty-five seconds.

Caloric test, with hot water, nystagmus after fifty seconds. No paresis of larynx, but some impairment of sensation. X-ray of skull negative. Operation, 10.10.30, Mr. Gerstenberg. Cushing's cross-bow incision; cerebellum approached from behind; dura under great tension; left lateral ventricle tapped; right cerebello-pontine angle exposed, two small cysts punctured; 7th and 8th nerves seen to be stretched out, but no tumour seen; patient's condition bad, further exploration avoided; died five days later.

P.M. report not yet available.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Dr. GAVIN YOUNG: The post-mortem report is, briefly, that there was a cystic tumour in the cerebello-pontine angle which involved a number of nerves. The 6th nerve was displaced medially, the 5th nerve was distorted, 7th and 8th nerves curved round the lateral and posterior margins. It was suggested that it might be a teratoma. The point about this was that the labyrinthine branch of the 8th nerve did not seem to be very much disturbed; it seemed to be more the auditory part. The contents of the cyst were fluid (in reply to Dr. Leitch).

Dr. J. S. FRASER: I do not see any mention of spontaneous nystagmus in this case. Dr. Gardiner and I recently went over our cases of 8th nerve tumour and we found that "extravagant" nystagmus was the most characteristic sign of 8th nerve tumour. Not only was there nystagmus to both sides but also on looking up and down, which is a thing one never finds in labyrinthine cases.

Dr. GAVIN YOUNG: There was no spontaneous nystagmus.

CASE 7. **Acromegaly**—GAVIN YOUNG, M.B.—W. O., aged 15, complained of severe headache, 4.9.30, height 6 ft. 4 in., weight 15 stone, shows usual signs of acromegaly; uneven development of face and head, with occasional severe left hemicranial headache; left retrobulbar neuritis; X-ray films show enlargement of pituitary fossa, with marked opacity over area of sinuses, L., but not confined to sinuses; ? interpretation of opacity.

Dr. J. S. FRASER: There is obviously something more present in this case than merely an enlargement of the pituitary. There is either bony thickening or tumour formation affecting the anterior, middle and probably the posterior fossa of the skull on one side.

Dr. GAVIN YOUNG: It is at present the intention to leave moderately well alone. The patient was sent to us complaining of headache, which cleared up spontaneously. There is no idea of doing anything at all. I should like to know if any member is familiar with the X-ray appearance.

CASE 8. **Epithelioma of Left Antrum of Highmore**—W. S. SYME, M.B.—Female, aged 68 years. Seen 11.3.30. Painless swelling left side of face. Yellow discharge from nose anteriorly and posteriorly; no sign of blood. Blockage of left side of nose. Lateral wall of nasal cavity was seen to be pushed inwards and there was a tender swelling of left upper alveolus with sensation of crackling. No growth was found in the nasopharynx. X-ray showed opacity of left antrum and of one lobe of the frontal sinus. Radiologist reported that there was no evidence of bone erosion.

13.3.30.—$CHCl_3$. A Caldwell-Luc opening showed the antrum to be full of growth with erosion of the anterior wall and floor. Pathological report: A papillomatous growth showing much irregular hyperplasia with, at places, definite epitheliomatous change. The carcinomatous cells are invading the stroma of the tumour and the adjacent bone.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

21.3.30.—The opening was enlarged and anterior wall removed. The growth and most of the antro-nasal wall removed with diathermy. The posterior and lateral walls were found to be intact. The cavity was swabbed with acriflavine. Twelve needles each of 2 mgrms. radium were packed round the cavity walls and into the erosion in the floor. The radium was left in position for five days giving a dose of 2880 mgrm.-hours.

4.4.30.—Very well. Has had no pain or elevation of temperature.

17.4.30.—Application of X-ray on advice of radiologist to catch outlying cells.

On 20.6.30, 26.8.30, and 28.10.30, small sequestra of bone removed with ease from the edges of the bony opening, totalling in all about the size of a shilling. The cavity has been cleaned out daily with a bland lotion.

CASE 9. **Tumour of Antrum**—GAVIN YOUNG, M.B. (with the assistance in radium cases of A. A. CHARTERIS, M.B.).—J. McI., aged 54. Painless swelling right cheek, three months; lump in gingivolabial fold two weeks, a fleshy active growth both sides of alveolus from midline back to last molar; no obvious glands; X-ray—right antrum dull.

26.8.30.—Antrum opened, most of growth removed. Nine needles packed in: 1296 mgrm.-hours.

1.9.30.—Palate and inner aspect of gum, 9 needles, 1008 mgrm.-hours; cheek—subcutaneous insertion—nine needles 1814 mgrm.-hours. Two pathological reports state impossible to say growth histologically malignant, though clinical course leaves no doubt. Appearances of fleshy papilloma.

11.10.30.—Greatly improved; no obvious tumour growth in mouth. Some thickening on hard palate.

CASE 10. **Tumour (? Adamantinoma) of Antrum**—GAVIN YOUNG, M.B., and A. A. CHARTERIS, M.B.—Mrs. McK., aged 38. Between December 1928 and November 1929 seen at O.P.D., pain, left cheek, no evidence of antral disease; septal operation and turbinotomies; reported again February 1930, when portion of left infected turbinotomies removed for examination. Pathological report: ramifying solid cords of epithelial cells often enclosing spaces with mucoid degeneration; ? benign salivary tumour. X-ray—left antrum opaque.

11.3.30.—Antrum opened through canine fossa, large opening; filled with growth which had caused swelling of left cheek and obstruction of left side of nose; growth removed, also antro-nasal wall; growth extended back to nasopharynx. Eleven needles packed into antrum—1584 mgrm.-hours. Pathological report: same characteristics as before; some trace the origins to vestiges of embryonic enamel organ

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

of teeth—adamantinoma. Pathologist states: of this kind of tumour, local malignancy usual—only later recurrences tend to form secondaries.

11.10.30.—Patient looks well—no signs of tumour growth to be seen.

Cases Nos. 8, 9 *and* 10. Dr. LEITCH asked with regard to No. 8 what was the duration of the symptoms when the patient was first seen. The report stated that there was "no sign of blood" in the nasal discharge, while the pathological report indicated a large benign tumour possibly becoming malignant.

In No. 9 the clinical notes said that the swelling was "painless," and there were "no obvious glands." Presumably also there was no tendency to bleeding. The two pathological reports seemed to indicate a benign growth. Was the growth found to be encapsuled at the operation? Did Dr. Young regard this tumour as benign, or malignant?

No. 10 seemed to him (Dr. Leitch) to be a case of adamantinoma, and perhaps a more extensive operation such as "Moure's" seemed indicated. The pathological reports did not appear to support any salivary gland origin. An up-to-date description of such "cysts," or "cystomas" was given by Dr. Joseph Shroff, New York, in *The Laryngoscope*, March 1929. Dr. Shroff pointed out that the definitely cystic type was more commonly found in the lower, than in the upper, jaw.

Dr. I. SIMSON HALL: One would like, first of all, to congratulate Dr. Syme on his obtaining such an excellent result in the case he shows of radium treatment of antral carcinoma. The despair with which the rhinologist is apt to regard this type of case is accentuated by the fact that radical surgical treatment has been almost completely abandoned by the general surgeon, and on this account it is with all the greater pleasure that we examine a successful case at the meeting of this Society, instead of being compelled merely to read about such at continental and other clinics.

In Mr. Lithgow's department of the Edinburgh Royal Infirmary, we have had three of these cases in recent months. Two of them were undertaken merely with the object of palliation, and no cure was expected or hoped for. The third case, however, was comparatively early, and although unsuccessful in the end, when compared with this case of Dr. Syme's, furnishes two or three points of interest which one is tempted to emphasise.

Firstly, early diagnosis, and immediate application of radium after initial operative interference.

Secondly, a route of access which provides inspection and treatment of every part of the cavity.

Thirdly, provision for complete inspection of the treated area, for an indefinite period.

The last, in particular, seems to be of the greatest importance as recurrence in the postero-inferior angle was one of the causes of failure, in the cases to which I have referred.

Our small experience shows that this extension of the disease is one which calls for serious consideration, and one is tempted to speculate on the advisability of employing an external route in addition, to insert radium behind the maxilla.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Dr. J. S. FRASER: I am very doubtful whether an operation such as the Caldwell-Luc operation is suitable in these cases. I had recently a private case of this sort, with swelling of the cheek. I made an extensive incision at the junction of the gum and cheek and removed almost the whole of the anterior wall of the antrum, scraped out the growth in the antrum, which was not of a very malignant nature, and inserted radium. Within a matter of six or eight months the tumour had "recurred." My own belief is that in these cases it is better to perform excision of the upper jaw or to do nothing at all. In an operation through the Caldwell-Luc incision you cannot remove the whole of the growth. Even after excision of the maxilla it is advisable to fill the cavity with stent in which a large number of radium needles are embedded. This was done recently in one of my cases by Mr. J. J. M. Shaw. Of course we have still a lot to learn about radium. We know now that œsophageal cancers are radio-insensitive and it may be that these growths in the antrum are of the same description.

Dr. HARPER: I would like to ask the opinion of members if this form of malignant disease of the antrum is a common condition. One's own experience is that most carcinomas which involve the antrum are really ethmoidal carcinomas.

Dr. BRAND: It is my experience also that the ethmoid as a rule is affected; whether it is affected first, or the antrum first, I do not know.

Dr. SYME: I have nothing further to say except that I think probably the reason why this case has done so well is the original situation of the papillomatous growth in the antrum. The cancerous formation probably took place in a situation which was easily got at and easily treated. Had it, as Dr. Hall suggests, been situated further back, it would have been more inaccessible and I do not think that with the method employed the result would have been so successful.

Dr. A. A. CHARTERIS: I am afraid we have not had a great experience of this class of case, but as you see from these reports it has not been altogether unfavourable. I think it is an important point that one should apply radium, if radium is to be used, as soon as possible, because naturally any disturbance would tend to disseminate the growth. The question of the sensitivity of these growths was raised and I think it is a fairly general experience that they are of a sensitive nature and that one can usually obtain a good response to the action of radium. The question of operation was also referred to as an alternative method of treatment. If the entire growth can be removed by excision of the upper jaw, that would seem to be a curative method, but I fancy that not many of these cases will present themselves in such a favourable state. In view of the sensitive nature of these growths, I think that radium is well worthy of consideration, since one must remember that the effects of radium will extend to some distance beyond the actual situation of the needles or tubes in the growth. I think I might also say that while in case No. 9 the growth was not confirmed as malignant histologically, the pathologists themselves added to their report that they had no doubt it must be malignant, and I think anyone who saw the case first could not have a shadow of doubt. The swelling of the cheek and the fleshy tumour spreading from the antrum over the gum and palate were very convincing. I think it is one of our striking cases.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

CASE 11. **Laryngeal Atresia following ? Measles**—GAVIN YOUNG, M.B.—W. L., aged 3. Admitted to a county fever hospital suffering from stridor and dyspnœa following measles; laryngeal diphtheria diagnosed, but swabs negative; intubation unsuccessful; tracheotomy; inability to breathe without tracheotomy tube. Admitted W.I. 29.2.30; by direct laryngoscopy, glottis found to be closed; laryngofissure and obturator.

Dr. GARDNER suggested that Dr. Young on removing the tube and obturator might introduce another tube with a large opening in its upper convex surface, so if half of the outer end of the tube were closed the child could still breathe through its larynx and trachea by means of the opening in the upper convex surface of the new tube. It should then be gradually occluded by corks of increasing size. Small doses of bromide internally would also assist this manœuvre.

CASE 12. **Foreign Body in Lung, followed by Gangrene of Lung**—GAVIN YOUNG, M.B.—D. G., aged 21. Admitted W.I., septics ward, under Mr. Andrew Hutton, 23.4.28. "Weak chest" for years; one month prior to admission patient developed cough and severe pain in side; three weeks later, red swelling appeared over back; opened by family doctor and still discharging. 24.8.28.—Resection of rib (A.H.); no localised collection of pus found. 25.8.28.—X-ray examination showed F.B. near entrance of left bronchus, of unrecognised shape; bronchoscopy (G.Y.) revealed a foreign body buried in wall of bronchus; considerable force failed to move this; patient was moribund and died 27.8.28.

P.M. examination revealed a greatly eroded halfpenny, with the larger part in the œsophagus, which had perforated into the left bronchus, and was largely covered by granulations; left lung was gangrenous. In infancy, patient was thought to have swallowed halfpenny, but when the floor was searched another was found.

CASE 13. **Foreign Bodies**—GAVIN YOUNG, M.B.—Various, recovered from œsophagus or bronchi, including half a safety-razor blade recovered from the gullet of a mentally deficient lad of 17; a needle swallowed in a piece of bread; a pin; a paper-clip from the left lung of a girl of 5; fish-bones and coins.

CASE 14. **Laryngofissure**—GAVIN YOUNG, M.B.—Three cases already shown; squamous epithelioma.

Rev. J. G. S. (private patient). R.V.C. removed October 1926.

J. Y. (private patient). R.V.C. removed August 1927.

J. M'G. R.V.C. removed October 1926.

CASE 15. **Epithelioma of Larynx, L.V.C.**—GAVIN YOUNG, M.B.—A. B., aged 60. Hoarseness one year; growth of pea anterior part left cord; no glands; biopsy, squamous epithelioma.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

12.9.30.—Fenestration; local anæsthetic; no tracheotomy; seven needles—705-6 mgrm.-hours.

4.11.30.—Affected cord not yet returned to normal; voice still improving.

CASE 16. **Epithelioma of Larynx**—GAVIN YOUNG, M.B.—E. M'I., aged 46. Hoarseness for three years; growth left cord; left arytenoid slight swelling left aryepiglottic fold.

1.4.30.—Fenestration; no tracheotomy; seven needles: 1008 mgrm.-hours. Developed some necrosis of thyroid cartilage, which had to be curetted.

2.10.30.—Growth disappeared, leaving some fullness in affected parts; considerable gland formation, left submaxillary region; treatment refused.

28.10.30.—Seventeen needles into glands which were adherent to tissues—6528 mgrm.-hours. Larynx remains well.

CASE 17. **Epithelioma of Larynx**—GAVIN YOUNG, M.B.—J. B., aged 67. Hoarse for two years; growth, squamous epithelioma, affecting length of R.V.C. and arytenoid, also false cord.

10.9.29.—Fenestration and tracheotomy, local anæsthetic; four needles—1680 mgrm.-hours. Patient was subject to chronic bronchitis and emphysema. Developed broncho-pneumonia and septic arthritis and died 1.11.29.

CASE 18. **Epithelioma of Larynx**—GAVIN YOUNG, M.B.—C. Y., aged 69. Small node, R.V.C. squamous epithelioma.

16.9.29.—Fenestration and tracheotomy, local anæsthetic; four needles—1680 mgrm.-hours.

19.9.30.—Died, broncho-pneumonia.

Cases Nos. 14, *etc.* Dr. J. S. FRASER: With regard to Nos. 14, 15, 16, 17 and 18, one gets the idea that Dr. Young is showing these cases to illustrate the superiority of laryngofissure over the insertion of radium. It seems that one or two of these cases treated by radium came very late; for instance in No. 17 there was a history of hoarseness for two years and the arytenoid and also the false cord were affected. That case does not seem at all suitable for the implantation of radium needles. It was a case for hemi-laryngectomy or total laryngectomy. No. 16 also had been hoarse for three years and the arytenoid was affected. I think that the cases which are going to do well by the radium method are cases where the vocal cord only is affected. The most favourable cases are those in which the growth does not reach the anterior commissure or the arytenoid cartilage and in which the cord is still movable. These are the cases in which you will get a good result by the radium method. It may be that there is a class of case in which you will get a good result by laryngofissure but which is not suitable for the radium method; I do not know. I personally should never think of performing laryngo-

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

fissure if the case were suitable for radium because I have found that the voice is much better after radium than after laryngofissure. Laryngofissure is a mutilating operation while the radium method results almost in *restitutio ad integrum*—indeed in several cases I now have difficulty in deciding which cord was the affected one unless I look up my notes of the case.

Dr. LEITCH said that he would like to emphasise the importance of excluding both syphilis and tuberculosis, but especially tuberculosis, before using radium in such cases. Some months ago he had a case where the diagnosis between tuberculous disease, and malignant disease, of the larynx was extremely difficult. Only after several examinations did the local appearances seem to point more in the direction of tubercle but the possibility of epithelioma could not be excluded. Discussing with Dr. Harper the question of using radium in such a case, Dr. Harper said, "If you use radium and your patient has tuberculosis, your patient will die." He (Dr. Leitch) thought that the truth of this was not sufficiently recognised, and that the use of radium where there was either latent or active tuberculosis might be more harmful to the patient's chances of recovery than simple neglect of any epithelioma which might have been superadded. In No. 18 the growth was a "small node." Would not laryngofissure have been preferable here?

Dr. GAVIN YOUNG: "If there were any question of comparing the two methods of treatment, the only comparison would be between those shown under Nos. 14 and 15. Of course comparing the functional result of No. 14 with, for example, the cases of fenestration which Dr. Fraser showed in Edinburgh this summer, there is no question of comparing the functional results, which are far better after the use of radium. With regard to Nos. 16 and 17, I thought it was well worth while to make a fairly big opening in the thyroid ala and trying to get the radium as extensively over the inside of the larynx as possible. The trouble about No. 16 was that there was a good deal of necrosis of cartilage which I think has left its mark on the inside of the larynx. I do not think that this swelling on the inside of the larynx is actually malignant. It has been like that since very shortly after the application of the radium. There has been no change in the appearance."

Dr. HARPER: I do not think that the functional result in such cases is of much importance. You have got patients with malignant disease and you have got to decide what is the best method of curing these patients of the malignant condition. I am perfectly certain that patients with malignant disease of the larynx do not mind whether they have a good voice or a hoarse voice afterwards. What they want is to be cured of the malignant disease. The insertion of radium is obviously a big operation.

Dr. GAVIN YOUNG: If it is possible to get both a cure and good functional results then I think the matter should be considered. The point is that it is the tracheotomy which makes it a big operation. The two people who had tracheotomy done died.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

Dr. BRAND: There is no necessity for tracheotomy. I think the whole point is that it is a very simple operation for the patient in a suitable case. If radium is going to be successful and if there is to be no recurrence, then I think it will rule laryngofissure out altogether. Time alone will tell whether it is the right method or not.

CASE 19. **Epithelioma of Fauces**—GAVIN YOUNG, M.B.—W. M., aged 53. Pain right side throat sixteen months. Small growth right posterior pillar of fauces.

19.12.29.—Needles inserted through soft palate and fauces round and into growth—707 mgrm.-hours.

31.1.30.—Throat well. Small gland right side of neck. Patient did not return till 7.3.30. Throat well, neck worse.

14.3.30.—Removal of glands, sternomastoid and jugular; thirty needles—3456 mgrm.-hours.

5.6.30.—Swelling in left submaxillary region which proved to be inoperable; twenty needles—1728 mgrm.-hours.

September 1930.—Died. Note from doctor: throat remained well, neck gave little trouble, but patient suffered from generalised infective process with a cold abscess in the back.

CASE 20. **Squamous Epithelioma of Epiglottis, Ary-epiglottic Fold, and Glosso-epiglottic Fold, with Gland Involvement, Left Side** — GAVIN YOUNG, M.B. — J. D. McN. (private patient), April 1927. Diathermy, under suspension (G. Y.), with block resection, left side of neck by Mr. G. T. Mowat.

CASE 21. **Sarcoma of Tonsil**—GAVIN YOUNG, M.B.—Mrs. S., April 1929, left tonsil removed; histological examination, "sarcoma"; radium needles applied, two in fauces, one at base of tongue, four through submaxillary incision—1225 mgrm.-hours.

CASE 22. **Post-cricoid Epithelioma**—GAVIN YOUNG, M.B.—Mrs. G., aged 50. Choking on taking food for three years; unable to swallow anything but fluids for two months; pain in throat; direct examination, post-cricoid growth; barium drink showed irregular narrowing; no glands palpable; biopsy—squamous epithelioma.

21.5.30.—Pharynx exposed, left side of neck; few glands found, enlarged but not hard; growth on left posterior lateral aspect of pharynx, just broken through; fifteen needles—2529 mgrm.-hours. Pathological report on glands—inflammatory. Patient left hospital improved, but sank at home, and died end of June.

CASE 23. **Post-cricoid Epithelioma**—GAVIN YOUNG, M.B.—Mrs. G., aged 41. Pain and difficulty in swallowing for one year; now difficulty with fluids; direct examination—leukoplakia of hypopharynx, with localised thickening area of shilling; right posterior

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

wall shown by biopsy to be squamous epithelioma, also pedunculated growth on left side of hypopharynx attached to posterior aspect of cricoid.

16.5.30.—Pharynx exposed through right side of neck; growth on point of breaking through wall of pharynx; no glands; fifteen needles—2016 mgrm.-hours. The pear-shaped mass then removed from larynx by direct route. Pathological report: Cellular malignant tumour markedly pleomorphic; apparently squamous epithelioma of aberrant type, with transition to type of spindle cell and giant cell sarcoma. Deep X-ray treatment to both sides of neck by saturation method followed.

21.10.30.—Very well; no abnormality found in pharynx or larynx; swallowing well.

Cases Nos. 19 *to* 23. Dr. GAVIN YOUNG: This seems a very good way of treating an early post-cricoid epithelioma, and a point I did not make sufficient note upon in No. 23 is that this patient definitely had two primary malignant growths in her hypopharynx.

Dr. HARPER: Might I ask Dr. Young with regard to No. 19 if he had a section examined for malignant disease?

No. 19. Dr. Leitch said he would ask the same question here. The note from doctor following the patient's death states that "he suffered from a generalised infective process with a cold abscess in the back."

He (Dr. Leitch) wondered why Dr. Young should change to the use of radium when he had been so successful with the cases treated by laryngofissure and shown to-day under No. 14.

Dr. Leitch said that the notes given of No. 23 seemed to point somewhat strongly to a diagnosis of syphilis—leukoplakia, a pedunculated growth, growth on point of breaking through wall of pharynx, no glands, tumour markedly pleomorphic on microscopic examination, and finally the patient "very well." He was sure that Dr. Young would agree that a statement as to the Wassermann reaction was important in this case.

Dr. Leitch (in reply to the President) said that his reason for asking was that even a negative Wassermann was always additional evidence in support of a diagnosis of epithelioma.

Dr. GAVIN YOUNG (in reply): We have to depend upon the pathologist of course and he calls this "apparently a squamous epithelioma." It seems to me that the removal of what would be presumably a gummatous growth by the snare, followed even by deep X-rays, would not cause a gumma to clear up but would rather cause a very extensive tertiary lesion in the larynx. Leukoplakia is, of course, associated with malignant disease just as much as with syphilis.

CASE 24. **Epithelioma and Tuberculosis of Larynx** — GAVIN YOUNG, M.B.—J. P., aged 32, June 1928, attended E. N. and T. Hospital, complaining of sore throat and hoarseness; growth removed anterior third L.V.C.; "no malignant change."

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press

August 1928—Recurrence; biopsy—no malignant change.

October 1928—Laryngofissure: R.V.C. and part of L. removed. Pathological report—tubercular; no malignant changes observed. Patient spent most of 1929 under the care of the Public Health Authorities, who reported no sign of active tubercle in 1929. Patient was lost sight of but reported to W.I.

January 1930—Extensive growth whole of larynx, left side worse; biopsy—squamous epithelioma; surface therapy intermittently, 12,000 mgrm.-hours. Treatment had little effect, trouble with frequent abscesses at site of old wound. Died August 1930.

Dr. LEITCH pointed out that three pathological reports were "no malignant change," the third one (after laryngofissure) being definitely "tubercular." He (Dr. Leitch) placed no reliance on a "biopsy" report—the scrap of tissue which one could usually pick off did not give the pathologist a chance. On the evidence he (Dr. Leitch) would regard the condition in January 1930 as a "flare-up" of a latent tuberculosis, and would consider radium, or other similar treatment, contra-indicated.

Dr. GAVIN YOUNG: This case was under the care of the Public Health Authorities of this great city of ours, and they said there was no sign of any tubercle in 1929. He was X-rayed and he was kept carefully under observation and he very definitely had squamous epithelioma when he came to see me at the Western.

Dr. LEITCH: My point is that if a patient has tuberculosis—or latent tuberculosis—and you treat him with radium or similar emanations he will die, whether or not epithelioma has supervened.

CASE 25. **? Bilateral Adductor Paralysis**—R. J. WATSON, M.B.—Case shown on 30.11.29 at Stobhill.—B. C., aged 36. Marked improvement going on slowly. Swelling much less marked and increased range in voice. Now able to sleep with tracheotomy tube corked. The tracheotomy tube has been further improved.

https://doi.org/10.1017/S0022215100035970 Published online by Cambridge University Press