SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF LARYNGOLOGY

May 5th, 1933

President: MUSGRAVE WOODMAN, M.S.

Malignant Disease of the Bronchus

The opening paper read by Mr. F. C. ORMEROD is published in this issue of the *Journal of Laryngology and Otology*, Vol. XLVIII, No. 11, pp. 733-8.

DISCUSSION.

V. E. NEGUS said that he had seen, seven years ago, a young woman who had hæmoptysis; she had been seen by Sir St Clair Thomson, and had been in a sanatorium ten months. With the bronchoscope he (Mr. Negus) was able to see a small, semi-pedunculated growth in the left lower lobe bronchus; this he removed, and found it to be a simple fibroma. The patient was all right and her lung had been clear until five months ago, but then a larger growth was seen, in the same position, growing from the medial wall of the lower lobe bronchus. That also he removed; it looked like the previous one, but proved to be adeno-carcinoma. After removing it he put in radon seeds, with a slightly different container from that used by Mr. Ormerod; he put springs on the side, the better to hold it in place. The patient was now quite well again. Early examination might disclose more of these cases.

A man with complete collapse of the right lung, whose main bronchus was obstructed by a pedunculated growth, which the speaker removed and found to be adeno-carcinoma, was still well four years later.

He thought that the cases which Mr. Ormerod had mentioned had been chiefly those having an extension in the lung itself: but if the majority of carcinomata started in the bronchus, the conclusion was that examination of suspected cases must be allowed at an early stage, when cure might be possible; when the lung was widely invaded the chance of cure was slight, except by removal of the lung itself, a formidable procedure.

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E. D. D. DAVIS asked what instruments Mr. Ormerod used and how he removed the pedunculated carcinoma, whether by the snare or by diathermy. He (the speaker) was sometimes alarmed by the hæmorrhage in these cases. In his hospital the physicians were sending more cases for bronchoscopy.

A large number of the museum specimens of carcinoma of the lung showed a conical tapering constriction of the bronchus. This tapering constriction does exist, though it is not easily seen when looking through a bronchoscope.

So far as he knew, there were only twenty-six recorded cases of benign or pedunculated tumours of the bronchus. Eleven of these were removed by bronchoscopy and resulted in great relief to the patient. The distressing dyspnœa was cured. The growths all occurred in the first inch or inch-and-a-half of the bronchus.

F. C. ORMEROD (in reply) said he thought the growths began in the bronchial mucosa, and he hoped to be able to show sections which would bear that statement out. Usually such cases came with a completely obstructed bronchus, collapsed lung and a mass extending into the lung, and then the outlook was bad.

He used the Irwin Moore type of bronchoscope and the Paterson type of forceps. He had not encountered sufficient hæmorrhage to cause alarm.

He agreed with what had been said about clearing enough from the bronchus to afford æration. The degree of dyspnœa was out of all proportion to the size of the growth.

CASES

Lupus of Palate, Pharynx and Larynx. (Further Report of Case previously shown.)—JOHN F. O'MALLEY.

Male, aged 42. When shown (*May 2nd*, 1932*) there was extensive superficial ulceration of the palate, fauces, pharynx, epiglottis, arytenoids and larynx, with marked loss of voice.

Now much improved, following ultra-violet irradiation by Dr. Beaumont at the Institute of Ray Therapy, Camden Road.

DISCUSSION.

Dr. WILLIAM BEAUMONT showed a film demonstrating the actual treatment given.

He said that this was the first case of lupus of the larynx which he had seen, as he was not a laryngologist, and he had found it necessary to evolve a special technique. He had therefore designed a silvered quartz applicator for use with a new form of water-cooled mercury vapour arc lamp. With this it was possible to get the short ultra-violet

* *Proceedings*, 1932, xxv., 1,510 (Sect. Laryng., 48).

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rays in close contact with the lesion. The treatment given in this case was for three minutes three times a week for the first two months, then twice a week, and eventually once a week. In addition prolonged general body irradiation was given three times a week. This was suitable for other forms of tuberculous conditions of the larynx.

The lamp mentioned in the May number of the *Journal of Laryngology and Otology** consisted of a small mercury arc enclosed in a quartz casing which was introduced into the mouth. Because of the possibility of danger to the patient, in his opinion, any lamp of this design introduced an unnecessary risk. It was because of this that the technique shown in the film was evolved. The special quartz solid rod was designed so that the mercury vapour arc itself need not be introduced into the mouth. The radiation from the end of the quartz rod was approximately the same in wave length as from the arc itself, and was in the region of 1,800 A.

Sir ST CLAIR THOMSON said that tuberculosis was a kaleidoscopic and chameleon-like disease, varying so much in intensity that it would kill one patient in six weeks, while another would not succumb to it in sixty years, even if untreated. Any method which would shorten the duration of tuberculosis of the larynx was welcome, because a patient with only temporary or partial arrest of the lung disease could return to everyday life and could often resume his ordinary occupation, and get well; but the person who had the disease in the larynx, and whose return to everyday life meant resuming the use of the voice, ran a great risk. The larynx was not likely to get well, and if it did not, the lung condition became progressively worse. The method now described was certainly worthy of a trial, especially as it did not seem to be such an ordeal as might have been thought; he gathered that it was a treatment of only three minutes' duration, given three times a week. Its effects would have to be controlled in a large number of cases. At Midhurst sanatorium, years ago, tuberculin treatment had been taken up, but with a negative result, and the Patterson method of partially graded exercises had been tried, also with negative results. The recent method of treatment by artificial sunlight according to Strandberg and others, had been tried, but without effect. He had said for thirty years that lupus would get well under any treatment or no treatment. He had seen cases of the disease treated and a cure attributed either to the galvano-cautery or to the Strandberg method, and then they had relapsed, and after the relapse they had got well in the absence of any treatment at all. He did not say this in condemnation of the method now described.

The present case gave a favourable impression, and he did not think that such a case could have done so well in so short a time under any other form of treatment.

J. F. O'MALLEY said that the change in the patient's condition since shortly after he had shown him at the meeting last year was remarkable. Mr. Barwell had then recommended arsenical treatment, and this was

* 1933, XLVIII, 326. "A Note on Tuberculosis of the Larynx and Light Treatment", by A. J. Cemach.

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tried for some time, but without effect. After two months' treatment by Dr. Beaumont the patient had presented himself looking remarkably well.

Intranasal Radical Ethmoidectomy. A Series of Cases showing End-results.—L. GRAHAM BROWN.

(I) Female, aged 39. First seen *June 10th*, 1932, complaining of frequent colds, attacks of nasal obstruction, discharge and sneezing since childhood. Also deafness in recent years. Adenoids removed at age of 14; cauterisations to turbinates in 1917 and 1925. Polypi present. Skiagrams showed dull ethmoids and hyperplasia of left antral mucosa. *November 26th*, 1932: Bilateral ethmoidectomy and left Caldwell-Luc. Present condition: Cured of nasal symptoms and hearing much improved.

(II) Male, aged 36. First seen *June 4th*, 1930, complaining of attacks of frontal headache, nasal obstruction and discharge. He has had a mastoid operation on the left ear for lateral sinus thrombosis. Polypi present in both middle turbinate regions. *July 2nd*, 1930: Bilateral ethmoidectomy. Present condition: Satisfactory; some crusting at first, but the nose now remains clean and comfortable.

(III) Male, aged 40. Seen *May 1st*, 1931, with left frontal and left antral suppuration. *May 6th*, 1931: Left radical ethmoidectomy and left intransal antrostomy. Patient returned *May 29th*, 1931, with swelling at inner canthus of left eye. Mucocele present. *June 3rd*, 1931: Left external frontal sinus operation. Present condition: Cure of symptoms and nose healthy.

(IV) Male, aged 32. Seen *February 23rd*, 1933, complaining of nasal obstruction and loss of sense of smell. Removal of nasal polypi seven years ago. Patient has attacks of hay fever every year. Both nasal fossae completely blocked with polypi. *March 1st*, 1933: Bilateral ethmoidectomy. Present condition: Nose comfortable and patient has regained his sense of smell.

DISCUSSION.

HERBERT TILLEY said that this was a series of excellent results. There was an impression abroad that radical interference with chronic ethmoiditis was fraught with considerable danger, and that it was an unsatisfactory operation for curing the trouble. In the cases shown the presence of a little mucus was of no moment. These patients had lost their headache, and he would be a captious critic who would deny that the results were other than excellent. He asked whether, after removing the middle turbinals, Mr. Graham Brown had employed the Portmann curette for exenterating the " lateral mass " of cells, because it was an excellent instrument for this purpose, and permitted one to remove them with little risk to surrounding structures.

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L. GRAHAM BROWN (*in reply*) said that in the opinion of some rhinologists the operation of radical ethmoidectomy was very dangerous, and they considered that in some cases of polypi, with infection, it was sufficient to remove the growths locally, and that further surgical interference would give a bad result. That, however, was not his experience. His method was to have the patient anæsthetised and reclining on the table in a semi-sitting posture, to cocainise, and then remove piecemeal the whole of the ethmoid cell area. The latter was the key position to all the sinuses, and by operating on this area one could very often obtain good results where other sinuses were complicated.

He had never used the curette mentioned by Mr. Tilley; he had used the Sluder knife, but his objection to this and all curetting methods was that they did not permit the necessary gentleness. The liability to meningitis should not be forgotten, though he had never yet had a case in over one hundred patients operated upon by this method.

Endothelioma of Left Maxillary Sinus, Nasopharynx and Cervical Glands. Disappearance of all Foci after X-ray Treatment.—J. F. O'MALLEY.

Male, aged 64. First seen at Royal Ear Hospital, *April 20th*, 1932, on account of swelling on left side of neck (nine weeks) and sore throat (seven or eight weeks). Occasional difficulty in swallowing liquids and solids.

On examination.—A tumour was palpable just above and behind the palate on the left side. Glands palpable, discrete, mobile both sides of neck. Largest mass under left sternomastoid muscle. Case referred, as one of doubtful carcinoma, to Mr. Julian Taylor, who had some glands removed under local anæsthesia. These were reported to be endothelioma.

Patient was then submitted to the following X-ray treatment: Kilovoltage 190 kv. continuous current; filter, 1 mm. copper, 1 mm. aluminium; focus skin distance, 40 cm.

Dosage.—(1) *To enlarged cervical glands:* 200 r to each side of neck on alternate days for six days: Total of 600 r on each side of neck. Followed by 500 r twice to right side of neck at an interval of two and four months respectively. Area irradiated 20 by 25 cm.

(2) *To enlarged glands in both axillae:* 250 r-500 r repeated five times at varying intervals for five months. Area irradiated 6 by 8 cm.

(3) *To left antrum* (after *January 8th*, 1933): 1,000 r to left antrum spread over five days, followed by 600 r spread over three days after an interval of two months. Area irradiated 6 by 8 cm.

January 8th, 1933.—Returned again with history of nasal discharge for six months and gradual obstruction of left nasal passage, and an X-ray report of "marked opacity of left antrum".

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No sign of tumour in nasopharynx or enlargement of glands. Left side of nose occluded, mucous membrane swollen and pale. Much pus present anteriorly and posteriorly. On transillumination: Left side very dark; right clear. On puncture of left antrum: Soft mass felt between end of cannula and inner wall of antrum.

No fluid could be syringed into the nose or withdrawn by aspiration. Some blood escaped from puncture wound.

Sent for X-ray treatment, as this seemed to be effective in nasopharynx and glands (see above).

January 24th, 1933.—Can now breathe through left nostril. Discharge gone. Transillumination: Left side less dark.

February 1st, 1933.—Lipiodol (5 c.cm.) injected into both antra (see Pfahler, *American Journal of Roentgenology*, 1932, xxvii., 352). Oil retained in left antrum until operation.

February 20th, 1933.—Caldwell-Luc operation: (*a*) To establish diagnosis by removing any portion of growth remaining. A few small pieces found; reported on as endothelioma. (*b*) To ventilate sinus and connect with airway of nose.

Carcinoma of Œsophagus in a Male aged 45 years, treated with Radon Seeds. Patient free from symptoms two years later.—LIONEL COLLEDGE.

History.—Admitted to St. George's Hospital on *April 16th*, 1931, complaining of difficulty in swallowing for four months and inability to swallow solid food for two months. Slight pain in chest. Had lost more than 2 st. in the previous four months. Voice had been husky for a similar period; cough not marked.

Examination and treatment.—The Wassermann reaction was negative. Report on barium skiagram: "A definite obstruction of the œsophagus in its lower third. The œsophagus above the site of obstruction is dilated and below the obstruction the lumen is narrowed and irregular. The appearances are those of an organic obstruction, probably malignant." The right cord was fixed. The patient was œsophagoscoped under local anæsthesia on *May 2nd*, 1931, when an ulcerating growth with a raised edge was found at about the level of the fourth dorsal vertebra. Five radon seeds were inserted into the growth. On *May 20th* five more seeds were inserted and this procedure was again repeated on *June 10th*.

Progress.—The patient was much improved, and by the end of *June*, 1931, was able to swallow solid food, and had gained 10 lb. in weight. In *March*, 1932, patient was free from symptoms and, on œsophagoscopy, no evidence of neoplasm was seen. In *March*, 1933, patient remains free from symptoms, and has gained a further 8 lb. in weight. The right cord remains fixed.

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LIONEL COLLEDGE, in reply to a question by the President, said that he did not remove a piece, because by so doing he thought that one took away the slender chance of a cure. He did not doubt that the disease was malignant. He thought little harm was done by removing a piece from the larynx, where the lymphatic drainage was not so free. In the first case of the kind which he had treated, the disease disappeared entirely, and the patient remained clinically well for ten months, and then returned with a perforation into the bronchus. He felt that had he treated that patient for a longer period, the result might have been better. Therefore in the present case, and in some subsequent ones, he put in three sets of seeds, at intervals of a week, and this case showed an encouraging result, and indicated that one might aim at something more than palliative treatment.

Carcinoma of Pharynx treated by Radium and deep X-ray Therapy.—E. A. PETERS.

Female, aged 63, *September 4th*, 1930, admitted on account of large carcinoma of posterior wall of pharynx. Ten needles, each containing 1 mg. radium, screened with 0·5 mm. platinum, were inserted behind the growth for a week. *November 18th*, 1930.—No growth visible, but small gland present in neck; radium collar applied for one week. *February 25th*, 1932.—Circular ulcer on posterior pharyngeal wall; Wassermann negative; eight 1 mg. radium needles inserted for a week. *October 21st*, 1932.—Pain and dysphagia. Ulcerating growth on posterior wall; upper cervical spine rigid and painful; erosion of cervical vertebrae. Deep X-ray therapy carried out by Dr. R. W. A. Salmond and Dr. Hilton.

There is now a low depression on the posterior wall of the pharynx, with mucoid exudation; patient moves the neck quite freely. No pain; no enlarged cervical glands.

DISCUSSION.

THE PRESIDENT said that if the erosion of the cervical vertebrae had been caused by the radium, why had it healed when deep X-ray therapy was carried out? If it was not due to the radium, to what was it due?

E. A. PETERS (in reply) said that there was no actual necrosis of bone, so he presumed that the bone absorption was due to extension of the growth. There were a few glands in the neck. The case showed how, under certain conditions, deep X-ray therapy was effective, for a time at any rate, when the application of radium had failed.

A. D. SHARP said these notes on the action of radium on malignant disease of the œsophagus were encouraging, as it was generally agreed that radium was less successful when ulceration occurred with malignant disease.

A year ago he had a case in which the whole of the hypopharynx was filled with malignant growth, which the pathologist reported to be

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epithelioma with keratinisation. Ten radon seeds were inserted, and in the course of six weeks there was nothing to be seen of the tumour. He had been unable to ascertain where the growth originated. There was difficulty in swallowing, so that even fluids could be got down only with trouble. During the six weeks there was much distress on account of the presence of mucus and sloughing. The growth was found to have arisen from the aryteno-epiglottic fold, and there was now to be seen a white band, apparently fibrous. Three months later a radium collar was applied.

Choanal Polyp which caused Death by Respiratory Obstruction.—T. B. JOBSON.

Male, aged 39, had suffered from nasal obstruction and discharge for many years. Polypi removed in 1918. Patient was " gassed " in the European War, and suffered from bronchitis and emphysema. Left side of nose blocked with polypi.

April 4th, 1933, operation.—Atropine, gr. 1/75, nembutal, gr. iii. ; morphia, 1/6 gr. at 10.15 a.m. Operation 10.45 a.m. : bilateral Sluder's ethmoidectomy, anæsthetic induction was normal. A post-nasal plug was inserted by the house surgeon. The operation proceeded normally. Large masses of polypi were removed from both sides, more on the left. Post-nasal plug was removed, and patient was returned to the ward. He had morphia gr. 1/6 at 1.40 p.m. His colour was a little blue, but this was attributed to the emphysema. Later his respiration became worse, and he died at 3.45 p.m.

At autopsy a large myxomatous polyp was found in the hypo-pharynx, partially impacted at the opening of the larynx. The polyp was pyriform, hanging down by a stalk from the left posterior nares.

This tumour must have been in the man's pharynx for many weeks, yet he made no complaint or reference to it either before or during his stay in hospital.

Lingual Goitre.—T. B. JOBSON.

Patient, a girl aged 16, had been talking indistinctly for about a year and was thought to have " adenoids ". Examination showed a purple tumour about the size of a walnut at the back of the tongue, with several large veins on the surface.

The tumour was visible when the girl protruded her tongue, and then filled up the oro-pharynx, obscuring the edge of the soft palate and uvula. The foramen cæcum could not be identified with certainty.

March 5th, 1933.—Admitted in a collapsed condition due to hæmorrhage.

Red cell count, 1,860,000 ; 400 c.cm. blood transfused (Group IV).

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March 17th, 1933.—Second transfusion followed by anaphylaxis.
March 19th, 1933.—Red cell count, 4,880,000.
April 14th, 1933.—Cauterisation by diathermy of the superficial vessels on the tumour, under local anæsthesia, through a laryngoscope.
Postscript (*July 22nd*, 1933).—Condition unchanged. No further hæmorrhage. [T.B.J.]

Congenital Shortening of Œsophagus.—A. J. WRIGHT.

Male, aged 7 years. Difficulty in swallowing both solids and liquids, with frequent regurgitation, since infancy. Undersized and poorly nourished. Skiagram, *July*, 1927, showed a tight stricture in the lower third of the œsophagus. The presence of the gastric pouch in the thorax was not recognised until nearly two years later, when a skiagram was taken with the patient inverted. (See *Proceedings Royal Society of Medicine*, 1929, xxii., 1,263. Sect. Laryng., 35.)

During the period from 1927 until 1930 the stricture was dilated on several occasions with Jackson's bougies through the œsophagoscope. This dilatation became progressively more difficult until *November*, 1930, when no bougie could be passed. Further treatment was refused until *July*, 1931, when a gastrostomy was performed and continuous dilatation carried out with rubber tubes on an endless string. This was maintained for two months and was followed by the passage of bougies intermittently. By *July*, 1932, the stricture had again become impassable. In *November*, 1932, an attempt at forcible dilatation with a metal bougie as a preliminary to application of diathermy led to perforation into the pleura with fatal result.

Pathological report on specimen (Dr. A. L. Taylor). "Slightly below the bifurcation of the trachea and $2\frac{1}{2}$ in. above the diaphragm, the œsophagus shows a stricture half an inch in length, through which a probe could be passed only with difficulty. At this site the œsophageal wall is thickened, fibrosed and adherent. Immediately above the stricture the œsophagus is dilated and hypertrophied with corresponding thickening of the mucous membrane, which is thrown into prominent whitish folds. Below the stricture a pouch communicates with the stomach proper through an aperture one inch in width, widely separating the crura of the diaphragm. The mucous membrane lining the pouch is continuous with that of the stomach below, and closely resembles it to the naked eye; microscopically it is found to contain typical gastric glands throughout. No trace of œsophageal epithelium was discovered in several sections examined. Perforation has occurred on the right side immediately above the stricture, and the lung on this side is completely collapsed."

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Societies' Proceedings

Congenital Tracheo-œsophageal Fistula in an Infant. —A. J. WRIGHT.

Specimen from a male infant six days old. The child swallowed normally, but ejected every feed from birth, and became cyanosed while doing so. Skiagrams showed a dilated œsophagus, which ended in a blind sac just above the bifurcation of the trachea, and a stomach widely distended with air. A gastrostomy was performed and feeds were introduced by tube, but vomiting continued, again with respiratory distress. Death occurred the following day.

At autopsy the upper half of the œsophagus was found to be hypertrophied and dilated, ending blindly above the lower end of the trachea. Its lower half communicates with the trachea near the bifurcation, and forms a continuous tube leading to the pharynx. Microscopically the epithelium of both parts of the œsophagus is of normal squamous type, and the cardio-œsophageal junction is normally situated.

This type of malformation is apparently due to adhesions between the pulmonary bud and the primitive œsophagus, with disappearance of the intervening wall. It is difficult to explain the great hypertrophy of the œsophagus in its upper part unless one presumes that swallowing movements take place *in utero*.

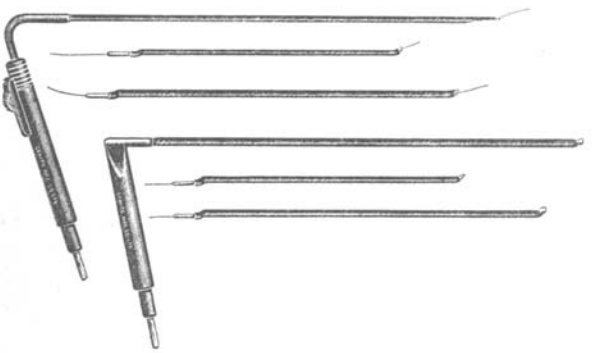
In this case there was also gross deformity of the left arm and hand, due to bony mal-development.

Demonstration of Instruments.—H. G. BEDFORD RUSSELL.

(1) An adjustable instrument for synchronous transillumination of the frontal sinuses.

(2) Electrodes and handle for diathermy in the larynx and trachea.

The cautery comprises a fine wire electrode, accurately extrusible from an insulating holder, controlled by means of a sliding button under the thumb. The instrument has stood up to routine work at St. Bartholomew's Hospital for upwards of two years.



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