It lay almost at the same level as the cord. Of course its obliquity of position at once revealed its true nature—that of a foreign body. One end was sharp and pointed, the other end was blunt and abrupt and carried a small cartilaginous splinter.

The actual measurements of the object were as follows: Length, 3·75 cm.; average breadth, ·25 cm.

When first seen the patient was suffering some respiratory embarrassment. It was slight. The cause of it was a moderate reactionary œdema in the larynx, together with stasis of frothy saliva about the laryngeal orifice. The breathing was not substantially relieved by the removal of the foreign body, and the face remained a little cyanosed.

On the day following the extraction of the bone the temperature rose to 99·5° F., the breathing remained somewhat laboured, although there was never anything approaching an actual stridor, and the cyanosis persisted.

On the fourth day following the operation the patient rapidly sank and died.

Post-mortem.—Extensive pleuritic adhesions of both lungs. Lungs themselves congested. Pericardial effusion. The heart itself appeared normal. Larynx: Laryngeal walls intact; no lesion.

SOCIETIES' PROCEEDINGS.

ROYAL SOCIETY OF MEDICINE.—LARYNGOLOGICAL SECTION.

November 1, 1918.

President: Dr. JAMES DONELAN.

Abstract Report.

(*Continued from p.* 285.)

Sarcoma of Maxillary Antrum; Lateral Rhinotomy; Recurrence in Glands; Radium Treatment.—Irwin Moore.—Further notes of a female patient, aged fifty, upon whom lateral rhinotomy was performed for sarcoma of the right antrum. Previously shown at a meeting of the Section on November 3, 1916.[1]

Summary of Treatment.—Lateral rhinotomy, September, 1916. Recurrence in the right pre-auricular gland first observed in March, 1917. Radium treatment, March and April, 1918. Recurrence in right orbit, July, 1918. Radium treatment again in July, 1918. Growths dispersed.

I am indebted to Dr. Lynham, Radium Institute, for the following later notes of the case:

"Lateral rhinotomy was performed on September 18, 1916, by Dr. Irwin Moore, for removal of a round-celled sarcoma from the right antrum. The growth had arisen apparently from the ethmoid, and had almost filled the antrum, penetrating its bony wall, and extending into the soft parts of the cheek, but not invading the skin. The floor of the orbit was intact, and proptosis was attributed to upward pressure of the floor, and not to any invasion of the orbit. The growth was thoroughly removed, together with the ethmoid cells and a portion of the muscular

[1] JOURN. OF LARYNGOL., RHINOL., AND OTOL., vol. xxxii, p. 102.

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tissue of the cheek. The section showed round cells with a fibrous stroma.

"In July, 1917, the patient noticed some swelling in the parotid region, and this has slowly increased, without any pain.

"At date (March 19, 1918) the patient looks healthy. The operation cicatrix is scarcely noticeable. There is no sign of active disease in the nose, cheek, or zygomatic or temporal fossæ. There is some degree of proptosis of the right eye. In front of the right ear is a smooth oval tumour, 4·3 cm. by 5 cm., firm, fixed, not adherent to the skin; not tender or causing pain. A shot-sized gland is felt at the right extremity of the hyoid. Treatment by radium carried out on four successive days, March 20 to 23 inclusive; applicators containing 160 mgrm., and screened with 1·5 mm. of lead, being applied for sixteen and a-half hours, distributed over four consecutive days. April 10, 1918: The tumour has subsided, leaving the pre-auricular gland larger than a pea with a trace of diffuse infiltration round it. Treatment carried out on four successive days, April 10 to 13 inclusive, on the same lines as previously; applicators containing 100 mgrm., and screened in similar fashion, being applied for twelve hours, distributed over four consecutive days. July 16, 1918: The gland is now shot-size, but still palpable. Patient recently has had further diplopia. There is some induration above the right inner canthus firmly adherent to the side of the nose, and extending up to the margin of the orbit above the canthus. There is a second hard, moveable, almond-sized mass felt above the right eye, between globe and orbit, pressing slightly on the globe. The eye seems a trifle more prominent, but the photograph taken in March does not confirm this. Treatment carried out on five successive days, July 22 to 26 inclusive, applicators containing 75 mgrm. being applied for twenty-five hours on the same lines as on the previous occasion, and distributed over five consecutive days." Patient reports, August, 1918: "The lump over the top of eye has entirely gone, and the one at the side is only very slight now. The double sight has quite gone, and the sight is much clearer." The patient is shown to demonstrate the advantages of radium treatment in cases of recurring sarcoma.

Mr. Herbert Tilley: I wish members would try opening the antrum underneath the cheek in these cases. The incision should reach from the malar process to the median line: turn up the soft parts, open the canine fossa, separate the soft tissues from the vestibular aspect of the ascending process of the superior maxilla, and remove that structure with strong bone forceps. That gives at once a large opening into the antrum: you can see the ethmoid region, and even the sphenoidal sinus. Only those who have tried this method can have any idea of the extraordinary good field of operation which it affords. At the close of the operation the soft parts fall into position, two or three stitches are inserted, and rapid healing occurs. If my colleagues will try the method I do not think they will revert to the external operation of lateral rhinotomy.

Mr. W. Stuart-Low: Two years ago I showed some cases here in respect of which I contended that the antral route was much the best. With the patient well above you and using a good light you can see the whole area of operation. Take the whole of the inner wall of the antrum away, and, if necessary, remove the ascending process of the superior maxilla. You can remove everything to the base of the skull if required by that method. There has been no recurrence in my cases so treated

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It is a complete operation, and leaves no outside mark or scar. I have operated by this method in cases of epithelioma and sarcoma of the maxillary antrum, and in similar conditions of the nose where the antrum has become affected.

Mr. W. M. Mollison: Surely Mr. Tilley did not intend to recommend the antral route for carcinoma? It is in many cases not merely a matter of taking away the growth and bone; subcutaneous tissues must often be removed as well. In the cases of carcinoma upon which I have operated, it would have been impossible by this means (the antral route) to have removed growth far enough back. Of the three sarcomata upon which I have operated one might have been done in that way, but the others might have been torn. By the external operation the growth could be shelled out without damaging it at all.

Mr. Tilley (in reply): A growth which has penetrated the bony walls and infiltrated the soft tissues would not be suitable for the method I advocate. I recommend it for a localised growth in the antrum, where the bony walls are intact and where the symptoms point to malignancy. It is especially suitable for growths involving the inner antral wall or the neighbouring ethmoidal region.

Dr. Irwin Moore: Can anything more be done for this patient, because since I saw her in August she has been complaining of terrible headaches, and says her sight is deteriorating. Dr. George W. Thompson, who kindly examined her for me, reports that there is pressure on the right optic nerve, and I think there is no doubt that this is due to some recurrence in the ethmoid region on the right side.

Carcinoma of the Maxillary Sinus; Lateral Rhinotomy; Recurrence.—Irwin Moore.—Specimen (right side of face) of a female, aged sixty-two, upon whom lateral rhinotomy was performed for epithelioma of the right maxillary antrum in November, 1916. Patient was shown at the meeting of this Section on February 2, 1917,[1] three months after operation, to show the satisfactory results obtained; the face wound had healed in five days, and everything appeared to be going on well. Recurrence was observed three months later, rapidly extending from the zygomatic fossa to the orbit, necessitating removal of the eye. Patient died in November, 1917, one year after the first operation.

Post-mortem.—The growth was found to have spread, involving the remaining portions of the antral and orbital walls, and extending backwards into the sphenoidal sinus. The side of the cheek had sloughed away and left a large cavity.

These two cases, operated upon at the same time, and kept under observation side by side, are interesting as illustrating the greater degree of malignancy of epithelioma in this situation as compared with small-celled sarcoma.

Photographs of the patient three months after operation are also shown.

Incipient Singer's Nodules in a Vocalist.—J. Dundas Grant.—The patient, a young lady student of singing, complained of huskiness, of about a year's duration. At the junction of the anterior and middle third of each vocal cord was a minute projection; during phonation the vocal slit was thus divided into an anterior and posterior segment, and on separation of the cords a small string of mucus stretched from one nodule to the other. The voice could not be carried above the middle "C," on

[1] Journ. of Laryngol., Rhinol., and Otol., vol. xxxii, p. 355.

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which the transition usually takes place between the thick and the thin register. She has been instructed how to practise the "pmawing" exercises devised by Curtis. It is anticipated that as the nodules are at the very earliest possible stage in development they will subside.

Mr. W. M. Mollison: The inability to sing certain notes is possibly connected with a very slight chronic affection from above, such as post-nasal catarrh. There are septic tonsils and glands on both sides of the neck, and it might be worth while enucleating the tonsils and exploring the sinuses. I saw a slight irregularity of a cord on one side, but that may have been due to mucus.

Dr. Grant: It was my intention to draw attention to the condition of the upper air-passages and tonsils, because much septic material can be squeezed out of the tonsils, and these should be treated in addition to the rest of the voice and the exercises devised by Holbrook Curtis, which are very well known.

[*Later Note.*—The projections are already less prominent and the string of mucus is much diminished. She can sing with much greater ease, and can already produce a number of notes above the middle "C" without difficulty.]

Method of inducing Cough and Expectoration by the Inhalation of Oleum Sinapis.—J. Dundas Grant.—This is a useful method of getting a little expectoration at the time of examining the patient. A few drops of aromatic oil of mustard are placed in an empty 6-oz. bottle, where they volatilise. The patient sniffs this from the neck of the bottle: he soon begins to cough, and will in many instances bring up expectoration, which, otherwise, it would be difficult to procure at the time.

Sarcoma (?) of the Left Tonsil.—Andrew Wylie.—Patient, female, aged fifty-six, complains of a swelling in the left tonsil, growing slowly for seven years. There is no pain, no real difficulty in swallowing or breathing. It is fairly moveable, elastic to the finger. The soft palate is slightly adherent to it. This swelling was punctured several times, and found to be of a solid nature. No improvement with potassium iodide. Slight, but not definite enlargement of cervical glands. Exhibitor considers that the growth can be removed fairly easily, and the exact diagnosis made by a pathologist.

Dr. H. J. Banks-Davis: I think there is pus in the palate as well. These cases often get it, and when an incision is made to release it from the palate the growth fungates through the incision, making subsequent operation more difficult.

Dr. W. Hill: If it is sarcoma, it is a very good case for the application of radium. If it is a fibrous tumour it should be shelled out.

Dr. Grant: This may be a "mixed" tumour between the layers of the palate, such as can sometimes be shelled out. If it were sarcoma, probably the patient would have enlarged glands. If, however, it turns out to be sarcoma, the opening made for the scooping out would do for the introduction of radium tubes.

Mr. O'Malley: As stated by Dr. Grant, this probably originated in the layers of the palate as an adenoma. I have shown two cases of that type, but the condition had not progressed to the extent here seen. Owing to the length of time it has been growing it has depressed the tonsil. When you get the patient to open her mouth the mass beneath the jaw disappears, but when the mouth is closed the mass can be felt. There does not appear to be involvement of glands outside.

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Mr. HOWARTH: I had a similar-looking case two years ago which turned out to be an endothelioma. It was more extensive than at first appeared, and it extended along the internal pterygoid plate to the base of the tongue. As a block dissection of the glands was being done I was able to deal with it bimanually.

Dr. JOBSON HORNE: The growth is probably more extensive than it appears to be when viewed from the mouth. I do not think it would be a simple matter to remove it.

Three Dental Plates removed from Œsophagus.—A. Brown-Kelly.—These plates were extracted through the mouth. In two other cases the plate slipped into the stomach, and was passed *per rectum*, and in another it was removed by œsophagotomy. In each of the six cases the patient was a young man, the plate was swallowed during sleep and became impacted in the upper part of the gullet, and recovery was uneventful.

Absorption of the Pre-maxilla in Tertiary Syphilis of Nose.—Dan McKenzie.—The patient is a male who came to hospital six months ago because of the "shrinking of his jaw." The history was that two or three months previously the gums about the upper incisors began to shrink, and these teeth loosened and dropped out. After they had been shed the shrinking still went on until none of the gum was left. He was unaware of any disease in the nose.

Examination bears out the patient's complaint. Not only is the alveolar process but also the whole of the anterior arch of the palatal processes of the superior maxilla considerably reduced in size, the mucous membrane and submucous tissues of the gums being thrown into ridges and folds through the shrinking of the underlying bone. There is no ulceration in this part of the mouth, but high up in the gingivo-labial recess in the left canine fossa there is definite firm infiltration with a fissure running through it. The incisors of the lower jaw project beyond the shrunken upper jaw by about an inch, and the upper lip has fallen in, giving to the patient's face an unsightly underhung appearance.

The nose is the seat of active tertiary syphilis. In the region of the bony septum and floor of the nose there is a sequestrum embedded in densely infiltrated tissue showing a nodular surface. When he first came to us this piece of dead bone was still quite firm, but it is now beginning to loosen, and I anticipate being able ere long to remove it. At first sight the bony absorption, coupled with the nodular or "tubercular" characters of the infiltration in the nose, brought to mind the possibility of leprosy. But the patient has lived in England all his life; the Wassermann reaction is positive, and microscopic examination of the nodular infiltration in the nose shows dense fibrous and granulomatous characters with the vascular changes of syphilis. Presumably, therefore, the absorption of bone in the pre-maxillary region is due to destruction of the nasopalatine nerve, and also perhaps of the dental branches of the superior maxillary nerve, from involvement in the extensive infiltration.

The patient is receiving vigorous anti-syphilitic treatment (novarsenobillon, mercury and potassium iodide).

Dr. W. HILL: I have had two cases in which the premaxilla gave trouble. In one it came away as a sequestrum, in a case of congenital syphilis. In the other case I did a Rouge's operation in order to get

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away a sequestrum from the antrum. But Rouge's is a bad operation, especially in a syphilitic patient, and this was a boy, aged sixteen. The last stage of that case was worse than the first. I got the sequestrum up, but half the premaxilla came away; there was a hole from the lip into the nasal cavity, and there was more depression in the nose than when I started operating. That was many years ago.

Mutism of Ten Months' Duration.—J. Dundas Grant.—The patient, a soldier, aged twenty, was blown over by a shell on December 30, 1917, when in France, while making an attack. He was unconscious at first, but does not remember for how long. When he recovered consciousness he was voiceless and speechless. He went first to a hospital at the base, then to one in London, and then to another military hospital, and from there went to the West End hospital on October 29 of this year. I saw him two days later, and on laryngoscopic examination found the vocal cords separated to the utmost possible extent. By means of the application of faradism to the neck, and of persuasion, his voice was restored, though his speech remained stammering.

[*Later Note.*—On November 5 the stammering was greatly subdued by the prolonged application of faradism to the submental muscles, and when seen on the 7th he could speak quite well.]

Functional Aphonia of Three Months' Duration.—J. Dundas Grant.—The patient, a soldier, aged twenty-nine, stated that he was "gassed" in July, 1918. He went straight to the casualty clearing station, and when there his voice got weak, and after two days it quite disappeared, remaining so till I saw him yesterday (October 31), when the voice was completely restored by laryngoscopy and a very mild application of faradism to the neck.

Functional Aphonia of Ten Months' Duration, with Laryngitis. —J. Dundas Grant.—The patient, a soldier, lost his voice suddenly on January 26, 1918, when in Italy. A bomb fell outside his billet in the night. He was restless and lost his power of speech. On February 1 his temperature rose to 104·6° F., and went up and down for a fortnight owing to an attack of broncho-pneumonia. He was in the casualty clearing station for three weeks, and during that time was so weak that he had to be fed with a spoon. He was then sent to a general hospital, and had inhalations for two months; he was next sent to another hospital in France, where he remained for six weeks. He was sent back here in May, and has been in a London military hospital ever since, with the exception of a fortnight in a V.A.D. hospital at Willesden. I saw him for the first time at the West End Hospital for Nervous Diseases on October 31.

The vocal cords are pink, shiny, and swollen, and do not approximate in their interarytænoid portions, though they do in the middle third, where they are somewhat "bellied." His muscles are weak and flabby, and in view of the possibility of his being a subject of tuberculosis I have postponed any energetic treatment for the functional aphonia till his sputum has been examined for bacilli.

[*Later Note.*—I have to report that I saw him again on November 5, when the vocal cords had lost their tumidity; his voice had returned shortly before my expected visit; this was probably due to the persuasive effect of the electrical and other suggestive treatment on his companions. There were no tubercle bacilli found in the sputum.]

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Dr. ANDREW WYLIE: If Dr. Grant were to remove the tonsils and adenoids in two at least of the patients, even if the operation did not cure the aphonia, the moral effect would do so.

Mr. O'MALLEY: If these tonsils are removed the patients will probably talk very well on recovering from the anæsthetic.

The PRESIDENT: In one of these cases the vocal cords are still very red from congestion.

Mr. W. M. MOLLISON: All functional cases recover by suggestion. Three days ago I saw one of these cases of functional aphonia: he had been dysphonic since February, and after ten minutes of suggestion he talked very well. His cords were red, but when I saw him again two days later the redness had already decreased. The redness of the cords in these functional cases is due to the patients having used their voice wrongly.

Dr. SMURTHWAITE: To treat all these cases of aphonia as if they were functional is to invite serious mistakes, as many of them turn out to be tubercular. Out of 400 cases in the last three years I have selected fifteen which were tubercular. To treat even suspected functional cases without looking into the larynx is madness. I agree that functional cases can be cured by psychic treatment. I always look into my patients' larynges and satisfy myself that I have to deal with a functional case before I start my intensive suggestion process. In purely functional cases there is no reason why the patient should not speak before he goes out of the room.

Mr. O'MALLEY: All my treatment in these cases consists of a method of suggestion I have already described. With regard to not examining an aphonic case before treating it by suggestion, I will give an instance of a striking pitfall in a case which was sent to me with the note that already the patient had had three injections of salvarsan, and asking whether there was a serious lesion in the throat to prevent him speaking. After two or three friction movements of the laryngeal mirror he spoke well. It was a case of simple aphonia.

Dr. PERRY GOLDSMITH: I remember one case of cure after Major Hurst had failed by his method, and it was after laryngeal examination. A man may have aphonia as a symptom of some other disease. If you believe a case to be functional, you must make the patient realize you yourself have faith in the process, and that he must have faith in it too. And to carry out the method you must have him by himself; you will not get a good result if you try it in a spectacular way, for all the ward to see.

Dr. GRANT (in reply): I have not had a case of functional aphonia under my care which has not been cured. The cases I have brought to-day present different points of interest. One, a healthy looking man, had been aphonic for some months, and yesterday, after a few minutes, I had him talking perfectly well. A more unusual case is the one of complete mutism, in which the cords were widely abducted. He is now at the stage of stuttering—a stage often resulting immediately after restoration of the voice. The third case is the most interesting of all, because the vocal cords are thickened and red and bellied, and the condition has lasted some fourteen months. The man's musculature is particularly soft; probably there is some wasting. He had suffered from broncho-pneumonia, therefore I made him expectorate a little. Until I have excluded tuberculosis I shall refrain from attempting to hustle him into restoration of voice.

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