SOCIETIES' PROCEEDINGS.

ROYAL SOCIETY OF MEDICINE—LARYNGOLOGICAL SECTION.

May 4, 1917.

President: Mr. T. Mark Hovell.

Remarks on Treatment of Irritative Coughing.—T. Mark Hovell (President).—I have practically discontinued the use of trichloracetic acid for the treatment of irritative cough because I found that, in many cases, it produced a considerable amount of irritation which sometimes continued for several days, and I now employ instead a solution of perchloride of iron, 4 dr. to 1 oz. in equal parts of glycerine and water; but I always write the prescription as 240 gr., as otherwise the chemist is liable to dispense the liquor, which, as you know, contains much more free acid, which is not required and is better omitted.

I may mention also that Messrs. Hall & King, chemists, of Folkestone, have prepared for me, with the juice of garlic, an acetic syrup, an elixir, and an oxymel, all in the proportion of 1 in 5, so that now garlic may be administered by the mouth and thus save the more troublesome method, to which I referred into my Introductory Address, of cutting the cloves into thin slices and wearing them under the soles of the feet between two pairs of socks. These preparations are not disagreeable, and with the addition of honey or treacle they will be readily taken by most children if they dislike the preparation in its crude form. The dose of the juice of garlic as prepared by Martindale is 10 to 30 minims.

Although garlic will destroy the micro-organism of whooping-cough it must not be forgotten that, for the cure of the cough, an astringent must be applied to the lingual tonsil.

Adherent Soft Palate.—G. W. Dawson.—Patient, a male, aged twenty-three. At the age of twelve he had a sore throat, which lasted two years, and for which he was treated. However, when he was aged sixteen the nasopharynx became closed, and he states that he was operated on four times and wore a tube in his nose for six weeks. When I saw him in October, 1916, the post-nasal space was completely shut off from the pharynx, and he was rapidly going deaf. In November I made an opening in the adherent palate, which was thick, and introduced a rubber tube, which he has worn ever since, with great benefit to his hearing and general comfort. Wassermann's reaction was strongly positive.

Mr. Herbert Tilley: The patient will be relieved, but only so long as the tube remains in position, and I should like to know how long Mr. Dawson proposes to leave it there, and how long he thinks it will be before the edges are covered with epithelium. If his method fails, perhaps he will feel inclined to adopt the method I described some years ago, when I showed two cases some months after operation. It entails

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dividing the adhesions between the palate and the posterior wall of the pharynx, and inserting a silver-wire suture from before backwards at the junction of the soft and hard palate, letting it pass over the posterior free surface of the soft palate, to re-enter it on the posterior aspect of the free margin of the soft palate. The two strands are brought forwards and fixed over one of the incisor teeth. This is done on each side of the midline, and the wires are allowed to stay in a week, or until they cut out. This is a modification of a method described by Mr. W. G. Spencer many years ago at the old Laryngological Society.

The PRESIDENT: There is one method of preventing adhesions, which is not generally known. About seventeen years ago, a young lady had her soft palate very seriously torn at an operation for removal of adenoids. When I saw her, extensive adhesions had formed between the soft palate and the posterior wall of the nasopharynx, leaving only a small aperture. Sir Frederic Eve, who performed the operation for me, had a prepuce which he had removed immediately before the operation commenced, which he split and stitched to the edge of the soft palate and base of the posterior pillars. The result has been extremely satisfactory. I saw the patient a year ago, and a free opening still remains. I agree with Mr. Tilley that directly the tube is removed from Mr. Dawson's patient, the opening will close; but if it were to be operated upon as Mr. Tilley suggests and then some mucous membrane stitched on, the result might possibly be good.

Dr. JOBSON HORNE: The note that the Wassermann reaction was strongly positive is the all-important factor in this case. I have had excellent results in two traumatic cases such as the President described, but we know the tendency for plastic adhesions to form in syphilitic cases.

Dr. DAN MCKENZIE: I should like to advise members against operating on these cases unless they are sure that the activity of the original malady has ceased. I say that because I have, by operating, set up again an amount of ulceration which ultimately left the patient decidedly worse than he was before.

Nasopharyngeal Fibroma.—G. W. Dawson.—Patient, a boy, aged fourteen and a half, complained of nasal obstruction for six months. Swelling appeared at the right anterior naris two months before operation. There was slight swelling of the right cheek. He was in no pain, but was very drowsy. On October 20, 1916, after a preliminary laryngotomy, the growth was removed. It was found very dense and tough, attached to the roof and right side of nasopharynx. The antral wall was eroded and admitted a finger.

Dr. IRWIN MOORE: Were there attacks of hæmorrhage before the operation? The growth is either recurring or has not been completely removed. Might it not be a fibroma originating in the nose from the ethmoid or the antrum, with adhesions in the post-nasal space?

Dr. PEGLER: Mr. Dawson asked me to look at his section, and I conclude at once it is not a true nasopharyngeal fibroma, but a diffuse angio-fibroma, which has taken to growing into the nasopharynx. A true fibroma is not very vascular; the difference between the two types is very considerable from the point of view of vascularity. Pure nasal fibromata are very rare.

Dr. JOBSON HORNE: I agree with Dr. Pegler. The angiomatous element is the more important of the two. I agree also that, in most cases, these spring from the basisphenoid.

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Mr. Dawson (in reply): My first case had been operated upon four times, and when the man came under my observation he was distressed by the amount of deafness, which was rapidly becoming worse. That decided me to reopen, and see what would happen. Immediately it was opened he recovered his hearing, and expressed himself as feeling generally better. I found the scar tissue more than ½ in. thick, so that one could not manipulate it; so I think it would have been very difficult to carry out the wire treatment. If the tube is left out a few days, closure occurs; I leave it in because the patient prefers it so, and is then more comfortable. In my second case the fibroma protruded from the front of the nose, and bulged the palate downwards. It was attached to the roof and side of the nasopharynx, and its broad attachment was very tough, so that it was difficult to make any impression on it. With a raspatory and strong forceps I removed it piecemeal, as best I could. I could not get it all away because the boy collapsed towards the end of the operation. The growth caused an opening in the antral wall; one could introduce the finger past the tumour, and the opening felt as if it were eroded. I have no doubt it was due to pressure. He only had several slight hæmorrhages before. During the operation hæmorrhage was severe.

Right Optic Neuritis caused by Suppuration in the Right Posterior Ethmoidal Cells and Sphenoidal Sinus.—E. D. D. Davis.—A. B——, a fishmonger, aged forty-nine, was sent to the hospital with right exophthalmos, with restriction of movements of the right eye in all directions. Right optic neuritis and loss of sight. Vision, $\frac{6}{36}$. The loss of sight was of four weeks' duration, and exophthalmos two weeks. The left eye was normal. On December 29, 1916, I examined the nose and found tenderness of the floor of the right frontal sinus. No tenderness on pressure of the eyeball, or during movement of the eye. The nose showed polypoid middle turbinals, with pus in the right olfactory cleft; the signs of right nasal sinus suppuration were obvious. There was no suppuration of the left side. The maxillary and frontal sinuses were dark on both sides. The right maxillary was syringed out with a Killian trocar and contained no pus. X-ray: Small right frontal sinus; no evidence of cause of exophthalmos. January 2, 1917: About six weeks after onset of defective sight, both middle turbinals were removed, the right ethmoidal cells and sphenoid were opened. The fronto-nasal duct was enlarged and a right intranasal antral operation was performed. Pus was *only* found in the posterior ethmoidal cells and sphenoid. The maxillary sinus was normal. February 2: Mr. McMullen reported the eye to be practically normal, vision $\frac{6}{12}$, and that the exophthalmos and optic neuritis had disappeared.

Mr. Mollison: It is not entirely proved that Mr. Davis's operation restored the patient's sight. I have seen these cases of blindness coming on for no obvious reason, and have removed the middle turbinal once or twice, simply in order to feel that I had left nothing undone, and in a month or so the patient recovered. But we cannot say that because the recovery followed an operation, such as the opening of the posterior ethmoidal cells, that these cells were the only cause of the blindness.

Dr. Dan McKenzie: Although what Mr. Mollison says about retro-bulbar neuritis is true, we know that the condition clears up spontaneously, yet here there was definite purulent disease of the nose and the nasal sinuses; and at this time of day I do not think one can doubt that optic neuritis is induced by suppuration of these sinuses.

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Mr. DAWSON: I had a similar case in February, 1916, in a woman A little pus was observable in each olfactory cleft, but there were very few symptoms otherwise. She had a slightly deflected septum, particularly at the upper part, which rather obscured the ethmoid region above. With the right eye she could only distinguish the difference between light and darkness, and the other eye was little better. I did a submucous resection, and found the ethmoid soft immediately above. I scraped both sides, and in two days she had recovered her sight. Vision returned to $\frac{6}{6}$ in each eye. I should like to hear an explanation as to why the recovery of sight was so rapid.

Dr. P. WATSON-WILLIAMS: This is a good example of a kind of case which probably most of us have encountered. There are one or two points to be emphasised in connection with sinus infection in relation to optic neuritis. The connection between the two was recognised as far back as the days of Berger, and he introduced the term "canalicular neuritis." I think one of the reasons we have failed to make the advance we might have done, lies in the fact that if there is no gross evidence of suppuration, we are apt to negative the nose as a possible cause of the optic symptoms. We may be unlucky in catching the secretion as it escapes from the sphenoidal sinus; it may be seen at one time, and a few minutes later the evidence may disappear. Given an infective sinusitis, I think it is when the leucocytosis is poorly marked and the secretion is mainly clear mucus and is not at all abundant, that infective conditions of the sphenoidal sinus leading to canalicular neuritis are most apt to occur. The reason is that polynuclears inhibit the organisms to such an extent that when there is much suppuration there is less likely to be toxic absorption, just as when a *post-mortem* wound does not suppurate there is more likely to be a systemic infection. So we must examine very carefully, and not be guided by the presence or absence of suppuration. We must be particularly suspicious when there is a nasal field contraction or relative scotoma, for then the case is much more likely to be due to sinus disease. When later the manifestations of suppuration are more pronounced, it may be too late to do anything.

Mr. CLAYTON FOX: It is very important, in these cases, to pay particular attention to the condition of the optic disc, especially in the early stages of the neuritis. The first change seen is in the periphery of the disc, and that causes enlargement of the blind spot. That is a very important matter, because it constitutes direct evidence of the periphery of the nerve being involved.

Left Optic Atrophy caused by Suppuration in the Posterior Ethmoidal Cells, Sphenoidal and Maxillary Sinuses of the Left Side.—E. D. D. Davis.—A warehouseman, aged fifty-seven, complained of loss of sight of left eye for ten weeks, and long-standing nasal obstruction. He had nasal polypi for years, which were removed at intervals. The sight of the right eye was becoming slightly misty. He was seen by Mr. McMullen on June 20, 1916, who found left optic atrophy, the pupil reacting sluggishly to light. No pain on pressure on the globe or on movement of the eye. He could only see hand movements in the upper nasal half of the field of vision. Right eye, vision $\frac{6}{6}$ partly. He was sent to me for an examination of the nose. Both sides of the nose were full of polypi, with suppuration on the left side. The left frontal sinus and maxillary antrum were dark. Both clear on right.

July 19, 1916: Middle turbinals and polypi removed. Both sphenoids and ethmoidal cells opened. Both maxillary and left frontal sinus

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opened by intranasal operation. The left sphenoid, posterior ethmoidal cells, and left maxillary antrum contained pus and polypi.

Three days after operation the patient volunteered the statement that he could see better with the left eye. On October 20, three months after operation, the sight of the left eye had improved, the pupil reacted to light, and the periphery of the field of vision was normal, but there was a central scotoma.

Mr. E. D. D. Davis (replying on both cases): During the last eighteen months, ophthalmic surgeons have sent me sixteen cases of blindness which they called either optic neuritis or retrobulbar neuritis. In only two was nasal disease detected, the two now shown. The nasal disease—polypi and suppuration—was obvious, and the sight improved after operation. Early operation gives a better chance of recovery, because cases due to nasal suppuration go on to atrophy, and then whatever is done does not improve the sight. Two cases were instances of syphilitic neuritis, which were treated in the ordinary way with benefit. In one case there was double optic atrophy of doubtful origin. One sphenoid had been operated upon, and I operated upon the other, but found nothing, and there was no improvement. Of the other class, so-called retrobulbar neuritis, there were eleven cases, and in these I examined the nose on several occasions, exploring the sphenoids with the Eustachian catheter. I also explored the maxillary antra, but none of these examinations yielded any result. Wassermann reactions, urine, nervous system, and X-ray examinations, and searches for tuberculosis were all negative. Two patients were suspected of tuberculosis, but no evidence was obtained. These cases usually occur in young women under forty, and the degree of visual defect varies. It is usually of sudden onset, and unilateral. In a month or six weeks the sight improves and the patient is much better, but a recurrence is apt to follow. Ultimately there is recovery. What is the cause of that type I do not know; the ophthalmic surgeon suggests there is an intermittent catarrh of the ethmoid or sphenoid, and that the sight improves with the disappearance of the catarrh, more particularly as the onset of retrobulbar neuritis is sometimes accompanied by a history of an influenzal cold. I had charts of the fields of vision made, so that we might know what fibres of the optic nerve were affected. The outside fibres supply the macular region, and, if affected, produce central scotoma. Affection of the nasal side would produce a central scotoma, while the central fibres of the trunk of the nerve go to the periphery of the field. But the charts were of little value; in both the cases which had nasal disease there was a central scotoma and contraction of the field. The retrobulbar neuritis cases also had a central scotoma and contraction of the field. Two of the patients with retro-bulbar neuritis had slight enlargement of the middle turbinal, and the condition of the nose was doubtful, so I removed the middle turbinals and opened the sphenoids and ethmoids with a negative result and no improvement in the sight. I hope members will be able to find something to account for this condition.

Acute Osteomyelitis of Frontal Bone secondary to Acute Frontal Sinusitis; Operation; Recovery.—W. M. Mollison.—Male, aged fifteen, attended hospital on February 22, 1917, on account of pain and swelling on the forehead. He gave the following history: "For several years attacks of epistaxis from the left side of the nose; for some weeks (?) frontal headaches. Ten days ago had 'influenza' and suffered

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from severe frontal headaches and had discharge from the left side of the nose. This morning the left eye began to swell."

Examination showed swelling over the forehead, most marked over the left frontal sinus; the skin was shiny but not red; there was great tenderness over the whole of the swelling; the left eye was practically closed on account of œdema of the lids; there was some œdema of the right eyelids, but this eye could be opened well. There was creamy pus in the left middle meatus. Temperature 100·4° F. The patient's general condition was good. This examination took place at 4 p.m., and the boy was admitted forthwith.

Operation was performed at 9 p.m.; by this time the œdema had spread very distinctly, both eyes were quite closed by œdema of the lids. The usual incision was made over the left frontal sinus and the sinus opened and pus found; while this was being done the cut edges of the bone were noticed to be oozing minute beads of pus and to be somewhat avascular. It was now realised that extensive removal of bone was indicated; further skin incisions were made—one over the right frontal sinus, which joined the original incision at its lower end across the bridge of the nose; from the centre of this incision across the nose a vertical incision was carried up over the forehead; the flaps thus marked out were reflected up and outwards. Bone was now removed till a healthy cut surface was reached; the frontal bone required removal from one external angular process to the other, and for more than 2 in. in a vertical direction from the fronto-nasal junction; the left ethmoidal cells were found to contain pus and were removed, also the supra-orbital crests and a small amount of the orbital roofs. The cut edge of the bone was then mopped with pure carbolic acid.

The patient made a good recovery, and about four weeks later the flaps of the skin were replaced and sutured.

Mr. Tilley: I congratulate Mr. Mollison on having saved this boy's life, because osteomyelitis of the frontal bone is nearly always fatal. Those who wish to inform themselves on the subject cannot do better than consult Dr. Dan McKenzie's article in the Journ. of Laryngol., Rhinol., and Otol., 1913. During the last six months I have been asked to see two cases presenting that condition: one not as a result of operation, but a complication of an acute, unrecognised frontal sinus separation of influenzal origin. The following were the main features in the case: Intense œdema of the left upper eyelid, chemosis of conjunctiva and some proptosis. Œdema over the supra-orbital region which extended to the neighbourhood of the parotid gland and over the ascending ramus of the jaw. Deep pressure over the region of the frontal sinus caused much pain. Pus present in the left middle meatus. The frontal sinus was opened by an incision just below the level of the eyebrow. Pus and bubbles of air escaped. The whole anterior wall was removed and the inflamed mucous membrane wiped away. Small beads of pus could be seen in the diploë bordering the edges of the sinus. Pus continued to discharge freely from the wound for six weeks and it was irrigated twice daily. Meantime the non-inflammatory œdema of the skin on the left frontal bone continued to spread until it reached beyond the hair-line. The whole of the left frontal bone was then exposed and found to be extensively necrosed in many areas, while in others the bone was inflamed. In removing the necrosed portions, adherent dura mater and cortical substance of the brain came away. In spite of such desperate conditions, the patient has recovered completely, although a metastatic abscess in the left breast and an attack of acute facial erysipelas after

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her return home gave us considerable anxiety. In the second case I adopted an incision which avoids the occurrence of the median vertical scar in the forehead. A transverse incision is made in the scalp beyond the hair-line, extending outwards and downwards to the temporal fossa; from the lower end of this a second incision is made forwards to the external angular process of the frontal bone, where it joins the outer limit of the original incision in the eyebrow (for opening the frontal sinus). The small incision in the temporal fossa healed without leaving any visible scar.

Dr. DAN MCKENZIE: I also would like to congratulate Mr. Mollison on the very prompt and efficient manner in which he tackled the case, for to that was due the saving of the boy's life. Even when there is an abscess in the soft parts, one's mind is occupied about the frontal sinus, and if, on getting through the bone we happen to find it diseased, it then requires considerable moral courage to extend the operation sufficiently to get beyond its limits if they are wide. I advise caution in regard to the prognosis of these cases. This boy looks well now, but, unfortunately, in this disease one cannot be sure, until at least six months have passed, that the condition will not return. There have been cases in which the surgeon thought he had removed every bit of disease, and the patient remained well for a considerable time, but at the end of it there was a little puffy swelling in the neighbourhood, and it developed into a recurrence. But we must not be too despondent about these cases, because there have been cases in which prompt and thorough removal of diseased bone has resulted in permanent cure. And if there be no recurrence, in course of time the bone removed is replaced, so that in this case the forehead will be as good as before, as the frontal eminences will be restored. That, however, does not apply to the supra-orbital margins, I fear. My paper[1] showed that the cases which had come on after sinus operation did not recover: the only cases which recovered were some of those which had been dealt with surgically in a very thorough manner, and in which the osteomyelitis had set in spontaneously.

Dr. P. WATSON-WILLIAMS: What were the organisms in this case? If these were determined, it might be an indication for treatment which might tend to keep off recurrences. I should also like to know how much bone was removed. The success in this case is certainly a matter for congratulation.

Dr. JOBSON HORNE: Dr. Dan McKenzie said that osteomyelitis is very fatal when it follows operation upon any sinus. Does he include in that the antrum? [Dr. MCKENZIE: Yes.] I should have thought that osteomyelitis following upon operation on the antrum of Highmore would be very rare, and, if it did occur, that the patient would very likely recover. I agree as to the grave outlook in these cases generally; in fact, I believe external operations on the frontal sinus are more fatal than we think.

Dr. IRWIN MOORE: Mr. Norman Patterson has asked me to show the photograph of a very interesting case of osteomyelitis which started after an operation on the frontal sinus. He operated upon the case twelve times, the whole of the frontal bone being eventually removed. The patient, an Australian soldier, has now rejoined his regiment. Mr. Patterson hopes to speak more fully on it when he returns from France.

Mr. O'MALLEY: I recently had a case, which turned out eventually to be syphilitic, in which there was an infection by the ordinary micro-organisms. There was a history of the right frontal sinus having been

[1] JOURN. OF LARYNGOL., RHINOL., AND OTOL., January, February, March, 1913.

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opened, and of redness and tenderness over it, with swelling extending to the outer angle of the eye. A few days afterwards I laid it open, and tried drainage and ordinary treatment, but with no effect. There was no appreciable rise of temperature. In a few days the œdema had extended to the outer angle of the other eye and across the forehead, so that both eyes were closed with œdema. Therefore, I laid him open from one malar bone to the other, and found that the walls of the frontal sinus had gone, though only one had been operated upon, and the bone had been replaced by granulation tissue, the latter having also replaced the supra-orbital ridges, and the fronto-malar joint was in a similar condition. After clearing it out thoroughly and dressing the wound, I thought I would have the Wassermann test done. It was positive. Improvement followed soon after the iodide and mercury mixture had been started, and after injection with "606" there was a marvellous clearing up. There may be a syphilitic factor in some of the cases one hears of. The present case seems to have been an ordinary acute osteomyelitis.

Mr. E. D. D. Davis: I have seen two cases of osteomyelitis following a radical operation for antral suppuration. In the operation I did the antrum was vigorously curetted, and the patient died of osteomyelitis and meningitis some weeks later, in spite of a second operation. In another case seen by me, curetting of the ethmoid produced osteomyelitis and death. I have only seen one case of osteomyelitis following a frontal sinus operation. The frontal sinus had been attacked on three occasions by a surgeon, and I did a fourth radical operation, establishing free drainage into the nose. The patient developed chronic osteomyelitis of the frontal bone, and, I believe, died eighteen months later.

Mr. H. J. Banks Davis: It would be interesting to know, in cases of osteomyelitis following the antral operation, whether the operation done was the intranasal one alone or the complete operation. I do not agree with the present tendency to do the intranasal operation; it does not suffice, because often one finds the antrum filled with polypi, which cannot be properly cleared out by operating through the nose only. This does not apply to acute cases, where polypi have not had time to form or the disease to become chronic.

The President: I am strongly of opinion that the antrum should be cleared out by the external operation, and then an opening made through the inner wall for dressing and washing out. I agree with Mr. Banks Davis that septic matter is very liable to be left behind when only the intranasal operation is done.

Mr. Clayton Fox: I should like to ask what the patient dies from in these cases of osteomyelitis in connection with the jaw. The term osteomyelitis was applied a few years ago only to cases in which there was inflammation of the marrow of the bone. It now seems to be used if any part of the maxilla becomes inflamed. The nature of the operation is important. If the radical operation is accompanied by scraping out, there is more likely to be infection. But these cases of osteomyelitis can be separated from those in which there is extensive inflammation of the diploë between the two tables of the skull bones. Osteomyelitis arising from operation on the maxillary sinus is only a matter of infection, which may occur even when only a portion of soft tissue is removed. There must be some inflammation after operation on any portion of tissue, and the bone concerned must be infected for the time being, though perhaps not sufficiently to produce general symptoms, such as pyæmia.

Mr. Mollison (in reply): I regret to say that the nature of the micro-organism is not known. The operation was done late at night; a

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swab was taken, but seems to have been lost. With regard to the amount of bone removed, I took away both outer and inner tables, exposing the dura well on to the forehead almost as high as the upper limit of the vertical scar. I took away bone from the external angular process on one side by a curved incision made to that on the other side, also the supra-orbital ridges and a portion of the roof of both orbits. I was not convinced I got beyond the disease at the right external angular process. There are two classes of cases of osteomyelitis of the frontal bone. One is typified by this case of mine. The other class contains those in which the disease came on subsequent to the performance of a frontal sinus operation. These classes are to be separated from one another from the point of view of prognosis. I have no doubt that extensive operation at once is the only treatment; it is of no use to do the operation in portions. I have had three fatal cases in which osteomyelitis has come on subsequent to operations on the antrum or frontal sinus. I am sure the initial mistake of not doing enough at first is fatal. A little point of importance in this case was the treatment of the bare edge of the bone; I painted it with pure carbolic acid, in the hope that any organisms left in the wound would thus be prevented from getting into the bone surface exposed.

Carcinoma of Maxillary Sinus, Three and a Third Years after Operation, with no Recurrence.—W. M. Mollison.—The patient, a female, aged fifty, was shown to the Section in 1914.[1] Original operation, January, 1914; removal of carcinomatous glands, April, 1914 Recently a gland was felt in the submaxillary region, and it was thought to be the seat of recurrence. It was removed in January, 1917, but microscopical examination showed it to be merely inflammatory.

Mr Harmer: The notes do not state whether this carcinoma was of an epitheliomatous nature or of the columnar-celled variety. If it was an epithelioma it is a remarkable recovery; if columnar-celled there is nothing unusual in the history of the case.

Skiagraph of the Skull of a Patient suffering from Tumour of the Pituitary Body, with Brief Notes of Operation and Result.—Herbert Tilley.—J. D. K——, male, admitted on March 6, 1917. He gave a history of severe headache on the left side of some three and a half years' duration. About middle of May, 1916, he noticed marked dimness of left eye. August 21, 1916, an ophthalmic surgeon in New York found a "large scotoma (temporal) of left eye. The fundus of the same eye has small arteries and large veins." Mr. Cecil Snell, of Sheffield, saw the patient in October, confirmed the above findings, and found the right eye healthy, but on February 21, 1917, he discovered that the patient had bilateral hemianopia, "the right optic disc is slightly pale, the left one markedly so. There has been no optic neuritis." "He is now quite unable to read." Wassermann reaction negative. No improvement under iodide of potash.

On March 6, 1917, I saw the patient for the first time. When resting his pulse was 60. Examination of nose revealed no abnormality beyond absence of left middle turbinal, which had been removed last year. I referred him to Dr. Finzi, who provided me with the radiographs exhibited.

March 22: Operation. Moure's lateral rhinotomy on left side; submucous resection of the posterior third of septum, removal of anterior wall and septum of the sphenoidal sinus, followed by removal of postero-

[1] Journ. of Laryngol., Rhinol., and Otol.

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superior wall of sinus and portion of tumour. A loose wad of gauze was inserted into sinus and the external wound was sutured. Great care was taken not to wound the easily visible lateral walls of the sinus and yet next morning the right upper and lower eyelids were intensely ecchymosed, but not swollen.

The patient made an excellent recovery, and the pulse, which was 54 on the evening before the operation, rose to from 65 to 72 during the time he was in the nursing home.

April 12: The patient can now read a little without any difficulty.

Remarks.—The exact nature of the tumour was not determined, and the ultimate issue of the operation cannot yet be stated, although there is marked improvement in his pulse-rate and the patient is delighted with the improvement in his sight. One of the main reasons for bringing forward the case is to emphasise the easy access to the sphenoidal sinus regions which was provided by Moure's lateral rhinotomy.

Dr. DAN MCKENZIE: We have not had many opportunities of seeing cavernous sinus thrombosis, but I suggest that in future it will be possible to make a surgical attack on the cavernous sinus by means of this operation. If I have such a case I shall certainly attempt to get at it through the nose, by the route so successfully adopted in this case by Mr. Tilley.

Skiagrams Illustrating Spasmodic Stricture of the Thoracic Œsophagus.—Dan McKenzie.—The skiagrams were taken by Dr. Robert Knox.

The first (see figure, p. 282), taken during the phase of active spasm, shows the bismuth mixture arrested about the level of the ninth rib. The shadow shows, by the typical pointed lower border, that there is no dilatation above the stricture.

The second shows the thorax in an interval between the attacks, and, the œsophagus being normal, the bismuth mixture is passing without any "hold-up."

The patient is a lady, aged twenty-five. Occasional difficulty in swallowing was first experienced in 1910, and in 1911 the attacks became frequent and pronounced. She married in 1912 and has two children.

When first seen the attacks were very troublesome, coming on at irrregular and unexpected times, and varying in degree, although, as a rule, the obstruction was so great as to prevent even soft solids being swallowed, and sometimes liquids were also arrested and obstruction was absolute. The attacks lasted from a few seconds to several days, and the patient was always aware of their onset by feeling a "grip" in her throat. The relaxation of the spasm was also manifested by a feeling of relief. During the intervals between the spasm the patient could eat anything. She was seriously emaciated when first I saw her. Since treatment was begun the attacks have practically ceased; none has lasted more than a few seconds, and these have only occurred once or twice in a month. The treatment consisted in the administration of bromide, and during an attack, of atropin $\frac{1}{150}$ gr. sublingually. The improvement, however, set in immediately after the first X-ray examination.

Mr. DAWSON: I recently had a case which might have been one of spasmodic stricture of the œsophagus—a young woman who for a long time had had difficulty in swallowing. I passed the œsophagoscope, and she said she was much better, and she remained better for a month. Then she returned with a slight recurrence, and the passage of the œsophagoscope relieved her again.

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Skiagram taken during phase of active spasm. Bismuth mixture arrested at level of the ninth rib. (Dr. Dan McKenzie's case, p. 281)

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Retropharyngeal Abscess; Injury to the Cervical Sympathetic —an Unusual Complication following Operation by the External Route.—Irwin Moore.—This patient, a female, aged twenty-five, was shown at the meeting of this Section on April 7, 1916,[1] two weeks after operation. The abscess was opened by careful dissection along the posterior border of the right sternomastoid, ½ oz. of pus evacuated, the abscess wall, which was found to be much thickened, was curetted, and a drainage-tube inserted. Examination of the pus showed tubercle bacilli. The wound healed in six weeks and there has been no recurrence. After the operation the patient unfortunately suffered from paresis of the right cervical sympathetic, manifested by:

Pseudo-ptosis—slight drooping of the upper lid causing narrowing of the palpebral fissure, due to paralysis of the unstriped muscle-fibres of Müller.

Enophthalmos—sunken appearance of the eyeball, which looked smaller than its fellow, and resembling a badly-fitting artificial eye.

Contraction of the pupil, with absence of dilatation on shading the eye.

Paresis of the upper portion of the right trapezius muscle was also present, shown by the fact that the patient was unable to shrug her shoulder when pressure was made from above. (Cervical plexus from third and fourth nerves.)

The case is again shown because there was considerable doubt as to whether the paresis would improve, and to draw attention to the possibility of such an occurrence with its accompanying disfigurement, which is ignored in surgical text-books. Treatment by faradism was carried out. Fortunately the symptoms have now cleared up, as may be seen by a comparison with the photograph taken two weeks after operation.

Mr. H. J. Banks Davis: In these cases I am now in the habit of opening through the mouth, though I know it is supposed to be a wrong procedure. Sometimes there is great difficulty by the neck route. I remember operating on a child, aged eight, with retropharyngeal abscess and secondary œdema of the neck. Landmarks were obliterated, and the incision exposed the anterior border of the sternomastoid instead of the posterior, and in opening the abscess the greatest difficulty was experienced, the neck wound being of enormous depth. I now employ the buccal route with sinus forceps, and I have not seen trouble following. As students, we were taught it was fatal to open through the mouth, though I believe that this is the method in vogue at Great Ormond Street Children's Hospital.

Mr. Tilley: I uphold what Mr. Banks Davis says and I do not think it is a wrong method. At a large fever hospital in London they make no difficulty about opening retropharyngeal abscesses from inside the mouth. No anæsthetic is given, and the patient's head is held as if for an examination for adenoids. The surgeon opens the abscess with his index finger, and after evacuating the pus the patient is returned to bed and made to lie for two or three days with the head hanging backwards over a pillow, so that no pus can be inhaled into the lower air-passages. The cases seem to do very well. The external route should, of course, always be employed when the retropharyngeal abscess is due to caries of the cervical spine.

Dr. Irwin Moore (in reply): The last two speakers referred to retropharyngeal abscesses in children, and there is no doubt that in these cases opening from the mouth is the correct way. In the case I have

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shown there was a question as to whether it should be done through the mouth or through the neck. This patient's age was twenty-five, and her child had recently been operated upon for tuberculous glands in the neck. I thought this abscess might be found to be tubercular, and therefore it would be better to drain it from the outside to prevent the discharge re-infecting her. The pus from the abscess contained tubercle bacilli. The sac of the abscess was so much thickened that the question of dissecting it out was raised, but I did not attempt it. The wound healed up in six weeks, and the thickening and swelling have now disappeared.

(*To be continued.*)

Abstracts.

PHARYNX.

Wound of the Pharynx by Bullet; Fracture of Fourth Cervical Vertebra; Meningitis; Death.—A. Mouchet. "Bull. de la Soc. de Chir.," t. xliii, no. 23.

Senegalese soldier, admitted with small, round wound on each side of neck, almost symmetrical, but the right wound a little anterior. On admission, before being seen by a surgeon, the patient, being very hungry, obtained some food which he attempted to swallow. This caused him great pain, and the food came out through both wounds. After this, patient was fed through a tube. Subsequently both wounds healed up. About a month later patient's temperature rose, and he had pain on swallowing. Soon neck rigidity and other signs of meningitis appeared. Death.

Post-mortem.—Bullet had entered the right side of the neck, perforated the right ala of the thyroid cartilage, traversed the pharynx, and had entered the body of the fourth cervical vertebra, the left half of which was shattered. There was a tiny perforation of the dura, probably due to a spicule of bone. The track of the exit wound was behind the left common carotid artery. The whole spinal subarachnoid space was full of thick pus right up to the bulb. *J. K. Milne Dickie.*

NOSE.

Adrenalin-pituitary Treatment of Asthma.—Bensaude and Hallon. "Presse Médicale," April 8, 1918.

Good and prompt results are obtained by subcutaneous injection of adrenalin or pituitary extract or a mixture of the two. The action of pituitary extract is slower than that of adrenalin but is more durable, and seems to act not only on present attacks but as a preventive to a certain extent of future attacks. The solution used by the writers contains 0·5 mgr. of adrenalin hydrochloride and a quantity of extract of whale pituitary, disalbuminised, corresponding to 0·25 grm. of fresh gland to the c.c. It is sterilised and put in ampoules.

The dose generally used for adults has been 1 c.c. *per diem.* In one instance a patient, without the doctor's knowledge, took three injections

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