acri-flavin in cases of suppuration of the maxillary antrum. I have used it in six cases in the following manner: After puncturing the antrum I wash out with a mild alkaline solution or a solution of boric acid, and afterwards dry the cavity by blowing air through. I then lateralise the patient's head, and run in through the cannula one or two drachms of warm 1 in 1000 solution of acri-flavine. The head is kept on the side, slightly tilted backwards, for five minutes, and then bent forwards to allow the excess of solution to run out of the nose. At the next washing, two or three days later, one obtains one large "blob" of transparent yellow-stained mucus, mixed with flocculi of opaque orange-stained pus. The lavage is repeated at intervals until the yellow blob is obtained free from the orange-stained pus element. The acri-flavine is then discontinued, and at the next washing the antrum is usually found to be clear. I have not employed acri-flavine up to the present in any old-standing cases with profuse suppuration and thickened polypoid mucous membrane lining, but one of the cases in which the method has succeeded was of six months, and another of three months' duration, and my previous experience of treatment by lavage would not have led me to expect a cure by that method alone without the acri-flavine.

SOCIETIES' PROCEEDINGS.

ROYAL SOCIETY OF MEDICINE—LARYNGOLOGICAL SECTION.

June 1, 1917.

President: Mr. T. Mark Hovell.

Treatment of Primary Carcinoma of the Nasopharynx by Colloidal Copper.—Irwin Moore.—Members will remember that this case, a female, aged seventy, was shown at the meeting of the Section on November 3, 1916,[1] three and a half months after removal of the growth (July 14, 1916). The left tonsil had enlarged since the operation, was congested and indurated, whilst patient complained of severe pains extending from the left side of the neck to the top of the head. No enlarged glands could be felt. Opinions were invited as to the question of recurrence in the tonsil, and advisability of enucleation.

In the meantime patient consulted her physician, who recommended injections of colloidal copper.

Patient is now exhibited, six and a half months later, to show the remarkable results of this treatment, which has apparently not only cured the pain, but also reduced the size and induration of the tonsil.

It is now ten months since removal of the growth, and there is no recurrence nor enlargement of glands in the neck.

Lupoid Tuberculosis of the Pharynx, affecting the Soft Palate and Uvula, in a Boy, aged eight, the subject of Congenital Syphilis.—Irwin Moore.—This case was shown at the Section meeting on March 2, 1917, as lymphadenoma, but in consequence of the discussion and the chronic character of the infiltration, together with the more recent clinical and pathological examinations, the title has been changed.

[1] Journ. of Laryngol., Rhinol., and Otol., vol. xxxii, p. 103.

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

The former diagnosis was based partly on the blood examination, the features of which were consistent with, but not diagnostic of, lymphadenoma, but mainly on the opinion of Dr. Barcroft, who kindly saw patient for me at the Margaret Street Hospital for Consumption, on February 12, and reported as follows: "I found large discrete glands in the neck on both sides, and also in the inguinal region, which, taken with the other signs, could only be caused by lymphadenoma. Although no actual relationship has been demonstrated, it is very usual to find pulmonary tuberculosis along with this condition. However, in this case the pulmonary signs have not as yet developed."

A month later, on March 10 (since this case was exhibited), patient was taken to the Mount Vernon Hospital for Consumption and there seen by Dr. Halls Dally, who reported as follows: "I regard this case as one of *slightly* active tuberculosis. There are palpable glands in both posterior cervical triangles and groins. There is now a slight cough, with night-sweats and slight rise of temperature, and the child is losing flesh in spite of the appetite being good.

"Clinical examination reveals scattered, fine, moist crepitations over the whole of both lungs. Liver and spleen not enlarged.

"Radioscopic examination is negative. There is no enlargement of hilar glands, no peribronchial striation, and no enlargement of tracheobronchial glands. No tuberculous foci apparent in lung-tissue. Temperature, 3 p.m.: 98° F.

"There is a slight leucocytosis; the lymphocytes are within normal limits, but a *little on the high side, and the Arneth is low.*"

Since March 12 the infiltration of the soft palate has gradually extended downwards on to the faucial pillars and tonsils. Examination of the larynx on March 24 by Killian's suspension apparatus showed also infiltration of the epiglottis and arytænoids.

There are no signs of miliary tubercle nor of ulceration either in the pharynx or larynx.

Histological Report of Adenoid Tissue removed from the Naso-pharynx.—"There is a certain amount of fibrosis with chronic inflammatory reaction, which is characterised by the formation here and there of cellular systems, which occasionally have a central multinucleated giant cell. The lesion is undoubtedly tuberculous."

This case is of interest in that—

(1) *Tuberculosis of the pharynx* is a relatively rare disease. It has been shown by statistics that it is only affected in from 1 to 2 per cent. of consumptives. It is uncommon to find tuberculosis of the uvula and soft palate. In 100 cases of local tuberculosis of the pharynx, the uvula and soft palate were found to be affected in eight.

(2) *Statistics show that tuberculosis of the naso-pharyngeal adenoid tissue* has been found in 7·5 per cent. of individuals apparently free from pulmonary tuberculosis—based upon the presence of giant cells alone, or together with the tubercle bacillus; whereas in those cases of advanced disease in the lungs, especially when complicated by laryngeal involvement, the percentage is greatly increased—viz. to 68 per cent.

(3) *The chronic lupoid character of the uvula and soft palate*, together with the latent infection of the pharyngeal tonsil and the apparently recent implication of the lungs, suggests in this case a primary affection of the pharynx.

The Wassermann reaction is strongly positive.

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

Tertiary Syphilis of the Pharynx clinically resembling Tuberculosis of a Lupoid Type.—Irwin Moore.—Patient, a widow, aged forty-four, was admitted to hospital on May 23, 1916, complaining of soreness of the tongue and throat, with pain and difficulty in swallowing for five years. There has been difficulty in breathing for two years, though patient has been able to sleep comfortably lying down; also difficulty in speaking for three months. She can only swallow liquid foods, and has taken nothing solid for six months.

Patient was married at the age of twenty-two, has had one miscarriage at the age of twenty-four, whilst two children are now alive, aged nineteen and twenty-one. The swelling in the throat dates back to a year or two before marriage. She has had no treatment until five years ago, when the trouble became more marked.

Present condition: There is well-marked stridor on slight exertion. On examination of the throat, extensive nodular infiltration of the fauces and tonsils is seen extending on to the soft palate, uvula, and base of tongue. The posterior pillars are scarred, and have become adherent to the posterior pharyngeal wall. The oropharynx is markedly stenosed, the epiglottis is absent, and the larynx cannot be seen.

A low tracheotomy was performed under local anæsthesia the day after admission to hospital.

Lupoid Tuberculosis of the Nose and Larynx.—Irwin Moore.—I first saw patient, a girl, aged seventeen, on February 16, 1915, when she complained of hoarseness of the voice for two months. The nasal septum and right inferior turbinal showed marked lupoid infiltration, whilst the left nasal cavity appeared to have been less affected and recently healed. Both nasal orifices were somewhat contracted. The glottis was considerably narrowed, and the left vocal cord was partially fixed, causing inspiratory stridor on exertion. The right arytænoid, inter-arytænoid region and upper margin of the epiglottis were infiltrated, whilst the left arytænoid was ulcerated on its inner surface—as also the edges of both vocal cords. The lungs were normal. Patient's weight was 7 st. She was advised sanatorium treatment, and went to Torquay in October, 1915, for six months, where she was told that there was no disease of the larynx, and that she would get back her voice suddenly.

I did not see the patient again until May 29, 1917. The hoarseness is no better, though the general health has improved. There has been no marked change in the laryngeal or nasal condition during the past two years. There is a nodular infiltration of the epiglottis. The glottis is still very narrowed, and the left vocal cord ulcerated, whilst both the aryepiglottic folds and interarytænoid region show distinct infiltration. The left choana is occluded by adhesions, there being only a very small aperture present, whilst a small patch of infiltration is seen on the roof and lateral wall of the nasopharynx. Patient's weight is now 7 st. 4 lb.

Discussion on Dr. Irwin Moore's Four Cases.

Dr. W. Hill: If other members have had experience of the results of using colloidal copper locally, it is important we should have their views on it. I have not heard anything encouraging enough about it to lead me to use it, but I gather that the first case enormously improved under the treatment.

Dr. Jobson Horne: Will Dr. Irwin Moore give us details of the

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

treatment—how it is carried out, how frequently, and over how long a period?

Mr. HOWARTH: I should like to know why these cases are labelled "lupoid tuberculosis"? Why have we given up the name "*l*upus" for these cases? One I looked at seems to be typical lupus, and it is a pity to be constantly changing the names of diseases.

Dr. JOBSON HORNE: May I ask Dr. Irwin Moore to give us his views as to what lupus is—whether it is tuberculous or not?

Dr. BROWN KELLY: The second case is not lupus but a variety of hyperplasia. I have seen two or three somewhat similar cases and usually have found congenital syphilis present; they do not readily yield to specific treatment. The condition differs slightly from "sclerotic hyperplasia."

Dr. JOBSON HORNE: Has the Wassermann test been done in the second case?

Dr. W. HILL: I suppose there is a tendency to call anything lupus which looks like chronic tuberculosis and in which tubercle bacilli are not found, or they may be called "lupoid tuberculosis." The last is a sort of "portmanteau" word, convenient to distinguish a condition from ordinary tuberculosis. I do not know whether there is a lupus which is non-tubercular. But there is a suspicion in these cases in which the lung is involved. Possibly an error in diagnosis has been made, but the original diagnosis was rather nearer the truth.

Dr. H. J. BANKS-DAVIS: I am very interested in these cases, because one constantly meets with this type. If one sees a tubercular-looking ulceration or infiltration of the palate and there is no pain, I put the case down as lupus; if there is pain, I regard it as tubercular. I do not think I have ever seen a case of tubercle of the palate or phalanx which was not very painful; so great is it that the patient will not eat, and slowly loses condition. Lupus is not painful, though the involvement may be extensive. Some years ago I saw, with Dr. Jobson Horne, a well-known singer at a London music-hall, who developed tuberculosis of the palate; he had such pain that he could not eat, and was slowly going downhill. He had had syphilis, and went away to Eastbourne. It was a question whether he ought to have injections of mercury, and iodide of potassium internally. If there is infiltration of the larynx, unless it be syphilis or malignant disease, and the patient is given iodide, the infiltration is tubercular, breaks down, and the patient becomes worse. This man was given iodide, and when he came back the whole of the palate had sloughed off. Iodides, in my experience, never reduce infiltrations in the upper air-passages if they are due to tubercle, but are liable to cause rapid destruction of the tissues.

Mr. DAWSON: With regard to the second case, I suggest that a small piece ought to be removed and submitted to microscopical examination. Even though tubercle bacilli may not be found, the structure shown by the section may reveal its nature. It reminds me of chronic enlargements of the lower lip.

Sir STCLAIR THOMSON: The boy's throat did not appear to me characteristic of lupus, and, of course, tuberculosis in the pharynx rarely occurs except in advanced cases of pulmonary disease. The condition suggests a form of hyperplasia, possibly associated with congenital syphilis. On the epidiascope I now show a very good coloured drawing of the rare form of chronic tuberculosis attacking a healthy adult, who had nothing the matter with his chest, but showed tubercular ulceration on

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

his arm. The picture was done some years ago; the patient was treated with tuberculin and the galvano-cautery, and was seen recently in a condition of perfect health.

Mr. MOLLISON: In reference to what Dr. Banks-Davis said, in regard to tuberculosis of the pharynx, I think the cases of the kind he mentioned are invariably secondary to phthisis. Lupus is primary.

Dr. JOBSON HORNE: Are Dr. Irwin Moore's cases to be permanently labelled "lupoid tuberculosis"? I speak for the credit of our *Proceedings*. Case 3 certainly does not belong to the lupoid class, and I do not think the others are tuberculous, or the patients would not have lived as long as they have.

Dr. IRWIN MOORE (in reply): Dr. Sydney Green, who carried out the injections of colloidal copper in the first case, gave, between February 20 and March 23, seven intramuscular injections of cuprase (5 c.c. doses)—a preparation obtained from the Anglo-French Drug Company. The injections were painful, so they were preceded by a 5 c.c. injection of quinine and urea. The patient is a panel-doctor's dispenser, and the injections did not interfere with her work. Her health has improved remarkably. The pain in the neck has disappeared, and the enlarged fibrous tonsil, which it was thought might be a recurrence of the growth, has become softened and reduced in size. With regard to the cases of tuberculosis in the pharynx, I have not, as yet, ascertained the Wassermann reaction in the second case, because I thought the diagnosis was sufficiently clear from the investigations which had already been carried out. In a publication by Lockhart, of St. Louis, on "Tuberculosis of the Nose and Throat," 1909, plate xxvi, there is a water-colour drawing of an almost identical case to mine. I received a report this morning that the Wassermann reaction in Case 3 is positive. It is my intention to remove a piece of the infiltration for microscopical examination. Prof. Shattock has advised the retention of the term, "lupoid tuberculosis."

Specimen of Epithelioma of Left Vocal Cord Two Years after Operation.—James Donelan.—Patient, a male, aged fifty-four. Some of the chief points in the history are that the patient was an excessive user of cigarettes and alcohol. He also contracted syphilis in 1888. I first saw him in 1908. He had then a pronounced deflection of the nasal septum to the left, almost completely blocking that side and causing sinus retention. An irritating discharge passed down the left side of his pharynx and caused some laryngeal irritation and cough. He was averse from any operation at that time. Several negative Wassermann reports were received. Nevertheless energetic antisyphilitic treatment was given. The nasal septum was subsequently resected, and the local and general condition being much improved he returned to India.

He was seen again on August 22, 1914. Hoarseness. Small sessile growth at junction of anterior and middle thirds of left vocal cord. Mobility unimpaired. Mercury and iodides were again ordered, and as no effect was apparently produced exhibitor removed the growth by the indirect method on the eighth or tenth day after seeing him, and Dr. Wyatt Wingrave reported verbally that it consisted of merely inflammatory tissue with no malignant elements. The gap left by the operation filled up rather too rapidly, and the appearances were such ten days later that a consultation was suggested as to whether laryngo-fissure should be performed. The patient was seen with Dr. Dan McKenzie, and he suggested that a more extensive removal of tissue should be made by

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

direct method. It was arranged that Dr. McKenzie should remove specimens from the most suspicious parts of the swelling. This was done on September 14, 1914. Dr. Wingrave again reported that no malignant elements were present. Though advised to keep under observation the patient disappeared for six months, three of which were spent at Harrogate, where he had a course of treatment by means of sprays, etc. As the condition of his larynx did not improve he returned to London at the end of March, 1915. All the appearances were then those of malignant disease, and the removal of the cord was advised. Patient desired a further consultation, and saw Sir StClair Thomson, who recommended operation as soon as possible.

On April 13, 1915, I removed the whole of the left cord, including the vocal process. As the condition of the commissure appeared suspicious, it was thought best, even with the greater loss of voice, to remove the anterior third of the right cord as well. The after-course was quite uneventful, and patient went for a drive on the eighth day. He continued remarkably well until April, 1916, when he had decided symptoms of tertiary syphilis with increasing stenosis of the larynx. The curious thing about this is that the granuloma and cicatricial bands first developed on the right side, affecting chiefly the arytænoid and remainder of the cord, and the patient could breathe only through the space left by the removal of the left vocal cord. In consultation with Sir StClair Thomson it was decided that tracheotomy should be done, and patient has worn a tube since June 4, 1916. Since then the appearance of the larynx has at times given rise to considerable anxiety as to recurrence of malignant disease, but improvement has always followed the use of arseno-benzol in suppositories and energetic mercurial inunctions and injections. The patient's general condition has greatly improved, and the view is held that up to the present there are no positive signs of recurrence.

Dr. Fletcher, acting on behalf of Dr. Eastes, reported that the section of the left cord showed a distinct epithelioma while the posterior part was free from the disease. Through an accident the portion removed of the right cord was not preserved at the time of the operation.

Sir StClair Thomson: This case teaches several lessons. One is, that the direct method of removing growths from the vocal cord goes no deeper and is no more effective for obtaining a specimen than is the indirect method. A specimen was removed by the indirect method by Dr. Donelan, but was not deep enough to disclose the malignant growth, as often happens. Dr. Dan McKenzie attacked this growth by the direct method, but he also failed to get down to the malignant growth. On these two negative bases this patient goes untreated for six months before removal is carried out. Not having seen the patient earlier, I cannot say whether a diagnosis could have been made earlier. In many of these cases it is a physical impossibility to get a satisfactory specimen from a cord; so we are reduced, in such cases, to purely clinical grounds—*i. e.* to the appearances which we all know—and to watching the case, looking for the slow flagging coming on in the cord, the cauliflower appearances, the dimpling, and the cupping which often takes place in these growths in the middle. An important side issue from epithelioma in this case is that I understand this syphilitic subject gave six negative Wassermann reactions; yet, from the view I got when Dr. Donelan allowed me to see the case, I was convinced that it was the syphilis which had returned. He was treated with antisyphilitic remedies, and he is alive and well, and there is no recurrence of his malignant disease. Here, again, too many

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

people are apt to trust to the "penny-in-the-slot" diagnosis, and conclude that if a patient does not give a positive Wassermann he has not got syphilis.

Dr. DONELAN (in reply): I am much indebted to Sir StClair Thomson for bringing out the points of interest in this case. I regret very much the absence of Dr. Dan McKenzie, as I know he had some observations of the highest interest to make. I have only to call attention to the notes, which show that from the first I advised this patient to have his cord removed because the appearances were those we recognise as those of epithelioma. It is admitted that as much as 10 per cent. of negative Wassermann reactions are unreliable, and this case appears to be one of the 10 per cent.

Nasal Fibroma (of the Right Fossa) with Specimen and Microscopic Section.—L. H. Pegler.—The case is that of an elderly man, with specimen and section (described at the last meeting),[1] enabling members to note the subsequent behaviour of the root on the middle turbinate, which has not been disturbed. The fuller histological report promised is as follows:

Surface much fissured. The fissures and intrusions are invested with the ordinary epithelium; some of them run deeply into the substance, but, though continuous with the surface, appear as circular spaces, the long palisade epithelium contrasting with that lining the gland ducts.

Stroma of fibrous tissue, parts of which are of considerable density; it is remarkably non-vascular.

Glands are conspicuous and generally distributed. There are groups of acini and many ducts.

This growth, which bears some pathological relationship to a polypoid mucous hypertrophy, is best described as a fibroma, the pedunculation and volume of the mass justifying the diagnosis. (This is also Mr. Shattock's view, who has carefully studied the specimen, and has requested it for the College of Surgeons' Museum.)

Mr. FRANK ROSE: I examined this microscopical section with considerable interest, because it is something which one seldom sees. My difficulty consists in giving a suitable name to it. It is called a fibroma. There is fibrous tissue in it, but that is not its most conspicuous feature. The epithelium, both that covering the outside of the specimen and that forming the gland tissue and the ducts, is quite as conspicuous, and I hesitate to apply the term "fibroma" to a specimen in which there is so much glandular tissue. It reminds me more of the structure of a nasal polypus, one in which the basis is tough and firm. I shall be glad to hear Dr. Pegler suggest a title which does justice to those features.

Mr. CLAYTON FOX: Why not call it "non-œdematous fibroma" in contra-distinction to œdematous fibroma—the ordinary nasal polypus?

Dr. W. HILL: I suggest "fibroglandular hyperplasia" as a name for it.

Dr. PEGLER (in reply): Valuable though the microscope may be in determining the nature of a tumour formation, it has its limits as an aid to diagnosis. One is at a great disadvantage in forming an opinion if unable to study the macroscopic aspect of a growth *in sitû*, its behaviour during operation, and its appearance in the fresh state after removal. There are signs of recrudescence in the middle turbinal attachment, which has not been disturbed since evulsion, and so far the appearance differs greatly from that which we should have seen in a

[1] See JOURN. OF LARYNGOL., RHINOL., AND OTOL., vol. xxxiii, p. 304.

https://doi.org/10.1017/S0022215100019071 Published online by Cambridge University Press

common polypus case. I shall keep the patient in view. Several members have commented upon the title "fibroma" for the specimen. The only alternative that Mr. Shattock could suggest when we studied the specimen together was "fibro-adenoma," but we concluded that the glandular element was not conspicuous enough to justify this name. On the other hand, I quite admit that the growth has its affinities, and any leaning here is certainly towards the turbinal moriform hypertrophy type, but the affinity is not sufficiently close to indicate any clear reason for altering the selected title, which best covers its main features. Mr. Shattock's verbatim report having been asked for, and promised by myself, is here appended:

"(1) *Stroma* of fibrous tissue nowhere of great density. It has a conspicuous amount of gland-tissue distributed in it, but this does not assume sufficient proportions to allow of such tissue being viewed as neoplastic, and enable us to class the growth as a *fibro-adenoma*. The surface of the growth is much fissured, the processes being invested with the ordinary (palisade) epithelium. Some of the fissures run deeply into its substance, and though doubtless continuous with the surface, the connection in many instances is missed in the section. The long columnar epithelium lining such spaces is ciliated, and so differs from that lining the gland ducts. I should think the growth best described as a *fibroma*. I have looked at sections of inferior turbinals with moriform hypertrophy; there are quite as many glands in that tissue just below the epithelium. I take it that this fibroma is somewhat akin to a moriform hypertrophy in which similar deep fissures occur; but in the latter the signs of inflammation are obvious, whereas in the specimen under consideration the pedunculation and volume of the mass justify it being classed as a neoplasm."[1]

(*To be continued.*)

Abstracts.

PHARYNX.

Bone Metaplasia in the Tonsil.—Henry Albert and Minnie Douglis. "Annals of Otology," xxvi, p. 909.

The first report of a case of bone or cartilage in the tonsil was made by Orth in 1893. They have been found in the following forms: (*a*) Elongation of the hyoid bone or styloid process extending into the tonsil; (*b*) bony plates or nodules and cartilaginous nodules. Interest in the phenomena centres chiefly round the problem of the origin of the bony and cartilaginous nodules not connected with the skeleton. Investigators have disputed their occurrence from two points of view: (*a*) That they are the result of metaplasia following inflammation in the tonsil; (*b*) that they are the result of cartilage-cell remnants from the second branchial arch just below which the tonsil has its origin. The cell remnant theory best explains a large number of cases. The authors publish one case, the facts of which favour metaplasia.

Macleod Yearsley.

[1] In a subsequent note sent to the exhibitor since the date of the meeting Mr. Shattock points out that the real gland-tissue not being in excess of that found in the normal nasal mucosa should decide against a diagnosis of fibro-adenoma or of fibro-adenomatous hypertrophy.

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