THE SCOTTISH OTOLOGICAL AND LARYNGOLOGICAL SOCIETY

Report of the Forty-first Meeting, held in the Ear, Throat and Nose Hospital, Glasgow, on Saturday, June 1st, 1935

Case I.—An unusual approach to the Frontal Sinus.

—Dr. T. Howie.

Nurse J. R., aged 23. Frontal Sinusitis following influenza: admitted to Victoria Infirmary 7.3.31: temperature 100° F.: tenderness over right frontal sinus. Expectant treatment carried out.

12.3.31.—Fluctuant swelling the size of a bean had formed over the right frontal eminence.

16.3.31.—Operation. Right frontal sinus opened by external route: no pus: mucous membrane apparently healthy: small subperiosteal abscess over the upper limit of sinus. Drained to supraorbital wound: healed satisfactorily.

6.4.31.—Submucous resection of nasal septum carried out: anterior end of the middle turbinate on right side removed.

11.4.31.—Patient discharged.

After bathing, without due precaution, during *June*, 1931, there was an intermittent recurrence of the swelling on the right side of the forehead.

Re-admitted 16.7.31, when a large boss was seen over right frontal eminence, fluctuant and tender to touch. Pus was evacuated through the old scar and moist dressings applied.

27.7.31.—Operation. Mr. James Russell cut a scalp flap, half an inch inside the hair margin, from centre forehead to the front of right ear. This was turned down to expose old bone wound at supraorbital ridge: outer table of frontal bone eroded one and a half inches above orbital margin: surface rugged. Diseased bone was gouged away, supraorbital ridge notched and sufficient bone removed from anterior sinus wall to give access to all corners of cavity. Granulation and a few unhealthy ethmoidal cells were removed. The frontal sinus and fronto-nasal duct were firmly packed to encourage scarring. The packing was left for seven days and thereafter renewed every other day for a period of two and a half months, until the whole of the sinus was obliterated by healthy granulation tissue.

There has been no recurrence of symptoms since.

Discussion.

Dr. Howie said that this case had an unusual complication—a subacute frontal sinusitis, which developed a very mild osteomyelitis; and it called for an unusual route of approach because the abscess was high up in the forehead. If one had gone through the supraorbital

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margin it would have made a prominent scar. On this account he asked Mr. James Russell to see the patient and he suggested the operation described.

Dr. BROWN KELLY said that Dr. Howie's case reminded him of several cases he had recently seen of infection of the frontal bone which had been successfully operated upon by Dr. Hvidberg of Copenhagen. In these cases an incision was made across the top of the head and the flap drawn forwards and downwards. Bone was removed down to the dura and a magnifying glass used in order to ensure that more than the obviously affected bone was taken. Drains were put in on each side so that when the patient was lying on his back the discharge could escape readily. The wound was closed with clips instead of stitches. The results were very good. Afterwards there was no weakness in elevating the forehead and no scarring.

Dr. HALL said that he quite understood how such a route of approach as Dr. Howie used would give, in some ways, very good access to the area of disease, but it seemed to give the patient the disadvantage of both methods to continue to pack the wound for such a long time, through a supraorbital incision. He could see that Dr. Howie did that in order to get obliteration of the frontal sinus and he realized it was possible. Dr. Howie would explain that that is the easiest way, but he (Dr. Hall) would like to get Dr. Howie's reason as to why he opened the sinus in both directions and kept open the supraorbital wound.

Dr. HOWIE (in reply) said that there was an original operation which opened up this sinus and it was only some two or three months after, when the patient had a relapse of this swelling high up in the forehead, that they had to approach it from above, in order to clear it out. Dr. Howie explained that the reason for packing was that he had been told about Hajek's method, which he had since discovered aims at keeping the fronto-nasal duct open. He tried to cut off the wound from the nose and fortunately succeeded.

Case II.—Growth of Right Maxilla, (?) Neuroblastoma, Metastasis from Suprarenals.—Dr. GAVIN YOUNG.

J.B., aged 5, admitted to Sick Children's Hospital 6.5.33 suffering from concussion and forehead injuries. Swelling seen on right upper alveolus. On incision this contained a tooth and granulomatous tissue (report—adamantinoma). Patient transferred to Ward 12, Western Infirmary.

July, 1933.—Large doses of radium were inserted in the mass and a mould applied. From *July 30th* to *August 9th* the boy was very ill: vomiting and melæna: acidosis diagnosed: very drowsy: sugar and acetone in urine. Insulin, bicarbonate of soda and glucose administered. Physicians in attendance.

From *August 9th* to *28th* steady improvement. Swelling in face also improved. Massage and artificial sunlight up to middle of *September*, when patient became emaciated. Swellings were noted in abdomen and in both femora. X-ray examination showed latter to be sarcomatous deposits. 28.9.33.—Death.

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Post mortem report.—General peritonitis: extensive growth on stomach wall: duodenum firmly adherent to large tumour mass in region of pancreas, extending to the hilum of each kidney.

Histological report of tumour mass.—"The tumour is of very cellular anaplastic type. . . . No distinct rosettes are present but it is likely that the growth is primary in the adrenals and is a neuroblastoma."

Case III.—Stenosis of Naso-pharynx.—Dr. F. T. Land.

K.J., aged 24, seen 25.1.33 with complaint of nasal obstruction and difficulty in clearing nose of mucus which appeared some months after removal of tonsils and adenoids in another clinic. Palate in great part adherent to posterior pharyngeal wall. Wassermann reaction negative.

5.4.33.—General anæsthesia, Davis gag: adhesions separated digitally, one thick band being cut: palate tied forward by rubber catheters passed through nostrils—proved to be intolerable and removed after twenty-four hours. Adhesions recurred but patient could be kept comfortable by having synechiae separated digitally under local anæsthesia every five or six weeks.

19.2.34.—General anæsthesia: adhesions separated: posterior pillars divided horizontally in upper third and palatal ends sutured to anterior pillars, thus enlarging naso-pharynx. Relief for many months followed, but condition is again *in statu quo*.

Discussion.

Dr. Douglas Guthrie found that this patient states that she "can't speak so well as before" but she appears to have benefited so much from the last operation that she regards herself as cured. It is interesting to speculate as to why this stenosis occurred and Dr. Guthrie wondered if other members had seen stenosis of the naso-pharynx following removal of adenoids. He thought it difficult to see how a curette, even with the clumsiest technique, could produce this. The method adopted was foredoomed to failure. The retention of catheters is extremely uncomfortable; moreover, the stenosis gradually returns after such methods are used. If, on the other hand, one attempts to produce a little tube or hole, lined with mucous membrane, at the outer angle of the palate and then incises the intervening tissue, there will be no recurrence. The first step is to make a small hole in each side of the palate, then insert a stud or catheter to keep it open until it has become lined. In the second step the palate, between the hole and the free margin, is divided by diathermy. As regards the patient's symptom, difficulty of speech, she seemed to him to have rather a thickened palate as well as a stenosed palate. The uvula seemed to be rather œdematous and did not move very well and Dr. Guthrie suggested that if the exhibitor wishes to improve the speech he should prescribe some exercises, such as the practising of the sounds "Ah" and "ng" in rapid sequence. If he did that himself

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he would feel the palate moving and even giving a " click ". It is a very useful exercise after the adenoid operation and might be of help in this case.

Dr. CONNAL asked if any opinion could be expressed as to the efficiency of diathermy for separating adhesions in such a case.

Dr. HALL said he thought that the exhibitor would be ill-advised to attempt any widening of the nasopharynx as long as the patient was as well as she is now. The chief difficulty was in forced expiration which caused the soft palate to close up the nasopharynx. If the soft palate was fixed forwards by any such procedure such as that which Dr. Guthrie described, unless very great care was exercised probably the last state would be worse than the first, as the nasopharynx would then be fixed open. As the girl could describe her sensations from the time the operation was performed and she apparently had it rooted in her mind that " something went wrong ", neurosis probably played quite a considerable part in the disability.

Dr. BROWN KELLY said he was glad that Dr. Land had shown this patient a considerable time after the last operation, because cases of this kind were occasionally reported as cured while cicatricial contraction was still going on. He had had several similar cases which had given much trouble. The enlarging of the stenosis was easy; the difficulty was to keep it enlarged. A retractor attached to a dental plate had proved efficient but was uncomfortable. He had also employed frequent stretching of the stricture without tearing, over a long period. This was easily done with forceps such as were formerly used for removal of adenoids, e.g. Hovell's. The patient might learn to introduce them. One should be satisfied with a moderate degree of improvement and avoid over-stretching, with tearing and subsequent contraction.

Dr. LAND (in reply) said he was much indebted to the members who had discussed this case, which had been a very difficult one to treat. He thought it must be from a feeling of gratitude for the trouble that had been taken with her that the patient tended to make light of her symptoms at this meeting. On several occasions recently she had complained of difficulty in breathing and particularly in clearing her nose of mucus. It did appear to be better at the moment. Dr. Land agreed with the previous speakers who advised that he should rest content with what improvement had been obtained. The swelling of the uvula was quite a recent development, within the last six weeks.

Cases IV, V and VI.—Three Cases of Atrophic Rhinitis. —Dr. JAMES ADAM.

IV.—Lizzie B., first seen when 8, in 1918. Disease ascribed to diphtheria at 5. Stinking crusts and semi-fluid pus in both nostrils, the right much wider owing to septal deviation. Extreme atrophy of both lower and both middle turbinates. Chronic laryngitis and pharyngitis. Infra-turbinal opening of left antrum which was dark on transillumination and found to contain much pus. After this the discharge improved and the fœtor ceased, but the right nostril

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looked almost empty and its turbinates remained shrunken ; so rib cartilage was implanted in both walls of this nostril. After this all trouble ceased in nose, throat and larynx except for tendency of mucus to gather in nose when exposed to much dust.

V.—Mrs. L., first seen twelve years ago when 42. History of nasal discharge for over thirty years. Origin ascribed to a blow. Extreme atrophy of both lower turbinates, with hyperplasia of middle turbinates. Saddle nose : both nostrils full of crusts ; left is the wider. Proof puncture of each antrum yielded much pus. Modified Denker operation on each. The nasal opening into left tended to close and had to be enlarged (Canfield). Cartilage implant on dorsum (Gillies' columellar flap). Patient has not needed nasal treatment since. The implant is movable.

VI.—Mary McK., admitted Stobhill 16.8.33, aged 15. Nasal discharge from infancy : nose crammed with stinking crusts, otherwise a mere shell with extreme atrophy of all structures. General condition excellent. Both sphenoids contained pus and were opened. Costal cartilage grafts and latterly fascia lata inserted under mucosa of both walls of each nostril. Great improvement although nostrils are far too wide : still under treatment. The nose is short with nasal bridge broad as well as flat. (?) To have bridge narrowed by plastic operation.

Discussion.

The President said he thought in all three cases the patients had certainly benefited from treatment and the noses were very nice and clean. There was no crusting or discharge.

Dr. Logan Turner wished to congratulate Dr. Adam on the success of his treatment in these cases. He (the speaker) would be glad to hear if Dr. Adam and other members of the Society found that cases of ozæna were becoming less frequent than formerly. This statement was made from time to time.

Dr. Ewart Martin said that in answer to Dr. Logan Turner he thought they were seeing just about the same number of cases of atrophic rhinitis as they used to but, curiously enough, he thought that this year there were more cases than usual. The first case shown by Dr. Adam had been under treatment for twelve years and the second case for seventeen years. He, Dr. Martin, wondered if these cases had been left alone, with simple cleansing treatment, would they not be quite as healthy without operation ? Many cases diagnosed as atrophic rhinitis fifteen or sixteen years ago showed a similar condition when examined to-day. We are still bound to leave unanswered—what is the cause of atrophic rhinitis ?

Dr. Douglas Guthrie asked if Dr. Adam would say how far these cases of ozæna tended to cure naturally. Dr. Guthrie recollected two cases which he saw for the first time as long as twenty years ago. He had seen them again recently and they were now free from symptoms and there is no fœtor or crusting.

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Dr. BROWN KELLY said he was of opinion that ozæna had decreased very much. In estimating its frequency a distinction should be made between hospital and private cases, because nutrition played an important part in the cause. He rarely saw a fresh case of ozæna now, but occasionally he met with adults having no ozæna who in childhood had attended him for this disease. The tendency of ozæna in persons of about 40 was to slow, gradual cessation of crusting and fœtor.

Dr. MACARTNEY agreed with Dr. Brown Kelly about the diminution of ozæna because in recent years he had found it extremely difficult to get sufficient cases up to hospital to show the class.

Dr. BRAND also agreed with Dr. Brown Kelly and Dr. Macartney and stated that very few cases of atrophic rhinitis are now seen in the dispensaries.

Dr. ADAM (in reply) said that his experience agreed with the majority—that ozæna is far less common than it used to be. There was a twofold reason for that, first, the frequency of the tonsil and adenoid operation and second, improvement in the diet of children. Often a child with adenoids had a nose streaming with pus which cleared up after operation. In a case like that ethmoiditis is inevitably set up and such sinusitis is the key to atrophic rhinitis. Atrophic rhinitis, as far as he (Dr. Adam) could make out, arises from neglected sinusitis. The other thing which helps to the diminution of the frequency of atrophic rhinitis is the better diet. When he went to Stobhill twelve years ago he used to have a troop of children coming to him with noses with pus streaming from the nostrils and the treatment was simply attention to vitamins and outdoor exercise. Dr. Kelly referred to the nutrition and he (the speaker) agreed with him. Dr. Martin referred to syphilis in Case VI: the Wassermann reaction was "negative". Dr. Adam said he was rather interested in the suggestion he got from Mr. Kilner to use fascia lata for implantation: make a vertical slit in the mucous membrane, introduce an aural speculum into the slit and through it pack in strips of fascia. It is quite easy. It is not nearly such a painful operation as with cartilage implant because removal of the cartilage always involves great pain in the chest afterwards. Dr. Adam said there was one caution he would like to give. He had been using septal cartilage from one patient's nose to put into an atrophic nose when he got it and, some time last year he was on the point of transferring cartilage from a very healthy woman to another, but three days before the operation it struck him he had better test the Wassermann from the donor and it was "positive"! He knew of one case done by a plastic surgeon where he gave the patient syphilis in that way.

Cases VII, VIII and IX.—Three Cases of Malignant Disease of the Sinuses treated by Radium, with the assistance of Dr. A. A. Charteris. —Dr. GAVIN YOUNG.

VII.—Miss C., 57, admitted *September*, 1932. Nasal obstruction with copious discharge: no headache. Right naris filled with polypi.

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29.9.32.—Caldwell-Luc operation. Biopsy on fungating tissue from both ethmoid and antrum : both portions reported malignant.

6.10.32.—Both antrum and ethmoid radically cleared out through canine fossa : radium cylinder packed into upper and posterior part of cavity : eight needles throughout remainder of cavity : 1,584 mg. hours.

April, 1935.—Condition satisfactory.

VIII.—J.D., 56, admitted 5.3.34. Headaches, nasal obstruction and discharge, with considerable supraorbital swelling, right. X-ray examination showed sinuses on right hazy, with bone erosion in the fronto-ethmoidal region.

Frontal sinus opened : much friable tissue removed from lower part of sinus, invading ethmoid : radical operation : meninges exposed by disease over area of about 1 cm. diameter. Radiation by two silver cylinders containing 6·25 mg.

April, 1935.—Condition satisfactory : some crusting : no headaches.

IX.—J.McI., 54, admitted 6.8.30. Right cheek swollen : fleshy tumour in gingivo-labial fold, extending back to last molar tooth : no glands palpable. Caldwell-Luc : radical clearing out : sixteen needles packed into cavity and skin of cheek also needled : 2,822 mg. hours.

June, 1934.—Result satisfactory.

Discussion.

Dr. Collins said he was very interested in these cases and he congratulated Dr. Young on his results. Dr. Collins wondered if any other surgeons have had experience of treating these cases by the method suggested by Mr. Douglas Harmer of hemi-resection of the hard palate leaving the soft palate intact as far as possible. The resection is started by diathermy and, after half of the hard palate has been removed, as much of the growth as can be seen is also removed by diathermy. An obturator incorporating lead is fitted and radium needles are embedded in the stent. Dr. Collins said he had done one such case recently and this operation gave very good access. The operation itself is not very difficult and he thought, if successful in an early removal, it affords an adequate opportunity of inspecting every part of the antrum at regular intervals to see if there is any sign of a recurrence. That seems to be one disadvantage in inserting radium, as Dr. Young does, by the Caldwell-Luc operation ; every part of the antrum cannot be seen and a recurrence might easily pass undetected.

Dr. Hall said that he did not entirely agree with the last speaker. No doubt resection of the hard palate has advantages over a Caldwell-Luc incision with regard to the access. At the same time one would not think of attempting to remove a malignant growth of the antrum

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through a Caldwell-Luc incision ; sufficient room can be obtained by an incision along the alveolus. In that way the whole of the cheek can be elevated with the soft parts of the nose and complete access obtained to every corner up as far as the orbital plate. Dr. Hall had had some slight experience of that method described by Dr. Collins, and if the bone of the alveolus is involved, undoubtedly it is the proper thing to resect it and one would then remove the hard palate, but he did not see any advantage in carrying out a procedure which eventually involved the use of an obturator unless extension of disease rendered it necessary. He had seen a man recently who had been wearing an obturator now for three or four years and, just at the part where the plate rubs the edge of the cut palate, he is developing a leukoplakia which shows signs of slight malignant change and is necessitating further operation. In contradistinction another case, in which the plate was left intact, instead of having to wear an obturator has a perfectly normal palate and has an infinitely more comfortable existence.

The lack of uniformity in the dosage of radium was a striking feature in the cases shown. No doubt under different authorities different ideas held, but it goes to show how much difference there still is in opinions with regard to the dosage of radium. The dosage on the average appeared very small, and for the excellent results which had been seen Dr. Hall was inclined to credit the surgery just as much as, or even more than, the radium treatment.

Case X.—Case of Epithelioma of Antrum.

—Dr. W. S. Syme.

B.A., 41 years. 31.10.34.—Swelling of the left cheek : hard to the touch : (?) alveolar abscess communicating with the antrum : had been opened and drained frequently.

9.11.34.—X-ray showed a very dense right antrum : antrum opened and found to be full of a granular growth invading nose, cheek and hard palate. Biopsy—squamous epithelioma in all three regions. As much of the growth as possible was removed and the cavity packed.

21.11.34.—Four containers of radium giving 1,200 mg. hours in 120 hours were introduced into the cavity.

17.4.35.—Patient very well and is working hard. The tongue gave him some discomfort below the irradiated palate ; otherwise he has not had much discomfort.

Discussion.

Dr. Syme said he thought the only interesting point about No. X, apart from the condition of the patient just now, was that at the beginning it was looked upon as a gumboil, which was opened on several occasions and kept open for one or two months before any suspicion of malignancy occurred. He did not know very much about the use of radium, or the dosage, but was advised in these methods by Dr. Morrison of the Radium Institute. Dr. Syme said this case had not been going on for very long and it was difficult to know what the

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ultimate result would be but at present the patient is all right. He is able to carry on a very hard life, chasing sheep up and down the Fells in Cumberland.

Case XI.—Case of Carcinoma of Ethmoid.

—Dr. W. S. SYME.

Mrs. M.B., aged 49. Stuffiness, discharge and epistaxis especially affecting the right nostril for about eight months: headaches. Polypus in right nostril.

X-ray—both antra dull but the right more so, also the right ethmoid. Biopsy on polypus—cellular growth of malignant appearance suggestive of mixed parotid type.

27.8.34.—Right antrum opened and found to be free from growth, the walls being intact. The nasal wall was bulging and was mostly removed. The middle meatus was full of polypi and the underlying tissue was definitely malignant. The area was cleared as much as possible and radium packed into the cavity. (Two standard Stockholm applicators—cylindrical—each 3 by 1 cm. and containing 25 mg. Ra. E. Dose 2,400 mg. hours: filter 3 mm. lead.)

Cases XII, XIII and XIV.—Three Cases of Malignant Disease of Tongue and Fauces.—Dr. W. S. SYME, Dr. INNES, Dr. JOELS.

XII.—*Epithelioma of Fauces and Palate.*

3.11.32.—Dysphagia for three weeks: swelling right side of neck for eight days. Ulceration, with hardening of right anterior pillar and soft palate. Wassermann reaction negative. Biopsy—highly suspicious of malignancy.

21.11.32.—Removal of teeth. 24.11.32.—Removal of growth with diathermy. 18.5.33.—Fractional X-ray therapy: good reaction.

15.4.35.—Very well: no recurrence: (?) glands.

XIII.—*Epithelioma of tongue and fauces.*

J.H., aged 53. 11.1.34.—Pain in left side of throat irradiating to the head. Growth involving left anterior pillar, floor of mouth and side of tongue. Biopsy—squamous epithelioma.

16.2.34.—Ten 2 mg. needles inserted for 168 hours. 14.4.34.—Radium collar applied at the Radium Institute.

XIV.—*Epithelioma of Soft Palate.*

J.F., aged 66. 18.6.34.—Dysphagia for one year: pain left ear. Ulceration of uvula and soft palate. Wassermann reaction negative. Biopsy—squamous epithelioma.

6.7.34.—Diathermy removal.

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Cases XV to XXI.—Seven Cases of Laryngeal Carcinoma.

Case XV.—Squamous-celled Carcinoma of Larynx: laryngectomy.—Dr. JAMES ADAM.

T.R., aged 66, admitted to Stobhill 26.4.34: had been hoarse for two or three years. Laryngofissure had been performed elsewhere in *April*, 1933. He complained now of steadily increasing dyspnœa. The larynx was almost packed with growth involving mainly the left side and leaving little airway.

28.4.34.—Complete dental extraction. 14.5.34.—Low tracheotomy: no palpable glands.

30.5.34.—Laryngectomy (Tapia's method) under local anæsthesia preceded two hours before by Nembutal gr. 3 and one hour before by hyoscine gr. 1/100, morphia gr. 1/4. Patient complained of nothing except the two needles in the abdominal wall for saline drip infusion which was continued throughout and for twenty-four hours afterwards. The glands were not touched. Colour and pulse good.

4.6.34.—After the first twenty-four hours the patient remained comfortable and was fed by nasal tube. The stitches (except the tension stitches) were removed: tracheotomy tube removed and inserted into tracheostome: nasal tube removed.

On 11.6.34 he was allowed out of doors. Two small fistulae had formed opening into gullet: feeding by stomach tube. Silver tension sutures were used to help to close the fistulae.

27.6.34.—The patient was fed by mouth.

He has not been able to develop a pharyngeal voice. There are no palpable glands.

Cases XVI to XX.—Dr. W. S. SYME.

XVI.—J.S., aged 52, private case. 22.10.30.—Hoarseness for about four months: health good: no pain or dysphagia: was smoking a great deal.

Growth on right cord with slight loss of movement. 14.11.30.—Report of biopsy—squamous epithelioma.

20.11.30.—Fenestration and introduction of six needles of 2 mg. radium as a palisade: total dose—864 mg. hours: no tracheotomy.

19.3.31.—Deep X-ray to both sides of neck with no ill effect. 3.2.32.—Had remaining teeth out for pyorrhœa.

6.3.35.—Very well: voice practically normal.

XVII.—L.K., aged 54. 7.6.34.—Occasional loss of voice for one year: no pain or loss of weight: pale naturally: Wassermann reaction, chest and sputum, all negative.

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6.7.34.—Direct examination—ulceration of right arytenoid. Biopsy report—papillomatous growth: covering epithelium very hyperplastic, suggesting malignant change.

21.9.34.—Suspension laryngoscopy—swelling of both cords. Biopsy from left cord—suggestive of epithelioma but not definite. Right side now much improved.

19.10.34.—Laryngofissure: growth now seen to involve both cords but especially the right: subglottic extension of the right to cartilage and probably to the crico-thyroid membrane. Tissues on right of larynx removed as much as possible. Tracheotomy twenty-four hours. (?) For laryngectomy or irradiation. Tissue from larynx reported "squamous epithelioma".

14.12.34.—Radium Institute for protracted fractional irradiation.

29.3.35.—Much fitter in general: no glandular involvement: further irradiation advised against.

XVIII.—J.B., aged 53. 29.8.32.—Husky for nine months. 5.9.32.—Growth involving anterior third of left cord: no glands. Report of biopsy—squamous epithelioma.

19.9.32.—Laryngofissure: growth very discrete and not reaching anterior commissure: left cord and false cord removed: tracheotomy for twenty-four hours.

14.8.33.—Seemed to have some movement of an adventitious cord on the left. 10.12.34.—Very well and finds voice much better.

XIX.—C.M., aged 50. 29.9.32.—Husky for several months. Small growth on anterior half of right cord: movement limited: health good.

3.10.32.—Laryngofissure: growth confined to right cord. Growth removed. Bleeding troublesome but was stopped with pressure. Tracheotomy for twenty-four hours. Lower part of wound gave trouble for about fourteen days and the chest gave anxiety.

Patient has not reported sufficiently often but in *June*, 1933, was very well and there was no sign of recurrence.

XX.—T.S., aged 64. 23.11.31.—Husky for indefinite period: health good. Both cords hyperæmic and thickened. Wassermann reaction, chest and sputum, all negative. Patient to be kept under observation but probably a simple chronic inflammation.

31.3.32.—Direct examination: right cord injected and a swelling of the middle of the cord: left side unaffected: both cords move well. Biopsy—squamous epithelioma.

11.4.32.—Laryngofissure: growth limited to right cord: removal of right cord: tracheotomy for twenty-four hours.

26.6.34.—Very well and no sign of recurrence.

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Case XXI.—Dr. F. T. LAND.

XXI.—N.M., aged 55, first seen 3.3.34 with hoarseness of fourteen days' duration. Generalized injection of laryngeal mucosa. Teeth and gums very unhealthy—the former removed 28.4.34. Wassermann reaction negative.

21.5.34.—Voice improved but right vocal cord now alone injected and somewhat "fleshy". Biopsy—squamous epithelioma.

4.6.34.—Fenestration with local anæsthesia: five 1 mg. radium needles inserted and removed after seventy-two hours (360 mg. hours).

22.9.34.—Still some hoarseness. Soft, sessile polyp anterior end of right vocal cord—removed and base cauterized: by the histological examination there was no evidence of malignancy.

1.5.34.—Voice improving: movements normal: cords uninflamed but area of granulations remains at the anterior end of the right vocal cord.

DISCUSSION.

Dr. LOGAN TURNER asked Dr. Syme if he was quite satisfied with the condition of the right vocal cord in Case XVI, in which radium needles had been used. The voice was rougher than that generally associated with the treatment by radium. He was not altogether satisfied with the appearance of the anterior end of the cord.

Dr. DOUGLAS GUTHRIE said that on examining Case XVI he noted a definite irregularity and roughening of the edge of the right cord.

Dr. HALL asked why Dr. Syme introduced suspension laryngoscopy in Case XVII.

Dr. SYME (in reply) said that with regard to Case No. XVI, the man's voice certainly was still hoarse but he had been informed that this varied according to the time of day. The patient's voice is a great deal better in the evening than it is during the day. The patient is a man who is inclined to smoke a great deal and he is inclined not to use his voice as he might do. He has lived rather a hard life and is inclined to do so still. Dr. Syme had not himself noticed any great change in the right cord but he informed the meeting that he would take particular notice of it in future.

Dr. Syme said that Case No. XVII did not turn up but he had received a note to say that he is very ill in bed, with pneumonia, and Dr. Syme wondered whether this case had not got some further involvement, perhaps mediastinal. He was not altogether satisfied with the man's state on last examination.

Dr. Syme thought Case XVIII was showing well. The patient seemed to have an adventitious cord in place of the cord which was removed, which seemed to move fairly well.

Case XIX did not turn up but Dr. Syme said he had a note from the patient on *May 31st* to say that he is very well; although the voice is hoarse the man is working regularly on the road. Case No. XII also seems to be fairly well.

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Dr. Syme said he had a feeling still about these laryngeal cases that it was much more satisfactory, to him at any rate, to remove a growth surgically when he felt he could get completely round it rather than use an agent such as radium, about which he, quite frankly, was not quite sure. He felt much more confident, definitely, in these cases, if he could use laryngo-fissure. Dr. Hall had asked why he employed suspension laryngoscopy in Case XVII. He, the speaker, sometimes found in these cases, if there was suspicion as to whether there might be an extrinsic extension from the growth, that one got a very good view of the outer part of the larynx and lower part of the pharynx by the suspension method. He found he could get much more satisfaction in a view from a suspension laryngoscopy than by using direct laryngoscopy.

Cases XXII and XXIII.—Two Cases of Temporo-sphenoidal Abscess : Meningitis : Recovery.

—Dr. JAMES ADAM.

XXII.—W.G., aged 42, admitted to Stobhill Hospital on *October 18th*, 1933, shortly before midnight, with a severe headache : temperature 102° F. He was unable to give an account of himself and was very deaf. No history was obtainable until after his recovery, when it was found that his ears had been discharging for twenty years. He had during that time been twice at other hospitals, the last time three years ago when a polyp seems to have been removed from the right ear. When first seen by me on *October 20th* he had a rigor. In the left ear the tympanic membrane was sound but scarred and retracted ; no pus was present. The right meatus was filled by two polypi bathed in pus ; there did not seem to be any mastoid tenderness. The patient was almost comatose, had a retracted head and a stiff neck. There was a pronounced Kernig's sign but flexor plantar response. A lumbar puncture gave very turbid fluid under considerable pressure, containing excess globulin, uncountable polymorphous cells, some staphylococci but there was no reduction of Fehling's solution.

The operation was performed mostly under local anæsthesia. The mastoid was small and sclerosed, a healthy lateral sinus being exposed early in the operation. On opening the antrum pus welled into the wound and on removal of the tegmen the dura was seen to be necrosing ; through a small opening in it a large quantity of stinking pus continued to leak.

Next morning lumbar puncture yielded similar fluid to the previous one but an attempt to inject 10 per cent. urotropin caused the patient to squirm with pain and the injection was promptly stopped. The lumbar puncture on *October 22nd* drew nothing but blood and on the two following days was blank.

No drain was put into the large temporosphenoidal abscess (which reached far forward) but was kept open by passage of a

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large probe and by lifting the dura so as to exert pressure on the cavity.

The temperature fell to normal by the evening of the *23rd* and, by the *27th*, Kernig's sign had gone, the neck was much less rigid, the tongue clean and the general condition improved.

11.12.33.—The mastoid wound had almost closed and the patient was able to take active exercise.

He was kept sitting from the first day after operation.

XXIII.—R.C., aged 21 years. Admitted to Mental Wards, Stobhill, 27.6.34. Cerebrospinal fluid—purulent, globulin increased; Fehling's solution not reduced; abundant polymorphonuclear cells but no tubercle bacilli or other micro-organisms seen; no growth.

28.6.34.—Transferred to E.N.T. Wards: semi-comatose: had left mastoid operation elsewhere in *April*, 1932: after this had intermittent pain in head, mainly on right. A week before admission pain in right ear and headache (right): became drowsy and restless day before admission: vomited twice: temperature 102° F. and pulse 60. Patient was delirious and semi-conscious. Eye reactions normal: Babinski, extensor on right and flexor on left: Kernig positive. Nuchal rigidity. Right ear—pus, cholesteatoma. X-ray shows necrosis of right mastoid.

Radical mastoid: bone dense: cholesteatoma: dura opened: stinking pus from large temporal abscess. *B. pyocyaneus* from pus.

30.6.34.—The patient is now rational: Kernig still present: lumbar puncture gave purulent cerebrospinal fluid.

6.7.34.—Abscess not draining well: more bone removed and corrugated rubber drain inserted.

15.7.34.—Had rigor to-day: complained of dressing being too tight: no rise in temperature. Fresh dressing: drain still retained in brain abscess.

After this the progress was uneventful.

Case XXIV.—Case of Acute Otitis Media, Mastoiditis, Meningitis: Recovery.—Dr. JAMES ADAM and Dr. IAN THORBURN.

J.D., aged 14 years. Admitted to Stobhill 3.4.35. Right ear discharging for three days: pain over mastoid. External meatus swollen and tender: tympanic membrane thickened and congested, small perforation: no mastoid tenderness.

4.4.35.—Paracentesis (I.T.).

10.4.35.—His temperature was up and X-ray films showed distinct clouding of the mastoid: operation was advised and was refused. The same evening, however, it was granted. Simple mastoid operation (I.T.): large antrum containing pus: pus under

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pressure in postero-superior cells: sinus healthy: wound left open to drain. *Streptococcus hæmolyticus*.

13.4.35.—Abundant blood and albumen in urine. 19.4.35.—Blood gone from urine. 24.4.35.—The patient does not look well: temperature, pulse and respiration not settled: blood culture negative: middle ear not draining well. Wound, which had nearly healed, was re-opened.

27.4.35.—Frontal headache: nuchal rigidity and slight Kernig: pupil reflexes and tendon reflexes normal: fundi normal. Cerebrospinal fluid not under pressure but turbid: globulin increased: faint reaction to Fehling's solution: numerous polymorphs: slight growth of *streptococcus hæmolyticus*. Radical mastoid operation (J.A.): antrum unusually deep and found to be full of dark granulations. On removing these the inner wall of the antrum was found to be eroded, exposing the posterior semi-circular canal. The bone of the mastoid was exceedingly thick and exposure of the tegmental dura was difficult. After removal of the tympanic membrane, malleus and incus and granulations, the tegmen was removed and the dura incised. Cerebrospinal fluid slightly turbid but under low pressure (30 mm. cells): mostly polymorphs: *streptococcus hæmolyticus* again.

28.4.35, a.m.—Wound dressed: cerebrospinal fluid slightly turbid but under low pressure. p.m.—10 c.cm. cerebrospinal fluid under low pressure but turbid and giving slight *streptococcus hæmolyticus*: 5 c.cm. scarlatinal serum injected intrathecally and 20 c.cm. intramuscularly: nuchal rigidity less.

29.4.35.—Rigidity gone: Kernig negative: patient brighter.

1.5.35.—The patient's general condition has been normal for the last three days.

Case XXV.—Case of Chronic Otitis Media: Meningitis: Recovery.—Dr. JAMES ADAM.

J.K., aged 34. Admitted to Stobhill 6.4.35 on account of giddiness and sore throat of about a week's duration.

12.4.35.—Transferred to Ear, Nose and Throat Wards: very deaf, drowsy, slow cerebration, nuchal rigidity: no Kernig. Facial palsy (R.) of three days' duration. C.O.M.S.(R) of many years' standing: cholesteatoma. Cold caloric test gave no nystagmus.

Lumbar puncture—cerebrospinal fluid under pressure, turbid, with great increase of globulin and absence of sugar: no organisms found: polymorphs 1,000 per c.mm.

Radical mastoid operation: bone dense. (Staphylococci and Gram-negative bacilli in antral pus.) Labyrinth eroded: dura looked normal.

13.4.35.—Two lumbar punctures: cerebrospinal fluid as before. Tegmental dura incised; slight flow of cerebrospinal fluid.

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14.4.35.—W.B.C. 10,500 : pulse 60-80 : fundi normal. Cisternal puncture : cerebrospinal fluid not under pressure, much less turbid, gave reaction to Fehling's solution. Mental and general condition much improved : nuchal rigidity much less (this was about twelve hours after dural slit).

15.4.35.—Rigidity gone. After this progress was uneventful.

29.4.35.—Facial palsy hardly detectable. Caloric test (R.) gives no response and right ear does not hear when noise-box occludes left.

Temperature and pulse remained normal and patient's general condition satisfactory for seventeen days. Then the temperature suddenly shot up to 106° F. with rigor, headache, vomiting and nuchal rigidity. Cerebrospinal fluid under normal pressure but turbid ; cells 1,003 per c.mm., globulin increased, Fehling not reduced, no micro-organisms seen or found on culture. More bone removed, lateral sinus exposed but healthy ; tegmental dura incised. Next day, 7.5.35, Dr. E. Connal took over the case and at the suggestion of J.A. (on holiday) did double vestibulotomy. The horizontal canal had a fistula. Lumbar tap was repeated on *May 8th*; 900 c.cm. citrated blood and 150 c.cm. normal saline intravenously. Cerebrospinal fluid turbid, 900 cells per c.mm., Fehling not reduced. Dura again incised. 9.5.35.—10 c.cm. air injected by lumbar puncture : cerebrospinal fluid showed some reaction to Fehling. 10.5.35.—Patient much better, temperature normal for twenty hours : 8 c.cm. air again injected : cerebrospinal fluid now reduced Fehling normally, cells 400. On each of the following three days air was again injected and on *May 13th* an intravenous injection of 500 c.cm. citrated blood was given from patient's brother who had had a mixed staphylococcus vaccine three days before. After this progress was normal. From the time of the relapse of the meningitis the patient had ten spinal punctures, six injections of air through the spinal needle, two transfusions and two dural incisions.

Case XXVI.—Case of C.O.M.S. : Acute Exacerbation : meningitis : recovery.—Dr. F. T. LAND.

M.F., aged 11. History of intermittent otorrhœa (right) following measles at six years.

12.6.32.—Pain in right ear with cessation of discharge during last seven days. During the last twenty-four hours severe pain in head, back of neck and down back : drowsy, vomiting and crying out with pain.

Examination.—Temperature 103° F. : Pulse 122 : Respiration 22. Restless and suffering much pain : nuchal rigidity and Kernig's sign present. No ocular or other paresis found. C.O.M.S. (right) : cholesteatoma in middle ear.

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12.6.32.—Radical mastoid operation: sclerotic type: antrum and aditus already enlarged by purulent cholesteatoma: healthy middle fossa dura exposed: dura in Trautmann's triangle thickened. Lumbar puncture—30 c.cm. milky white fluid removed, under great pressure.

Bacteriological report.—Cerebrospinal fluid, "polymorph. leucocytosis: no organisms in films or on culture".

13.6.32.—Meningeal symptoms still present. Lumbar puncture —24 c.cm. milky fluid removed. 14.6.32.—Much better: 20 c.cm. cerebrospinal fluid removed, practically clear. Temperature 99° F. Uninterrupted recovery until 27.7.32 when right facial paresis appeared. 22.8.32.—Facial paresis now absent.

21.9.32.—Child well in every respect, but middle ear still discharging: being treated with pulv. ac. boric with 1 per cent. iodine.

Case XXVII.—Case of C.O.M.S.: Mastoiditis: Cholesteatoma: Large Temporo-sphenoidal Lobe Abscess: Recovery.—Dr. GAVIN YOUNG.

A.M., male, aged 31, admitted to Kilmarnock Infirmary 10.10.34. History of discharging ears, with deafness, since childhood.

Left hemicrania: left mastoid tenderness: delirium: temperature 100° F.: pulse 56. Patient's condition prevented proper examination.

Left radical mastoid operation: large cholesteatoma filling mastoid process and invading middle fossa: on lifting brain to clear cholesteatoma from middle fossa, pus was seen to ooze out from an eroded area in the meninges. Track was followed up into the temporo-sphenoidal lobe and about three ounces of pus were evacuated. Drainage with rubber tube and filet of gauze. Uninterrupted recovery.

DISCUSSION.

Dr. GAYLOR said he was not so much concerned with the actual surgical treatment of these cases. His main interest lay in the diagnosis and he thought that among the most important things in making an early diagnosis of temporo-sphenoidal lobe abscess was limitation of the contralateral visual fields. Although the problem still seems to be obscure, since an abscess of considerable size may not cause visual field defect, and although the course of the optic radiation between the external geniculate body and the calcarine cortex has not been fully worked out, in a percentage of these cases there is a visual field defect which he (the speaker) considered tremendously important. Whether it is due to involvement of the optic radiation itself or to pressure on the optic tract, seldom is this a false localizing sign. Dr. Gaylor had, however, seen a complete homonymous hemianopia as a false localizing sign in a case of tumour where pressure of the opposite crus of the

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cerebrum on the tentorium cerebelli occluded the posterior cerebral artery and obliterated the blood supply to the calcarine cortex of the side opposite to the primary lesion. With regard to therapeutics, Dr. Gaylor thought that in those cases where reactive pus appears in the cerebrospinal fluid, the treatment is lumbar puncture daily, provided there is no growth of organisms; where there is growth of organisms treatment is rarely effective—of course Dr. Adam's case showed a growth of streptococci and one must congratulate him on the result—but when the infection is pneumococcal it has been shown experimentally in dogs that one has to replace the whole spinal fluid with antiserum for a long period of time before one can expect a chance of recovery.

Case XXVIII.—Case of Acute Mastoiditis, Sinus Thrombosis, Cerebellar Hernia: Suggestions requested regarding further treatment of the hernia.

—Dr. J. B. HUTCHISON.

M.P., aged 5 years, admitted to the Ear Hospital on 6.10.33. Pain in right ear for several days: headache, sick and vomiting on day of admission.

Tympanic Membrane intact, not bulging: tenderness over mastoid and neck. Temperature 104·2° F., pulse 132, respiration 44. General examination negative.

Cortical.—Pus throughout: perisinus abscess: sinus thrombosed for two inches posteriorly: no bleeding from bulb. Patient's condition too grave to tie the jugular vein. The following day the jugular vein was tied—collapsed above but free bleeding obtained at lower end.

Convalescence was stormy and some days later a cerebellar hernia developed through the inner wall of the sinus. Some weeks later the hernia was removed by diathermy, the wound stitched and pressure applied. The hernia recurred and the wound broke down. Finally a thin layer of skin grew over, and a metal shield was fitted for protection while at school. My intention was later to under-cut the healthy skin posteriorly and slide it forward after diathermy of the hernia.

DISCUSSION.

Dr. HUTCHISON said he would like to say that the hernia had grown so much during the last few months that the question of diathermy must be ruled out.

Case XXIX.—Case of A.S.O.M.: Lateral Sinus Thrombosis with Septicæmia for seven weeks, and Multiple Abscesses: Recovery after Intravenous Acriflavine.—Dr. GAVIN YOUNG.

J.G., female, aged 14, admitted 26.12.33 with pain in and discharge from right ear: vomiting: temperature 102° F.

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Cortical mastoid operation: little disease found in mastoid: granulations on wall of lateral sinus: sinus opened and packed: blood culture report—no growth after forty-eight hours. The jugular vein was tied 3.1.34.

Swinging temperature for next six weeks, gradually subsiding, with formation of abscesses in left hip, elbow and shoulder which were attended to by Mr. W. W. Galbraith.

From January 16th to 28th, six intravenous injections of acriflavine were given. The last abscess healed in *June*, 1934.

DISCUSSION.

Dr. GAVIN YOUNG said he simply showed this case as an example of what a good woman can do. It was due to the unremitting care and attention of the Sister in the Western Infirmary that this child recovered.

Dr. HALL asked if Dr. Young would be good enough to give a little more information with regard to the injection of acriflavine and the results he has had with it.

Dr. GAYLOR said that in several cases of septicæmia with a positive blood culture of a hæmolytic streptococcus, acriflavine (1 in 1,000) without antiserum had been given intravenously with recovery. The extraordinary thing about acriflavine is that it seems to be excreted through the choroid plexus, so that one may introduce acriflavine into the subarachnoid space not only by lumbar injection but through the medium of intravenous administration.

Dr. GAVIN YOUNG (in reply) said that acriflavine was used 80 c.cm. 1/500 for some time on consecutive days and latterly on alternate days, intravenously. They use it on the medical side in the Western Infirmary. He further said, apropos the qualities of acriflavine, that two and a half years ago his wards were closed, one or other, thirteen times during the winter with outbreaks of scarlet fever. During that Spring they started giving each patient who came in, and while remaining in, acriflavine mouth washes and they had not had one single case of scarlet fever in the wards since then. It was not that there had not been scarlet fever about, because other institutions had had it, but they had actually not had one case. They had had erysipelas but not scarlet fever.

Dr. Ross SOUPER asked, apropos Dr. Young's remarks about controlling scarlet fever in his wards, did he make the patients wear a mask? This was getting away from the case before the meeting but in December, when he (Dr. Souper) was in London, he went round the Central London Throat Hospital and discovered that all the patients were wearing masks. One of the surgeons told him that since they had masked all their patients as well as the staff they had not had a case of scarlet fever. Dr. Souper said that formerly in cases of otitic septicæmia he pinned his faith entirely to scarlatinal streptococcal serums. Latterly he had been using N.A.B. in cases of streptococcal septicæmia; in a case lately, where streptococcal septicæmia followed acute mastoiditis, having found that the lateral sinus looked all right at operation he left it unopened; when they got a

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positive report on the blood the boy was put on intravenous N.A.B. combined with Amatox, a substance the nature of which he (the speaker) did not quite know but he was told it was of value against the toxic effects of N.A.B. The dosage of this for adult cases has been worked out and he (the speaker) divided it down to the dose suitable for the boy, who made a complete recovery without further operation. Dr. Ross Souper said that in two cases since then he had also used N.A.B. and one case was particularly interesting in that the patient had a lateral sinus thrombosis with streptococcal septicæmia without pyrexia before operation, except once up to 100° F. the night before operation, and the lateral sinus thrombosis was discovered quite by accident. The clot was evacuated and the sinus packed off but the jugular vein was not tied. After three doses of N.A.B. blood culture remained sterile. The speaker asked if any members had experience of N.A.B. and suggested that some of them who were perhaps dissatisfied with their present methods might care to try treatment with N.A.B.

Dr. EWART MARTIN said he was rather interested in Dr. Souper's suggestion of the use of N.A.B. because he had found that V.D. experts were doubting whether N.A.B. had any effect in the treatment of syphilis if there was a hæmolytic streptococcal infection present. He personally believed in blood transfusion after an intra-muscular injection of 30 c.cm. of anti-scarlatina antitoxin. He had not found any benefit in giving larger doses but had found better results in repeating the blood transfusion if necessary.

Case XXX.—Case of Scarlatinal Mastoiditis : Paralysis of Homolateral External Rectus Oculi : (?) Brain Abscess : Death.—Dr. Gavin Young.

I.R., aged 9. *January*, 1935.—Scarlet fever : nursed at home : no previous history of ear trouble : uneventful first fortnight.

28.1.35.—Diplopia for five minutes : consulting physician found nothing abnormal. Occasional slight earache, without discharge, and slight elevations of temperature at times, for next fortnight.

9.2.35.—Diplopia, with paralysis of right external rectus oculi : temperature 104° F.

10.2.35.—Examination (G.Y.).—L.M.T. normal. R.M.T. covered with desquamating epithelium : no discharge : mastoid slightly tender. No giddiness : no nystagmus.

X-ray examination—Right mastoid dull.

11.2.35.—Cortical mastoid operation : muco-pus with greyish granulations throughout mastoid : not very cellular.

During next few days occasional complaint of headache : photophobia : no improvement in ocular palsy : pulse rate 60 to 72.

17.2.35.—Temperature 104° F., pulse 58 : vomiting.

Dr. J. B. Gaylor reports nothing abnormal in the neurological system save possibly a slight facial weakness on left side.

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Child was comatose by the time she was brought to the table on same evening. Right temporo-sphenoidal lobe was searched without result and the child died twelve hours later without regaining consciousness.

No *post mortem* examination was asked for, for family reasons.

Discussion.

Dr. Gavin Young said that if ever there was a classical picture of a temporo-sphenoidal abscess this was the case. He thought at first, of course, that it was a Gradenigo's syndrome because of the ocular palsy but it was a most extraordinary case which quite defeated him. He supposed that actually the child died of meningitis but the condition looked like a temporo-sphenoidal lobe abscess in its early phase.

Case XXXI.—Case of Influenzal Otitis Media : Acute Mastoiditis : Gradegino's Syndrome.—Dr. F. T. Land.

A.R., aged 20, admitted 30.1.35. History of influenza three weeks previously, with pain in right ear relieved by myringotomy two days later. Since then profuse discharge, and severe right frontal headache : drowsy during last three days, and pain in nape of neck on right side : diplopia for last twenty-four hours.

Examination.—Temperature 100·6° F., pulse 96, respiration 22. Patient pale, ill-looking, drowsy : tongue red and rather dry : diplopia on looking to right but strabismus apparent only in extreme deviation : right external rectus paresis : no nuchal rigidity. A.S.O.M. right : meatal roof sagging : mastoid tender.

30.1.35.—Right cortical mastoid operation : extensively cellular : thin pus throughout : necrotic cell divisions : pale, unhealthy granulations. Middle fossa dura exposed, healthy, tension not increased.

Bacteriological report—pure culture hæmolytic streptococci.

9.2.35.—Not feeling well for last twenty-four hours : return of nuchal pain : ache along right lower jaw : strabismus more marked : temperature 99·6° F.

Radical operation completed : dura widely exposed above antrum, aditus and middle ear—apparently healthy : tegmen antri necrotic : wound packed.

13.3.35.—Recovery slow but uninterrupted : squint not now noticeable but diplopia on looking to extreme right : mucoid discharge still abundant from middle ear.

Discussion.

Dr. Land said that one of the interesting points about this case was the continuance of profuse discharge in spite of the extensive radical operations which had been performed. He considered that it arose in the cells adjoining the Eustachian tube. This might be used as an argument supporting the theory that infection of the apex of the

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petrous in these cases follows a spread of infection from these cells alongside the tube. The second operation, in which the zygomatic cells were followed up and a considerable area of the dura above the antrum, aditus and middle ear was exposed, resulted in immediate relief of the symptoms but without diminution in the discharge.

Case XXXII.—Peculiar Phenomena following a Cortical Mastoid Operation.—Dr. W. S. SYME.

T.S., aged 15. 4.1.34.—Pain in and discharge from right ear for two days, with sickness and vomiting: swelling behind the ear. Discharge three years ago. Temperature 102° F., pulse 128, respiration 26.

5.1.34.—Cortical operation: extensive disease: pus in great quantity: sinus exposed but looked healthy although the wall was covered with granulations.

8.1.34.—Had eleven fits of an epileptic type between midnight and 1.30 p.m. Wound re-opened and sinus examined by aspiration and found to be patent. No further fits. Temperature never above 100° F.

12.1.34.—Profuse bleeding through the sinus wall: packed. Patient made an uninterrupted recovery and was discharged 17.2.34.

There had been no previous history of fits and the health had been generally very good.

3.5.35.—Patient very well but ear still discharges.

DISCUSSION.

Dr. SYME informed the meeting that this boy still has a discharging ear which does not seem to respond to ordinary conservative treatment and it may be found necessary to perform a radical operation.

Case XXXIII.—Case for Diagnosis.—Dr. W. S. SYME.

M.R., aged 63. 8.1.34.—Sore throat for six months, with huskiness and cough. Wassermann reaction and chest negative.

23.2.34.—Direct examination—left cord fixed and showed a swelling below its posterior part. Biopsy from this swelling. Papilloma which at one place shows irregular hyperplasia.

20.1.35.—Direct examination—limited movement of both cords: general thickening of lining: probably chronic simple inflammation.

3.5.35.—Fixation of right cord.

Case XXXIV (Extra Case).—Dr. W. S. SYME.

A.C., male, aged 56. Dysphagia and pain in the right ear for one month: hard swelling in neck.

5.1.33.—Direct examination—growth in right pyriform sinus and on to pharyngeal wall: œdema of right arytenoid and ary epiglottic fold. Larynx free from growth. Wassermann reaction, chest and sputum all negative.

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Biopsy—" squamous epithelioma ".

9.1.33.—Suspension laryngoscopy: five needles of 2 mg. and five of 1 mg. inserted into and around the growth for 100 hours.

15.3.35.—Small recurrence on pharyngeal wall. Biopsy—" squamous epithelioma ".

5.4.35.—Five needles of 4 mg. inserted for 140 hours.

DISCUSSION.

Dr. SYME said this was a man who had a squamous epithelioma in his right pyriform sinus and the adjacent wall of the pharynx, treated with needling—ten needles altogether, five 2 mg. and five 1 mg. The patient seemed to do well for a long time, then he had a slight recurrence quite a short time ago, and had a further dose of radium. He seems to be fairly free at the moment. He had a very large mass of glands in the neck at the time of the first occurrence but Dr. Syme did not think there was anything in the neck at present.

Dr. Ross SOUPER asked if the needles were applied directly or by suspension.

Dr. SYME, in reply to Dr. Ross Souper, said the needles were applied by suspension.

Case XXXV (Extra Case).—Tonsillo-mycosis.—Dr. LAND.

J.McD., aged 36 (private case). Complaint of slight discomfort only on swallowing the saliva. Since *January*, 1935, the tonsils have been covered by numerous non-confluent patches of greyish-white, shaggy, adherent membrane. The tonsils, at first enlarged and prominent, are now small and hidden between the pillars. The non-affected parts of the tonsils and the fauces have not been congested. The condition appeared during convalescence from a streptococcal sinusitis complicated by mastoiditis. For the last three or four months the general health has been unimpaired but only slight improvement has been seen in the local condition.

Bacteriological report—" Smears and cultures show a budding yeast-like organism of the type Cryptococcus. No hyphomycetes were seen on smear examination of the original material."

DISCUSSION.

Dr. LAND said that this is a case of mycotic infection of the tonsils, occurring as it usually does during a period of debility. It has responded very poorly to treatment. Various topical applications have been tried, and for some time the patient has been having iodides, and Mandl's paint locally. Fibrosis appears to be pretty active in the tonsillar substance, but although the membranous material is now more easily detached, there has been only slight diminution in its amount.

Case XXXVI (Extra Case).—Dr. THORBURN.

Male, aged 39, complaint of hoarseness, gradual in onset, of six weeks' duration: no dysphagia or dyspnœa but latterly some discomfort in the region of the larynx.

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Abstracts

Examination.—Swelling and ulceration with whitish membrane formation affecting both sides of the larynx : the right side is fixed but ulceration does not extend to the arytenoids or to the ary-epiglottic folds.

Investigation to date.—X-ray chest and sputum—negative for tuberculosis. Wassermann reaction of blood—negative. Swab from larynx—gram-positive diplococci on smear : culture of hæmolytic streptococci : B. diphtheriæ absent. Biopsy not yet carried out.

DISCUSSION.

Dr. THORBURN said that the opinion of most of the members with whom he had spoken was divided between an unusual type of infective ulceration of the larynx and carcinoma. The short duration was against a diagnosis of carcinoma but he would keep the case under observation and if necessary do a biopsy.

ABSTRACTS

EAR

Acute Otitis Media with Meningitis followed by Labyrinthitis on the Opposite Side. W. KINDLER. (*Z. Laryng.*, 1935, xxvi., 177-81.)

Labyrinthitis without otitis media complicating cerebrospinal meningitis is not uncommon. But one very rarely finds an otogenic meningitis complicated by a labyrinthitis on the *healthy* side. Two such cases are described, both in children. *Boy, aged 7*, had an acute right-sided otitis media with symptoms of meningitis and a right-sided nystagmus. Vestibular tests showed a non-responsive *left* labyrinth with a normal tympanic membrane on that side, while the right labyrinth showed a good caloric response. Lumbar puncture gave turbid cerebrospinal fluid under pressure but no organisms. In view of the conflicting results of the vestibular tests no operation was done. The patient recovered and an examination some twelve months later showed a normal tympanic membrane, but it was still impossible to obtain a caloric response on the left side.

In the second case, *a girl aged 7*, the treatment was also non-operative, except for repeated lumbar punctures. During the fifth week of the illness, when the patient was on the way to recovery from the otogenic meningitis, a sudden attack of deafness and vertigo in the healthy ear occurred. The vertigo gradually disappeared and the deafness ultimately cleared up.

J. A. KEEN.

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