were extremely bad and that he had injected strychnine and was giving oxygen. While returning immediately to the hospital, it occurred to me that as the middle fossa was exposed the very firm packing might be affecting the medulla by pressure. This proved to be the case, as on releasing the packing respiration and pulse quickly improved. It should be mentioned that an X-ray photograph taken before the second operation showed that the growth involved the ethmoid region, orbit and maxillary antrum, and that the sphenoid sinus was quite clear.

I may mention, with the hope that others may try it, that this and all my recent cases operated on for malignant and purulent disease, are given grs. 10 of naphthaline tetrachloride thrice daily for three or four days after operation, and grs. 10 at bedtime for another week. Healing appears to be accelerated and toxic signs improved. Naphthaline tetrachloride is a very useful intestinal disinfectant and it is hoped by this means to improve the action of the endocrine glands, and so raise immunity.

It should be mentioned that this patient was very toxic in appearance, but is now quite healthy with a clean skin.

SOCIETIES' PROCEEDINGS

ROYAL SOCIETY OF MEDICINE—SECTION OF OTOLOGY.

President—DAN MCKENZIE, M.D.

November 6, 1926.

A Case of Congenital Deafness showing Malformation of the Bony and Membranous Labyrinths on both Sides—Dr J. S. FRASER.

The case is published *in extenso* in the *Journal of Laryngology and Otology*, Vol. xlii., May 1927, p. 315.

DISCUSSION.

Dr DAN MCKENZIE (President) said that the question was, how far syphilis was operative in producing the lesions shown. It looked like aplasia of the labyrinth, but unless syphilis could prevent the due development of the labyrinth, it was difficult to suppose that disease to be responsible. Another question was: Could the hydrocephalus have any connection with the condition of the labyrinth?

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

Dr KERR LOVE did not think there was strong evidence that syphilis was answerable for this case. He suggested it was a defective development appearing at the end of a woman's fruitful life; sometimes this took the form of mental deficiency. In the present case there was not the usual syphilitic history of miscarriages and still-births. Twelve years ago he recorded a number of family histories in cases of congenital deafness, each one supported by a positive Wassermann reaction, and in which there was congenital deafness, proving the congenital deafness to be due to syphilis. Was this child mentally alert?

Mr G. J. JENKINS regarded the case as a "Missbildung." For the organ to have been formed, and then brought to this state by a disease like syphilis, was unbelievable. With regard to the multiplication of cells in the region of the eighth nerve, was it not possible that this cellular infiltration was in the nerve, not round about it? Was it not a multiplication of the fibroblasts taking up the nerve fibre itself? It was sometimes difficult to distinguish the younger cells of fibroblastic formation from the leucocyte.

Dr J. S. FRASER (in reply) said that he also did not regard the conditions shown as due to congenital syphilis. The mother had produced eleven children before the birth of the patient, was ill at the time of conception and had not good health during the pregnancy. As Dr Kerr Love said, the patient represented her last effort at reproduction. He (Dr Fraser) believed some hydrocephalus was present, but did not know what the cause of it was. He would ask the pathologist Mr Jenkins's question about the eighth nerve.

December 4, 1926.

Have we a Resonance Theory of Hearing, or only a Resonance Hypothesis?—GEORGE WILKINSON, F.R.C.S.

The paper will be published in the *Journal of Laryngology and Otology*, Vol. xlii., June 1927.

Persistent Post-Auricular Pain.—PHILIP FRANKLIN, F.R.C.S. —Female, aged 25, was first seen in February, 1926, with a history of pain over the tip of the left mastoid, persistent for one and a half years. No history of deafness or otorrhœa was obtained. Nose, accessory sinuses, ear and teeth normal: left maxillary antrum punctured and washed out with no result. In March a small portion of the left middle turbinate in contact with the septum was removed; pain not relieved. In May her doctor reported development of suicidal tendency. A Schwartze operation was performed on the left mastoid. Pain relieved for one month, but recurred; still persisting, though somewhat less severe. In September three injections of alcohol and novocain at weekly intervals were given over the painful area. Relief for three days after first injection; for five days after second injection; no relief after the third. There is no obvious gastric disorder.

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

Mr NORMAN BARNETT said the fact that the pain was better confirmed the idea that it had been a referred pain. He had had a similar case in a non-neurasthenic woman, who had few other symptoms except pain. There was a discharge from both ears, and he had therefore to perform a double mastoid operation at which extensive disease of the bone on both sides had been found. After recovery pain was absent but later returned. Medical and gynæcological examination had given negative results. There was now freedom from pain and the patient was apparently normal. In the present case he suggested a medical and gynæcological examination. He suggested further that if the pain persisted ultra-violet rays should be applied by means of the Kromayer lamp, with sufficient exposure to cause definite reaction.

Mr E. WATSON-WILLIAMS asked if this patient's left sphenoidal sinus had been examined; the pain was in front of the usual sphenoidal area of referred pain. She said that she had had catarrh for some time, but that it had been better during the last week, and there appeared to have been a coincident remission of pain.

Dr HERBERT MARKS (Sydney) mentioned a somewhat similar case, which had given him anxiety, that of a nurse, aged 30. The pain had been bilateral, and had come on gradually. At times it was so severe that she had to go off duty. Indian paste and blistering gave relief temporarily, but when she returned to work the pain was as bad as ever. She had never had organic ear trouble, and hearing was normal on both sides. A skiagram suggested air-cells in the mastoid, and this suggestion was confirmed on operation. He had opened first the left mastoid and found a "honeycombing"; he scraped gently with a sharp spoon, and air bubbles came up through the cells. The anæsthetist suggested that the condition should be called a "vacuum mastoiditis." No pus had been present, and he (Dr Marks) had scraped away half the mastoid process. Healing had taken place, and the pain had completely disappeared from that ear. Two months later she had returned for operation on the other side, in which a similar condition was found. Within a fortnight she had returned to duty, and was now well. If the patient shown did not recover, hypnotic suggestion might be tried, as he (Dr Marks) considered there was a neurotic element in the case. He had known patients in Australia cured by that means.

Mr SOMERVILLE HASTINGS said this was a type of case frequently met with in practice. He asked whether the taste fibres going to the posterior third of the tongue had been investigated. In neuralgia affecting the geniculate ganglion and the facial nerve, there were symptoms closely resembling those in this case, and often accompanied by impaired taste in the posterior part of the tongue.

Mr E. B. BARNES asked whether the Eustachian catheter had been passed when severe pain occurred in the ear. Removal of adenoids might help the patient.

Mr RUSS WOOD said he also had had a similar case in a nurse, who had no signs of ear disease, or deafness. Tonsillar and sinus investigation had given negative results. He had opened the antrum, but had found it quite normal. On the suggestion of a medical friend he had given large doses

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

of ammonium chloride, and the pain had ceased for six months. At the end of that time the patient had returned with complaint of pain in the other ear, and the same mixture had had a similar result.

Mr TILLEY said he could not define the type of neuralgia which responded to ammonium chloride, but when such drugs as aspirin, pyramidon, salicylate and quinine failed, he had often found that ammonium chloride acted beneficially. It should be given in full doses, and the addition of the liquid extract of liquorice made a palatable mixture.

Sir JAMES DUNDAS-GRANT said that at the Central London Throat and Ear Hospital chloride of ammonium was used in almost all cases of chronic middle-ear catarrh, some of which might have been called otosclerosis, and as after a time the patients' faces became ruddy he concluded that the drug was a hæmatinic. Grainger Stewart said that in vertical headache associated with leucorrhœa, chloride of ammonium acted most beneficially. Five to ten grains was the dose, and a little bicarbonate of soda, liquorice and syrup of lemon were added to make it less unpalatable.

Mr FRANKLIN (in reply) said that the pain in this patient had been persistent, and had gradually been getting worse. Since the mastoid operation it had, however, become less severe. The sphenoidal sinus had been explored, and found normal. Judging from Dr Marks' description, his case of suggested "vacuum mastoid" could not have any bearing upon this case, in which the pain was evidently real, and the patient not of neurotic type. Therefore he (the speaker) did not think that hypnotism would help much. The use of the Eustachian catheter had no effect upon the pain. No investigation regarding abnormality of taste had been made. He would, however, investigate this aspect of the case. He was grateful for the suggestion to give chloride of ammonium.

Mastoiditis with Perisinus Abscess and Lateral Sinus Thrombosis presenting Unusual Features—LESLIE POWELL, M.B.—Patient aged 19, was admitted 12th September 1926 with pain in right ear for three weeks; discharge, three to four days; swelling and tenderness behind right ear; obviously ill; tenderness down right side of neck. Tuning-fork heard only on left side; mental condition sluggish.

First Operation on same day; simple mastoidectomy; extensive perisinus abscess found depressing the meninges, which filled out slowly.

On 15th September, one short rigor.

On 19th September, temperature rose, but fell again, and general condition remained good.

On 23rd September, a brawny swelling appeared in neck.

Second Operation: Wound enlarged; pus in diploë; more bone removed; pus found coming from pinhole in lateral sinus, which was freely opened evacuating a large amount of pus.

Incision over internal jugular vein; pus was found in carotid sheath leaking from small hole in internal jugular vein, which was freely

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

opened. Vein was collapsed to root of neck, so ligature impossible. Recovery uneventful except that a tube had to be reinserted on 11th October on account of further collection of pus in the vein, presumably leaking from mastoid wound.

The case is of interest as showing that plugging the sinus and ligaturing the jugular are not always essential to success, and the very slight symptoms produced by the extensive sepsis in the vein, when once mastoidectomy had been performed.

There is some recovery of hearing in the left ear, suggesting that the complete deafness on admission was due to the pressure of the perisinus abscess and raised cerebral tension.

The very slow filling out of the meninges when the abscess was evacuated is unusual. In spite of all the pus the neck wound healed by first intention except for the tube hole.

The patient sways slightly to right, but vertigo has ceased.

Mr J. F. O'MALLEY asked what the organism was. The pooling of the pus was very unusual.

Mr LESLIE POWELL (in reply) said that no bacteriological examination of the pus had been made. He had hoped for comment on the degree of risk in leaving the clots to shut off the septic part of the jugular vein. It had been stated that the peripheral part of the clot was aseptic, therefore in this case he had taken the risk, and the result was satisfactory. He asked how often one found cavernous sinus thrombosis following lateral sinus disease. He did not think extra risk was being run in that way because one could not shut off the connection with the cavernous sinus.

Rudimentary Auricle—H. J. BANKS-DAVIS, M.B., F.R.C.P.—A handsome and intelligent boy, aged 4, has a right rudimentary auricle and no apparent auditory meatus. The mother states that he is "stone-deaf in this ear," but I do not find that this is the case. She says that "if he were a girl, this deformity would not matter," as it could be concealed, but she is afraid that he will be teased at school and handicapped in after life, and wishes to know if no operation can be done to remedy the deformity and make him hear.

Sir JAMES DUNDAS-GRANT said this case could be better discussed after a skiagram had been taken; it was difficult to trace a meatus.

Mr MOLLISON referred to a case of deformed rudimentary auricle in an adult patient sent to him by Mr Gillies. On two previous occasions operation had been performed to open the external auditory meatus, and after each the hearing had been improved, but the meatus had again closed. He (Mr Mollison) had opened the mastoid and the antrum and there was an abnormal arrangement of the ossicles; there was no external auditory meatus. Afterwards Mr Gillies put in a skin-graft and held it in position with stent. When seen later the patient was certainly hearing half as well again.

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

Mr A. R. TWEEDIE asked if any member who saw a case of microtia in an infant would show it to the Section, so that the various reflexes might be tested.

Mr O'MALLEY said he had been faced with a similar problem in a bilateral case. He had seen the child when it was a year old, and he had not yet decided what to do. Adult cases were a different proposition. He intended to have a skiagram taken to ascertain what the external meatus looked like.

Mr SOMERVILLE HASTINGS advised that this case be left alone, as he had found in cases of imperforate meatus that there was very fair hearing. A girl with imperforate meatus on both sides had come to his hospital. She wore no apparatus, and went to a secondary school. She sat in front of the class and heard fairly well. He suggested a carefully made rubber apparatus to hide the defect.

Lateral Sinus Thrombosis, without Otorrhœa: Septicæmia; Subsequent Tonsillectomy; Acute Nephritis; Recovery.—T. H. JUST, F.R.C.S.—Boy, aged 10, was admitted to hospital on 31st March 1925.

History.—Pyrexia for three weeks, up to 103° F.; shivering at times; some headaches. History of slight earache (right) at commencement of disease, which passed off after a few days. Never any discharge present. No other physical signs were present.

On admission.—Chest and abdomen normal; temperature, 104.2° F.; pulse, 110; rigor after admission. Blood culture; profuse growth of hæmolytic streptococci. Right ear; membrane dull pinkish, intact, not indrawn; no mastoid swelling or tenderness. Left ear; membrane dull, intact, indrawn. Urine; albumin; some pus cells and hyaline casts.

9*th April.*—Schwartze operation (right); œdematous mucoperiosteum in the mastoid cells. Lateral sinus explored; full of pus. Sinus obliterated, and internal jugular vein tied in the neck. For one month temperature remained high, up to 104° F., with occasional rigors.

22*nd April.*—Blood culture; hæmolytic streptococci.

6*th May.*—Blood culture; sterile.

There was ultimate gradual recovery, and healing of the wounds.

The patient was kept under observation, and as he had septic tonsils and adenoids, these were removed on 6th October 1926. The boy went home after the operation, and was brought up to hospital on 8th October, with a temperature of 104° F.; tonsil fossæ clean; no physical signs found; blood culture, sterile. Widal reaction, T.A.B. negative. Urine: albumin, + + +; sugar, 0; granular and hyaline casts; red and white cells.

16*th October.*—Blood urea, 0.24 per cent.

21*st October.*—Blood urea, 0.11 per cent.

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

During this time the patient was extremely ill; lethargic, but did not complain of any pain.

The patient has now recovered from the acute condition; but the urine still contains some albumin with a few cells and casts.

Mr A. R. TWEEDIE said that Dr Jacob, of Nottingham, had drawn his (the speaker's) attention to a paper by Dr Alex. Fleming in *The British Journal of Experimental Pathology*, vol. vii, No. 5, p. 274, dealing with the bactericidal property of blood. From extensive experimental investigations Dr Fleming had concluded that an intravenous injection of a 10 per cent. solution of salt induced the maximum efficiency of the bactericidal property, and suggested as a dose for an ordinary adult, 50 c.c.

Recently he (Mr Tweedie) had had a case of septicæmia, in which there had been lateral sinus thrombosis. The internal jugular had been tied but the ligation had had no effect, neither had the injection of 100 c.c. of antistreptococcic serum, but there had been immediate improvement when an intravenous injection of 50 c.c. of a 10 per cent. solution of saline had been given; the temperature had decreased from 105° F. to almost the normal degree, and had remained down. Two further injections had been given. The blood culture at the next examination had been negative, and the patient had apparently made a complete recovery, which was, no doubt, entirely due to this form of treatment, although he (Mr Tweedie) regretted that the details of evidence were incomplete.

Mr MOLLISON said that recently he had asked Dr Eyre to try injections of mercurochrome for cases similar to this, and he had had two very successful results. One was a girl who had septicæmia, following an operation for acute mastoiditis; streptococci were grown in pure culture from the blood. Dr Eyre had injected mercurochrome on three or four occasions and recovery had ensued. The other case was that of a woman who had had a mastoid operation, and in whom what appeared to be blood infection had developed. He had not found any evidence of jugular thrombosis. There were lung infarcts on two occasions; the patient was losing weight and was very ill. Dr Eyre in this case also had given three or four injections of mercurochrome, and the patient had made a good recovery.

Mr TILLEY said that in the spring 1926, he had seen a patient (a boy) in consultation with Mr Broughton Barnes, whose case had presented this problem of acute septicæmia. It had begun with earache and discharge which had ceased before the speaker saw the patient; the tympanic membrane had then been normal, and the patient could hear the watch ticking six feet away. There was no pain in the ear, nor was the mastoid tender on pressure. There was no swelling in the neck, nor was there anything suggestive of jugular or lateral sinus thrombosis. In addition to the "swinging" temperature there was great pain over the symphysis pubis and behind the trochanter of the left hip-joint. In the daytime the boy felt fairly well, his mental condition was clear, but in the evenings he was ill. Later, symptoms of chest trouble developed with pleural effusion and the patient died. Luc, in his lectures, had recorded similar cases which were first described by Körner. Briefly, these cases began with acute middle-

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

ear suppuration and discharge, which cleared up, but before doing so symptoms of general septicæmia supervened and distal septic emboli appeared. In some cases the mastoid and lateral sinus had been opened up but no local foci of suppuration had been found. When he had found that there was a septic embolus over the symphysis pubis in this patient he (Mr Tilley) had hesitated to advise a mastoid operation because it was unlikely that the general septicæmia would be relieved by that procedure.

Dr DAN MCKENZIE (President) said that the delivery of the antiseptic directly into the circulation was a great step in advance of former means of treatment, and from all quarters one heard of general septic infections brought under control by this method. In his experience the colloid silver salt had had a great effect in these cases, though pharmacologists denied that any ordinary chemical action was induced by colloids. But it almost seemed as if the all-important point was the intravenous administration and not the agent itself, since a large variety of remedies had been successfully used.

Mr JUST (in reply) said that the patient's temperature had been high for three weeks before he entered hospital. He had been admitted as a case of typhoid, and at first there was no history of ear disease. A hæmolytic streptococcus had been found in the blood; and this had lead to the search for a septic focus. The history of the earache, three weeks before, was only obtained on close questioning. The operation was an exploratory one, on account of the history, the rigors, and the temperature of 106·2° F. The lateral sinus was found full of pus. The patient's blood culture had remained positive for three weeks after operation. It was a remarkable thing that he recovered; this was probably due to the fact that there was never any involvement of the chest.

When the patient was operated upon later for tonsils and adenoids, his very high temperature and serious condition were due to severe acute nephritis. At the time it was difficult to satisfy oneself that the cause was not a septicæmia. An interesting question is whether the length of the pyrexia after the mastoid operation was not due to an underlying nephritis, which was masked by the known septicæmia.

He felt a little afraid of mercurochrome, as he had seen one or two patients in whom it had produced severe bleeding from the urethra and rectum. He had tried crystal violet intravenously, in a case of septicæmia; the reaction had been severe, but the patient recovered. He was grateful to Mr Tweedie for the suggestion to employ 10 per cent. sodium chloride, as that was a simple procedure. The patient had had numerous doses of sensitised streptococcal vaccine (Besredka).

Rodent Ulcer Metastasis.—E. BROUGHTON BARNES, F.R.C.S. —Male, aged 49, leather worker, had a rodent ulcer removed from the forehead in 1922.

In 1923 left pre-auricular gland enlarged; treated by radium applications and then disappeared.

In 1925 swelling of upper part of pinna and adjacent tissues took place. He was first seen by exhibitor in November 1925. He then

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

had a perichrondritis of pinna (thought to be due to radium) and a small warty outgrowth in the meatus; section report, "papilloma." Patient failed to report every month as directed.

In *October* 1925, seen in present condition; scraping from meatus always shows great numbers of acid-fast bacilli. Reported after several examinations "not tubercle or leprosy, probably non-pathogenic." Guinea-pig injected October 1926; negative findings at post-mortem five weeks after.

Section from mastoid shows typical rodent ulcer running freely immediately above periosteum.

Examination.—Complete paralysis of the upper facial fibres; no paralysis of lower fibres. Weber to the left; air and bone conduction on left increased; C5 well heard; caloric reaction, left; normal.

The case is one of rodent ulcer metastasis and advice as to treatment is asked. Will it be possible to save part of the pinna?

Mr T. RITCHIE RODGER suggested that, before anything was done to the posterior part, the pinna and also the gland should be exposed to X-rays. He had had a case of tar epithelioma, in which the pinna had seemed to be even more affected than in this case, so that the patient was threatened with removal of the whole auricle. Operation was refused, and then X-ray exposure was suggested, and carried out, and within six months the lesion on the auricle had disappeared. There was, however, a considerable loss in the outer line of the auricle. In the present case the condition of the pinna might be largely inflammatory in spite of the induration.

Mr TILLEY suggested irradiation of the indurated parts, which, even if it did not cure, would make a slighter operation possible; already the facial nerve was partly involved. Recently, he (Mr Tilley) had had a case of a large rodent ulcer of the left nasal vestibule, which was irradiated, and after six weeks it has disappeared, except for the resulting smooth, healthy scar.

Dr DAN MCKENZIE (President) said he wondered whether the term metastasis had been correctly used here. In these cases he had successfully used diathermy.

Mr BARNES (in reply) said that with regard to metastasis, when he had seen the case a year ago the swelling was entirely under the skin; there was no ulcer. In 1923 a gland near the ear was treated by radium. He (Mr Barnes) would expose the pinna to X-rays. Regarding the use of radium, he was afraid that the rodent ulcer was already in the mastoid. The facial nerve seemed to be caught in the face, not the bone. Four weeks ago the paralysis was absolute in the upper part of the face, but there was none in the lower part.

Extradural Abscess causing Mastoid Suppuration—F. BRAYSHAW GILHESPY.—Male, aged 25, had had otorrhœa since childhood, following removal of adenoids. Seen in June 1926 with symptoms of mastoid suppuration; perforation through outer attic wall.

An extradural abscess was evacuated from roof of tympanic antrum;

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

conservative mastoid operation, bridge and outer attic wall removed; membrana tensa not removed. Hearing is good in this ear; membrane can be seen.

Mr TWEEDIE said the result was excellent, but he asked what was the extent of the previous pathological lesion and what parts were removed by operation. There seemed to be no remnant of incus present now.

Mr GILHESPY (in reply) said he had shown the case as illustrating his usual method of dealing with attic suppuration. He had been carrying out removal of the incus also, and he had had good results, and could confirm what Mr Jenkins said about it.

The Use of Weber-Liel's Intratympanic Tube in Chronic Eustachian Catarrh—Sir JAMES DUNDAS-GRANT, K.B.E., M.D.—From the shape and direction of the Eustachian tube the tip of an ordinary catheter tends to impinge on the outer wall and become blocked. The Weber-Liel "intratympanic" tube adapts itself within limits to the curvature of the Eustachian tube and can be introduced for some distance beyond the tip of the catheter. This is facilitated by inclining the outer extremity of the catheter laterally outwards and upwards and at the same time rotating it slightly on its long axis so that the beak points more upwards. The intratympanic tube acts as a bougie with the additional safeguard that the correctness of its position may be ascertained by auscultation during inflation. I have found unexpectedly good results from its use in cases intractable under simple catheterisation.

The modus operandi, step by step, is as follows:—

Spray the nasal cavity with the novocain-adrenalin solution.*

Paint the deeper part of the cavity and the side wall of the nasopharynx with the same solution by means of a small wisp of non-absorbent cotton wool twisted on a Jobson-Horne wool-holder.

Introduce the silver catheter and test the correctness of the position by means of the Politzer bag and auscultation tube.

Spray a little of the novocain solution through the catheter.

Inject two drops of parolein through the catheter and blow it in by means of the Politzer bag.

Introduce the gum-elastic Weber-Liel tube through the catheter till it impinges on the outer wall of the Eustachian tube.

Move the outer end of the catheter outwards and press the inner tube a little farther in. Then, or at the same time, rotate the catheter slightly on its long axis so as to raise its tip and at the same time

* The novocain-adrenalin solution is as follows:—

Novocain	10 gr.
Adrenalin (1 per 1,000)	13 minims
Solution of sulphate of potash (2 per cent.)	1 drachm
Solution of carbolic acid (0·5 per cent.) up to	½ oz.

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press

raise the outer end without letting the inner end shift. The inner tube can then in most cases be pushed still further up the Eustachian tube.

Temporal and Zygomatic Abscess in Chronic Middle-Ear Suppuration—ARTHUR CHEATLE, C.B.E., F.R.C.S.—During the last year, two cases very similar in character have been under my care at King's College Hospital. Both were in female patients who had had a chronic discharge from the left ear for many years.

A large fluctuating swelling was present in front and above the auricle with surrounding œdema which in one case spread to the eyelids and cheek; the mastoid region was only slightly œdematous. The superior and postero-superior deep meatal walls were greatly swollen, almost blocking the passage. At operation a large amount of offensive pus was evacuated, but no carious opening could be found in the surface of the bone; the bone was found to be of the acellular type with a very thick and dense outer antral wall. The antrum contained pus, granulation tissue and cholesteatoma under considerable tension. There was extensive erosion of the outer attic and postero-superior deep meatal walls and it was evident that the pus had tracked along the meatal roof between the soft meatus and the bone to reach the zygomatic and temporal regions.

This is a distinct but uncommon type of complication of chronic middle-ear suppuration.

SOCIETY OF GERMAN LARYNGO-OTOLOGISTS.

Hamburg, May 1926.

(*Zeitschrift für Hals-, Nasen-, und Ohrenheilkunde*, Band xv., Heft 1-4.)

Abstracted by Sir JAMES DUNDAS-GRANT, K.B.E., M.D., F.R.C.S.

DISCUSSION ON THE PATHOLOGICAL AND CLINICAL ASPECTS OF TUBERCULOSIS OF THE UPPER AIR PASSAGES.

The Pathological Anatomy of Tuberculosis of the Upper Air Passages—MANASSE (Würzburg).—The introduction to the discussion of Tuberculosis of the Upper Air Passages at the Annual Meeting of the Society of German Laryngo-Rhino-Otologists forms a valuable monograph on the subject. It contains a statement of the recognised description revised in the light of original researches into the naked-eye and microscopical data, of which admirable illustrations are lavishly presented. Manasse rejects the more recent classifications of the various processes, such as "productive" and "exudative," and adopts the old-established grouping into Infiltration,

https://doi.org/10.1017/S0022215100030383 Published online by Cambridge University Press