OTO-LARYNGOLOGY IN BERLIN.

A MEETING of the Visiting Association of Throat and Ear Surgeons of Great Britain was recently held in Berlin. The first work of the Association consisted in an extended visit to the various departments of Professor von Eicken's clinic. This clinic contains over a hundred beds. There is an attendance of new out-patients of more than 25,000 each year. Associated with Professor von Eicken, who is chief of the whole Department, there are two extraordinary Professors, namely, Professor Seiffert, who is a Laryngologist, and Professor Bayer, who deals with the Otological patients. The rest of the staff numbers twenty-three medical men and women.

The Pathological Museum contains many specimens of great interest. The temporal bones are obtained from all patients post-mortem and are preserved. There was also to be seen a very remarkable collection of instruments used in the treatment of diseases of the ear, nose and throat.

Next, the Department dealing with speech defects, presided over by Professor Flatau, was visited, including the collection of instruments made by the late Professor Gutzmann. In this department there is a kinematograph apparatus which demonstrates to the patients the correct use of the organs of speech.

Professor von Eicken's clinic also contains a department for scientific work on the ear, including a silent chamber. This branch of the work is presided over by Professor Dr Schaefer.

The next visit was to the room in which experiments on animals are carried out. Here the Association saw guinea-pigs seated on a broad strip of copper which was being beaten by a hammer worked by water power. These animals had been subjected to this noise with intermissions for about two months. The idea was to test whether bone conduction had any effect in inducing degeneration of Corti's organ and ganglion cells. Some of the animals had had the incus removed on one side so as to break the ossicular chain. Professor von Eicken and Professor Wittmaack do not agree on the question of the importance of bone conduction in producing degeneration of the nerve mechanism of hearing.

Another room contained coloured wax models illustrating various diseases of the nose, ear, tongue, etc. An interesting feature was a room containing temporal bones embedded in gypsum, showing the various stages of the different mastoid operations. There is also a photographic and illustrative department in which women from all over Germany are trained for two or three years to make drawings and photographs of patients and of the various diseased conditions.

In another room most interesting work is being done in the investigation of asthma. The patients wear a mask similar to that worn by soldiers in gas attacks. The respired air is first of all filtered free from all impurities, in order to ascertain whether the asthma is due to sensitisation to irritating particles in the inspired air. Various drugs can also be introduced for inhalation.

The diathermy room was next inspected. The operating table was coated with a piece of lead, on which the patient lay, thus forming one pole

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

of the current. The other pole of course consisted of the instrument which was used for the diathermy work.

The various operation rooms were next visited and it was noted that each contained a demonstration box for radiograms, to enable the operator to inspect the radiograms from time to time if necessary. In one of the rooms a hot-air apparatus was installed for the treatment of the cavity formed at the radical mastoid operation. It was noted with interest that the various forms of Bruening's head-light bath were in great demand.

An interesting exhibit was a lead chest in which the various rubber appliances used in the clinic are kept. The upper edge of this chest contained a slot and into this slot there fitted a rim which projected down from the lid, thus making the chest air-tight. The chest itself contained an open bottle of benzine, so that all the rubber was exposed to benzine vapour, which is found to prevent the rubber from deteriorating.

The Association next visited the room in which microscopic work on the nose and ear was being carried out. Some beautiful celloidin sections of the inner ear were on view. The Bacteriology Department was in the same room. In another part of this room Professor von Eicken showed us the artificial noses and ears which are made from flesh-coloured gelatine. The patient suffering from loss of nose or ear is provided with a slab of this gelatine and with a gypsum negative of his own defect. He can thus make himself a fresh nose or ear every few days, as the old one gets dirty.

A modification of Siebenmann's method of demonstrating the extensive distribution of the mastoid air cells was also on view. After the fusible metal has been introduced into the middle-ear cleft a great part of the bone is eaten away with acid in order to demonstrate the air cells, but the surrounding bone, which does not contain air cells, is left in position. This exhibit clearly demonstrated how impossible it is to clear out all the air cells even at the most extensive Schwartze operation.

Another room contains the case records, and here there is a lay clerk in charge. If the case record of each patient is not brought to this room within two days, Professor von Eicken himself finds out the reason why.

Other rooms noted were Professor von Eicken's own retiring room, rooms for treatment of skin troubles by means of ultra-violet rays, a room for the treatment of tinnitus by means of the high frequency current according to the late Professor Passow. Professor von Eicken himself has no high opinion of this line of treatment, but at any rate it pleases the patients.

The arc light is used for the treatment of ear cases which do not heal up in the usual time. This treatment is carried out as recommended by Professor Blegvad and also Professor Thornwald of Copenhagen. Patients suffering from rickets and enlarged cervical glands are dealt with by the same means. As might be expected in a clinic formerly presided over by Professor Killian and now by Professor von Eicken, there is an extremely large and interesting collection of foreign bodies removed from the lower air and food passages. Professor von Eicken stated that these number at least 150 each year.

Professor von Eicken has his own X-ray department, where beautiful work is done. Attached to the clinic there is also an extensive library. Lastly, the members of the Association were brought back to the large

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

lecture theatre, which contains enormous models of the ear, nose and larynx. Around the walls are excellent oil paintings of the various diseased conditions of the larynx.

Professor von Eicken demonstrated the method he employs in the trans-meatal mastoid operation. This is especially useful in cases of cholesteatoma. If the patient has good hearing, Professor von Eicken leaves the ossicles and drumhead in position, *i.e.* he performs the modified radical operation through the meatus; in other cases the radical operation itself is performed. In both instances local anæsthesia only is employed. Fuchsin in spirit is used to sterilise the skin of the meatus and auricle. As a local anæsthetic Professor von Eicken uses five or six syringefuls of 1 per cent. novocain with adrenalin. This is introduced from behind the auricle, and the needle is also passed along the posterior and superior wall of the meatus. Finally, Neumann's meatal anæsthesia is carried out. (Occasionally there is temporary facial paralysis after the operation, which lasts only half an hour and is due to the local anæsthetic.) After a sufficient time has elapsed a three-sided flap is cut by making incisions along the roof and along the floor of the meatus, according to the method of Koerner. The flap is brought out of the meatus and a stitch is passed through it in order to hold it back. In this way the operator can get at the bony posterior wall of the meatus with the chisel and gouge. A large aural speculum, containing a wide slot, is employed and, in the later stages, a nasal speculum. Very small gouges are used and also bone-cutting forceps. To some members of the Visiting Association, however, it seemed very doubtful whether there was any advantage in operating through the meatus. Undoubtedly the operation is more difficult. The only advantage appeared to be the avoidance of a scar behind the ear, which is not of great importance.

An operation, which was illustrated on the cadaver by Professor Seiffert, was that of an external operation on the frontal sinus in which, after the frontal sinus had been opened from below and the ethmoidal cells cleared out, a finger-stall packed with gauze was introduced from the anterior nares into the frontal sinus. A Thiersch graft was then inserted through the external wound so as to cover the finger-stall.

Professor Seiffert also showed that in the treatment of mediastinal abscess following injury to the œsophagus an endeavour is made to drain the abscess *into the gullet itself*. An œsophagoscope is passed and through this a pair of long scissors is introduced. One blade of the scissors lies inside the gullet and the other is passed through the rent in the wall of the œsophagus. In this way on closing the scissors an incision is made right through the wall of the gullet. By this method four cases of mediastinitis have been cured.

Professor Seiffert also informed us that cases of cancer of the post-cricoid region could be removed by operation through the directoscope. In the treatment of cancer of the vocal cord the radium needles are placed in a small metal case which is introduced through the hole made in the ala of the thyroid cartilage. The metal case keeps the radium needles in good position.

Professor Bayer has recently been working at the operation of Attico-Antrotomy. He maintains that the radical mastoid operation as usually

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

performed takes away much healthy bone. Further, the operation of attico-antrotomy preserves the middle-ear apparatus and is therefore to be performed in cases with good hearing. As a rule the operation is indicated in (1) chronic cases with cholesteatoma and good hearing, and (2) also in some acute influenzal cases in which the attic is the region involved. Professor Bayer illustrated his remarks on infection of the attic in influenza by means of four or five paintings which showed first of all congestion of Shrapnell's area; secondly, bulging; thirdly, blood blister formation; fourthly, inflammatory swelling extending to the wall of the meatus; and, lastly, perforation of Shrapnell's membrane. Before perforation occurs paracentesis should be carried out, but this does not cure the trouble in all cases and attico-antrotomy is then called for. The object of this operation is to preserve the ossicles and the lower part of the drumhead, and yet drain the focus of infection. The operation consists in removing the outer wall of the attic and aditus. In some cases of cholesteatoma with anterior perforation of Shrapnell's membrane the disease does not extend posteriorly beyond the attic, whereas in other cases with a posterior marginal perforation not only the attic but also the aditus and the antrum must be opened up. If the ossicles are normal and the hearing is good, it is not necessary to remove the outer wall; in such cases only the antrum should be opened. During the operation it is necessary to remove all bone chips, and it is better to protect the drumhead and in some cases the attic by inserting a small piece of gauze.

Professor Bruehl's clinic at the Maria Victoria Krankenhaus, Karlstrasse 29, has accommodation for 100 patients. Professor Bruehl demonstrated successful cases of sinus thrombosis, brain abscess and meningitis. Afterwards he performed a Schwartze operation, using a combination of local and general anæsthesia. The sharp spoon was used very freely. Professor Bruehl also demonstrated his own method of meatal plastic.

Professor Finder demonstrated a case which showed horizontal nystagmus to both sides, most marked to the right, with dysdiadokokinesia, paralysis of the right vocal cord and of the right side of the soft palate. The lower part of the right facial nerve was also paralysed and the right cornea was anæsthetic. Further, there was paresis of the right arm and leg. The patient's hearing had been normal till lately. The case was probably one of multiple sclerosis.

Professor Bruehl demonstrated a large number of children from one of the schools for hard of hearing children in Berlin. These cases included three of microtia with normal labyrinth. The standard in Berlin for the admission of children to the hard of hearing schools is perception of the conversation voice at a distance of less than 2½ metres (about 8 feet). There are in Berlin six schools for children suffering from diminished hearing quite apart from schools for the deaf and dumb. There are 5000 deaf and dumb individuals in Berlin and the authorities take care of the deaf through life.

(1) The Kindergarten for the deaf and dumb accepts children at the age of 2½ years. The children are kept from 9 A.M. to 6 P.M. (2) As the children grow older they are sent to the Municipal School for the deaf, which contains 240 children. The pupils are separated into various classes according to their mental qualifications. They are all totally deaf or almost

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

totally deaf. (The semi-deaf are of course admitted to the hard of hearing schools.) The deaf and dumb school publishes a magazine, which was shown to the members of the Visiting Association. The municipality pays for the conveyance of the children from their homes to the deaf and dumb school, the children living at home with their parents. Professor Bruehl and the Director of the Institute for the deaf and dumb laid great stress upon the children being *day scholars only*. They are very much against residential schools for the deaf and dumb if this can possibly be avoided. (3) From the 15th to the 18th year the pupils go to the trade school for the deaf. (4) Continuation classes for deaf citizens are held in the evening and include courses in History, Geography, English, etc. All these classes are free. There is also a municipal office for promoting the welfare of the deaf, and here advice is given as to the most suitable profession for the deaf boys and girls to take up. The city of Berlin pays subsidies to industrialists who employ the deaf. These subsidies decrease as the years go on, *e.g.* 50 marks are paid for the first year, 10 marks for the third year and so on. It is interesting to note that several of the totally deaf children had learnt not only German but enough English to make themselves understood.

Professor Bruehl demonstrated beautiful lantern slides showing the normal labyrinth and also the labyrinth of deafmutes. He showed that in cases of locomotor ataxia the spiral ganglion cells are degenerated while Corti's organ remains in good condition.

Professor Dr Halle demonstrated enucleation of the tonsil with local anæsthesia. The operation was very much as carried out elsewhere, but it was interesting to note that when the vessels between the visceral and parietal layers of the capsule were exposed, a long artery forceps was immediately put on and the bleeding was stopped by torsion of the vessel. Professor Halle does not use a snare but uses the knife all through the operation.

Professor Halle also demonstrated an operation for narrowing the nasal passages in cases of ozœna. He objects to the Caldwell Luc method of access in these cases because of the injury it causes to the nerve supplying the teeth of the upper jaw. Hallè therefore operates from inside the nose with the aid of local anæsthesia. He makes a vertical incision in front of the anterior end of the middle and inferior turbinals and then separates the mucous membrane of the lateral wall of the nose and carries separation downwards along the floor of the nose. He next chisels through in the line of the first or vertical incision into the antrum, and then chisels through the lateral wall of the nose at its junction with the floor. Finally a vertical chisel cut is made posteriorly ; the flap thus mobilised is pushed inwards towards the septum and kept in position by packing.

Professor Sorensen was kind enough to give the Association his views on the subject of the operative treatment of laryngeal cancer, and mentioned that it was now fifty years since Billroth's first laryngectomy. Sorensen does not believe in any endo-laryngeal operations for cancer. He advocates laryngo-fissure for cancer of the free edge of the vocal cord. If, however, the vocal process and the lateral wall of the larynx are affected, he advises a hemi-laryngectomy. It is useless to take away more than half of the larynx because in that case the larynx loses its function. Cases

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

of cancer of the false cord and of the subglottic region are not suitable for hemi-laryngectomy because such cases come late and transgress the middle line. Further, they are very malignant and early infect the glands. Sorensen advises subhyoid pharyngotomy for cancer of the epiglottis even if the base of the tongue is affected. He advocates total laryngectomy (1) if cancer of the epiglottis has spread down to the laryngeal cavity; (2) if both vocal cords are affected; (3) if the arytenoid region is involved; (4) in cases in which the ventricular bands and subglottic region are diseased; (5) in all cases of cancer of the sinus pyriformis; (6) all secondary cancers, *i.e.* cancers of the larynx growing down from the tongue and tonsil region; (7) all cases of recurrence after laryngo-fissure. Sorensen is a believer in operation in cases in which the glands in the neck are involved, though he admits that the results are not so good in these as in other cases.

Contra-indications.—(1) If the cartilages are perforated and the muscles and skin involved; (2) if glands are adherent to the common carotid, most of the patients are past the prime of life and in them ligature of the carotid has very bad results.

Results (GLUCK AND SORENSEN).

Of 125 cases of *laryngo-fissure* for cancer of the vocal cord, six died after operation (two from diabetes, two from hemorrhage and two from lung complication); nine had recurrence; and of these nine, four had total laryngectomy with cure; 115 are free from cancer over five years.

Subhyoid pharyngotomy.—50 cases.

Hemi-laryngectomy.—64 cases. Of these, four died (one from diabetes, one had been treated with radium and the wound would not heal, the other two deaths were from hemorrhage): 19 of the 64 cases had recurrence.

Total Laryngectomy.—788 cases: of these, 417 were intrinsic cancers of which 30 per cent. made a permanent recovery; 317 were extrinsic cases and of these only 10 per cent. were living after five years and apparently free from recurrence. Many of the patients were in poor condition before operation.

The following short description gives an outline of Professor Sorensen's technique for laryngectomy in a case of extrinsic carcinoma of epiglottis and ary-epiglottic fold involving the wall of the pharynx.

The patient was operated on under local anæsthesia and did not have any preliminary injection of morphia. 30 c.c. of ½ per cent. novocaine without adrenaline were injected at the level of 4th cervical vertebra external to the sterno-mastoid and above the external jugular vein to block off branches of cervical plexus. 5 c.c. injected into each superior laryngeal nerve, needle being directed upwards and outwards above ala of thyroid cartilage. 5 c.c. injected transversely above the sternum. T-shaped incision with transverse cross limbs; flaps dissected outwards. Pre-tracheal muscles exposed, sterno-hyoid, sterno-thyroid and omo-hyoid divided over guide on each side. Thyro-hyoid divided over guide. Parts of muscles attached to the larynx all cut short. Front of larynx to top of trachea

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press

dissected free. Transverse incision at lower border of cricoid cartilage above isthmus of thyroid gland, which was carefully separated and vessels tied off. Glands in front of crico-thyroid membrane left in position. Crico-thyroid arteries tied. Inferior constrictor muscle snipped free from its attachment to cricoid and thyroid. Ala of thyroid cartilage freed from pharyngeal aponeurosis on each side. Superior cornu cut short. Thyro-hyoid membrane exposed and superior laryngeal vessels ligatured after being separated from the nerve. This procedure was repeated on the other side. Carotid sheath exposed on both sides and some small glands removed piecemeal from the level of bifurcation of carotid arteries. Fixation sutures passed through thyro-hyoid membrane, which was then opened, the pharynx being swabbed with cocaine. The epiglottis was grasped and the larynx was dissected down from above with scissors, part of pharyngeal wall being included on the left side, where the growth was present. Pharynx was cleared of much fluid by suction. Inferior thyroid arteries tied on each side and larynx freed from top of œsophagus. Trachea opened transversely and larynx removed. Bare part of trachea taken away and the front of trachea united to skin by through and through stitches. Posterior wall united to the edges of vertical skin incision. Pharynx closed by Lembert sutures, care being taken not to perforate its wall. Transverse part of incision closed. Iodoform gauze drains put in through external angles of transverse incision and through extra openings made at the level of the trachea. One rubber tube placed in left lower drainage opening. Feeding tube passed through the junction of trachea and vertical parts of the incision. Cannula inserted into the trachea with jaconet guard. Patient returned to bed.

CLINICAL RECORDS.

A WORM IN THE APOPHYSIS MASTOIDEUM.

By Dr STEINMAN, Leningrad.

THE antrum mastoideum, and still more its secondary cells, have been very seldom the dwelling of exogenous elements; occasionally in the literature we meet with the description of cases where in the antrum mastoideum were found bullets of fire-arms (cases of Preysing, Levine, Schwartz), or the seed of a sunflower (case of Professor Bondarenko), which had penetrated into the aditus ad antrum after a whole series of unsuccessful attempts to withdraw it from the external auditory canal.

In my practice I have recently met with a very curious case, where a living ascaris had made its way into the antrum mastoideum and the terminal cell of the mastoid process from which I removed it during an operation.

https://doi.org/10.1017/S0022215100035027 Published online by Cambridge University Press