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Bi-lateral Chronic Suppurative Otitis Media. Radical Operation. Venous Thrombosis. Cerebellar Abscess. Recovery.—R. LEIDLER.

A boy, aged 16 years, was admitted to Hospital on 16th October 1931, with the history that two days before there had been a sudden rise of temperature to 39·8° with occipital headache on the right side and a severe rigor. He had suffered from bi-lateral otorrhœa of unknown origin since childhood. The Exhibitor had performed a radical operation on the left side ten years previously, but delayed local convalescence, owing to continued suppuration, had necessitated supervision ever since.

Examination.—Thickly coated tongue. Pulse 120. Temperacure 36·8°. Mental condition normal, slight neck stiffness.

Right Ear.—Anterior half of membrane and handle of malleus *in situ*—polypoid granulations surrounded by very offensive pus occupying a defect of the posterior half of membrane. No infiltration of posterior meatal wall or post-auricular area—no tenderness over the jugular vein—no palpable glands.

Left Ear.—Radical operation wound partly epidermised, partly lined with granulations. Slight muco-purulent secretion.

Whisper, right, 1 metre ; left, *ad concham.*

No spontaneous nystagmus. No fistula symptom. Labyrinth function normal each side.

First Operation (the same day, right side).

Bone partly sclerosed but extremely hyperæmic. Cells occupied by œdematous mucous membrane. Perisinus abscess under great pressure opened. The antrum was found to be full of purulent cholesteatomatous material and its walls were necrotic. The affected bone was therefore removed, exposing the middle fossa, the superior petrosal sinus, the sigmoid sinus and the posterior cranial fossa. The wall of the lateral sinus was investigated and found to be covered in part with granulations.

The radical operation was restricted to the removal of the outer attic wall because of the condition of the hearing, after which the granulations were very cautiously removed from the attic and the tympanic cavity, but the remains of the incus and malleus were left in position.

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The lateral semi-circular canal had a small erosion but no fistula.

The posterior membranous wall of the meatus was removed instead of being turned back for plastic purposes. The internal jugular vein was then exposed and tied below its junction with the common facial vein, where its contents were normal. The bulbous portion of the lateral sinus was then incised, revealing the presence of a mural thrombus with otherwise normal bleeding, whilst incision of the knee of the sinus showed a normal condition of the walls in this situation.

25.10.31.—The patient has had severe rigors almost daily since operation—the temperature varying from 36·6° to 40·5°. No headache, but some difficulty in swallowing. Wound of the bulb is suppurating freely. The packing was removed only on this date, as previous attempts had caused severe bleeding.

Intravenous injection of alcohol 60 c.cm. into the vein of the arm.

26.10.31—*Second Operation.*

As the patient's general condition and temperature were still unsatisfactory, the internal jugular vein was again exposed, its portion below the original ligature was found normal in condition, and it was again ligatured as low as possible, divided, and the area towards the mediastinum packed off.

After this, the upper portion of the vein was exposed almost to the jugular foramen, revealing a thrombosed and, in part, necrotic condition, with considerable surrounding adhesions; in dealing with these a sudden large gush of pus welled up from an abscess around the pharynx.

On re-exposure of the mastoid wound, the sinus and bulb were found to be normal, except for the peri-bulbar suppuration.

6.11.31.—Although the temperature had already subsided slightly, the patient's condition was still unsatisfactory and associated with vomiting and headache. The labyrinth responses and hearing tests on the right side were unaltered. No spontaneous nystagmus. Continual drowsiness.

7.11.31.—Sudden development of marked coarse horizontal nystagmus to the right. The neurologist reported that his examination, and the reflexes, indicated right cerebellar abscess.

8.11.31.—*Third Operation.*

Exposure of the posterior fossa and evacuation of extremely fœtid pus from the cerebellum; the abscess was lying beyond the posterior aspect of the pyramid and was reached only after the removal of marked extensive adhesions. Gauze drainage.

10.11.31.—*Fourth Operation.*

Progress still unsatisfactory with increase of unconsciousness. The cerebellar abscess was, therefore, exposed again and, as its drainage was found inefficient, a counter drain was made posteriorly.

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Thereafter, although the further convalescence was varied and caused considerable anxiety (during which cellulitis in the site of injection of alcohol in the arm necessitated surgical relief, and during which X-ray treatment of the wound was apparently of great assistance) the patient was discharged from Hospital on 12th December, and on 27th February 1932 could be reported as completely recovered, with the wounds healed, excepting for a slight continuing otorrhoea.

In commenting on the case, the Exhibitor drew attention to the long series of complications which commenced with an acute exacerbation of an old cholesteatoma. He also stressed the assistance which X-ray treatment had apparently given in accelerating the healing of the cerebellar abscess. Incidentally, he referred to Lempert's method of removing the posterior membranous portion of the auditory meatus in place of attempting one of the usual plastic methods—the advantage of which lay in its simplicity, the avoidance of stitches and disturbing formation of granulations, whilst it offered a good method of drainage, and the epidermisation of the wound cavity was just as good.

In the discussion which followed, GOMPERTZ referred to the intravenous injection of alcohol, stating that some years ago these had been tried by the gynæcologists in cases of puerperal sepsis with good results. He asked what further experience the Exhibitor had had in this connection, to which LEIDLER replied that he had used it only in two other cases. In the present case it did not appear to have had any effect.

The injection consisted of 60 c.cm. of alcohol, in a corresponding amount of normal saline solution.

NEUMANN stated that from his experience in this direction, he could only advise that alcohol injection should be tried when surgical methods had failed, and that in such cases he would rely on its administration by mouth. He also asked why gauze was used in the drainage of the cerebellar abscess instead of the method of Lemaitre, which he himself had been using lately. Further, he criticised the removal of the soft posterior meatal wall in place of the usual plastic operation, stating that, in his opinion, he did not think the former method was as good as the latter, and pointing out that the " approach " to the operation cavity through the un-enlarged meatus was too small in this case. Apart from this, however, he did not wish in any way to detract from the extraordinary success of Leidler's treatment in this case, on which he should certainly be heartily congratulated.

MEYER stated that intravenous injections of alcohol led to thrombosis of the vein in all cases.

LEIDLER, in answer, said that he very much appreciated the large amount of discussion which his case had invoked. Lemaitre's method had been impossible to use in this case as the situation of the abscess would have entailed extreme bending of the bougies whilst, with

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reference to avoiding the plastic operation, he would reply that he had used the method of the removal of the soft posterior meatal wall in some six cases already with very good results.

Two Cases of Acute Otitis Media with Septicæmia and Thrombosis of the Bulb.—H. NEUMANN.

(1) Woman, aged 27, was admitted on 15th February with the history of a sore throat which had commenced five days previously and had lasted some two days. Two days ago she also had a sudden attack of earache with a temperature of 40° C. and rigors, which latter had recurred frequently since then. Examination showed a quite recent acute otitis media. Paracentesis, which was at once performed, led to evacuation of pus under pressure. The following day the secretion had ceased and the appearance of the membrane, though still injected, indicated recovery—a local condition, however, which did not correspond with the septic state which still continued.

Two days after her admission she was transferred to the Psychiatric Clinic as, at the conclusion of a severe rigor during which the temperature rose to 41·6°, she became demented. While there a transient swelling of the knee joint occurred, but she was sufficiently recovered to be re-transferred in two days to our clinic, when, although the high fever had abated, examination of the blood revealed the presence of hæmolytic streptococci.

The appearance of the ear was now very much improved—the discharge had ceased, the parcentesis incision was well open and only at times showed a slight pulsation, whilst the patient herself felt completely well, had an extraordinarily good appetite and sat laughing in bed. In the evening, however, when again the temperature rose to 40°, she became tired and drowsy.

Thirteen days after the commencement of the otitis, as further examinations excluded other causes for the fever, a post-aural operation was undertaken. No pus was found in the cells, which contained only soft white sticky mucus ; whilst the wall of the sinus, although white in parts, appeared to be otherwise normal and, as puncture revealed fluid blood, no further investigation was made. On the next day the patient complained of pain in the neck and there was definite tenderness over the jugular area ; and as the septic temperature continued, three days later the wound was again examined, when the sinus was seen to be discoloured and was found on puncture to be thrombosed. It was, therefore, incised and a necrotic portion of the wall removed. On the first changing of the dressing pus appeared in the sinus, and on pressure over the neck a large purulent thrombus was expelled. The jugular vein was therefore ligatured and nine days later the fever had ceased and the convalescence was subsequently completely uneventful.

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(2) A strong healthy man of 19 was admitted with an acute otitis media, and for the first two weeks after his admission the temperature was subfebrile and his general condition was good. About the beginning of the fourth week the temperature rose to 40°, but the patient gave no indication of any aural complication and examination of the ear suggested a relatively healthy condition. In spite of this, on account of the high fever, it was decided to perform an antrotomy, when a commencing disturbance was found in the cells generally, whilst in particular a large cell in the region of the upper part of the sinus was full of pus and granulations. The fever, however, continued and, as general investigation excluded all other causes for the same and hæmolytic streptococci were found in the blood, the sinus was again exposed five days later, but its contents were found to be normal. Three days later, as no further improvement had occurred, the jugular vein was ligatured, after which normal convalescence took place.

ALEX. R. TWEEDIE.

ABSTRACTS

EAR

Thrombosis of the Lateral Sinus. JOHN B. POTTS, Omaha. (*Journ. A.M.A.*, 30th January 1932, Vol. 98, No. 5.)

The paper is based on a study of sixty-three cases. Most of them were young people. Forty-eight occurred before the age of 21, and thirty during the first ten years of life. The most significant single symptom was a sudden rise of temperature ranging from 104°-107° F. There was a high white blood cell count except in three cases in which it was less than 10,000. The appearance of well-being of the patient in the early stages is often misleading. Chills, sweats, tenderness over the jugular vein and metastatic infection are later symptoms. The Queckenstedt-Tobey test is of particular importance in young children. Much emphasis is placed on keeping the wound wide open and clean. The most common organism found was the streptococcus hæmolyticus, although the streptococcus viridans was found in one case, pneumococcus in one, and staphylococcus in three. In the series, fifty-four patients recovered and nine died. The jugular vein was tied in fifty-three cases. All the patients who died had their jugular vein tied and two recovered without tying. The causes of death were meningitis, brain abscess, multiple abscess and pneumonia.

The article occupies seven columns, has a bibliography, and three tables. ANGUS A. CAMPBELL.

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