Austrian Otological Society

AUSTRIAN OTOLOGICAL SOCIETY

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CASES

Mucosus Otitis, Mastoiditis, complicated by diffuse Purulent Affection of the Inner Ear.—JOSEPH FISCHER.

A man, aged 69, the subject of arterio-sclerosis, who had suffered from an attack of right-sided hemiparesis five years previously, developed an acute right otitis media on *September 25th,* 1933, for which, three weeks later on *October 10th,* Dr. Grabscheid performed an antrotomy under a local anæsthetic. The causative organism was reported to be *Streptococcus Mucosus.* Immediately after the operation a right sided facial paralysis occurred, but all signs of this had disappeared the next day and his further convalescence was normal until four days later, when, with a rise of temperature to 39·4° C., giddiness, vomiting and nystagmus directed to the sound side and a complete facial palsy of the right side developed.

Ophthalmic and neurological examination revealed nothing abnormal, but the functional tests showed deafness of the internal ear type and an irresponsive vestibular system on the right side, with no fistula symptom.

A diagnosis was therefore made of labyrinthitis and an immediate operation was proposed to the friends who, however, declined. Contrary to expectations, the threatening symptoms gradually abated in intensity and on *October 30th,* 1933, re-examination still showed complete deafness, lack of response to the caloric test, and facial paresis, but otherwise the patient was generally quite well.

A lively discussion took place as to the cause of the various symptoms in this case.

Sinus Thrombosis following apparently healed Acute Otitis Media due to Scarlet Fever. Operation. Ligature of the Jugular. Recovery.—M. BARWICH.

An acute left-sided otitis media occurred in a boy, aged 9, on *July 12th,* 1932. As four weeks later his temperature rose to 39° C. and was associated with vomiting, he was admitted to a local hospital. (*August 9th,* 1932.) Examination revealed :—

Ears: (right) nothing abnormal detected, (left), acute otitis media, profuse secretion, membrane slightly injected and distended but no œdema of the posterior meatal wall. Mastoid tender. Nose, normal. General examination, nothing abnormal detected. Lumbar puncture, pressure normal. Twenty cells to the c.cm. Pandy negative.

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August 12th, 1932.—Temperature 40° C., otorrhœa ceased. Membrane intact, details normal. Definite scarlet fever. Transferred to the Fever Hospital, where he was seen for the first time by the Exhibitor.

Examination.—Ears: Right, normal. Left, with exception of possible trace of past otitis media and slight injection of the peripheral vessels, also normal. Hearing normal both sides. Slight tenderness of the mastoid.

As, however, a high septic temperature persisted, infection of the sinus was suspected, and on *August 19th* a left mastoid operation was performed, when a pneumatic condition of the cells with an hyperæmic bone was found; otherwise there was no gross abnormality. A small patch of granulations, however, lay over the sinus, but as puncture revealed free bleeding, no further operation was undertaken. Three days later, since the septic temperature continued and examination of the blood from the sinus showed culturable Streptococci, the internal jugular vein was ligatured. At the same time the sinus was again examined and was now found to be thrombosed; and, as a slight flow of pus occurred on withdrawal of the puncture needle, the sinus was slit up and a purulent thrombus removed, after which free bleeding occurred from the torcular end.

An uneventful recovery followed.

Abscess of the Temporal Lobe following Acute Suppurative Otitis Media. Recovery but with loss of Vision.
—L. HOFMANN.

A boy, aged 11, with a tuberculous family history, who had himself been under treatment since he was three years old for tuberculosis, had a left-sided earache in *September*, 1932, with a temperature of 40° C.; and, as this was followed by rigors, headache, vomiting and continued raised temperature, he was admitted to hospital on *December 20th*, 1932, with the diagnosis of tuberculous meningitis.

Examination.—Eyes: Reflexes, movements and fundi, normal. Kernig positive. Slight neck stiffness. No symptoms of lesions of the pyramidal tract. Bronchitis. Liver and spleen enlarged. Wassermann reaction negative. Ears and nose, nothing abnormal detected. Cerebrospinal fluid, pressure raised, clear. Pandy and Nonne-Appelt, negative. 46 cells to the c.cm.

December 29th, 1932. Optic neuritis; more marked on the left side. Ears, nothing abnormal detected, and caloric reaction positive both sides.

January 7th, 1933. Progress unsatisfactory. Vomiting, but conscious. Ears: Right, normal. Left, slight radial injection of membrane. Paracentesis revealed a drop of muco-pus. Left pupil dilated. Right contracted. Left eye deviated outwards, no

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reaction to light on either side. Became unconscious during afternoon.

Operation.—Left mastoidectomy. Bone sclerotic and hyperæmic. Sinus exposed and found to be normal. Dura of the middle fossa exposed, normal in appearance but extremely tense. Temporal lobe punctured over the antrum with immediate evacuation of copious thin fluid. Non-offensive pus. 10 c.cm. were removed with the syringe, after withdrawal of which a profuse flow of pus still continued. No further drainage was attempted. Wet dressings were applied to the mastoid wound. (Hæmolytic Streptococci culturable from the pus.)

Further local treatment consisted in the daily aspiration of pus from the cerebral abscess, some 10 c.cm. being withdrawn on each occasion, but the general condition remained unchanged, whilst loss of vision developed during *January* and at the end of this month there was complete blindness.

In *March,* X-ray examination following air inflation showed considerable dilation of the anterior horn of both ventricles and of the whole ventricle on the right side. At this stage the child was transferred to the Surgical Clinic.

The Exhibitor drew attention to the fact that the otitis media had been remarkable, as it not only caused very few symptoms, as was common in a mucosus otitis, but even fewer than was usually the case; that the mucoid secretion found was sterile, that the cerebral abscess must have developed very soon after the onset of the otitis, in accordance with the occurrence of the intra-cranial symptoms, and, lastly, that the lesions led to a rapid and complete bilateral blindness.

In the discussion which followed, the value of the "minimal" method of drainage of a cerebral abscess (the French method), in comparison with a larger form of drain, was criticized and it was suggested that possibly in this case, the wide opening of the abscess might have prevented the severe hydrocephalus.

In reply, HOFMANN agreed that the treatment of cerebral abscess was always a problem—that sometimes a good result was obtained by one method and sometimes by another.

Thrombosis of the Sinus after Acute Otitis Media. Extension of the Thrombus to the Transverse Sinus of the opposite side. Recovery.—L. HOFMANN.

A boy, aged 9 years, had suffered from recurrent bilateral otitis media since he was six months old. Subsequently he had also had measles, scarlet fever, and whooping cough, and owing to an acute exacerbation of the otitis media on the right side, had been admitted to a Children's Hospital on *August 16th,* 1932, when examination

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showed a pulsating secretion on the right side. The left ear was normal and the temperature was 37° C.

August 25th, 1932.—The temperature suddenly rose to 38·9° C., and as the pulsating otorrhœa continued, mastoidectomy was performed the following day. Pus under pressure appeared at the first blow of the chisel and a small portion of the sinus lay exposed, but otherwise it appeared to be normal. The dura was not exposed.

September 4th, 1932.—The temperature still remained high and the boy complained of glandular pain; sodium salicylate was prescribed and also an intra-muscular injection of 10 c.cm. of his own blood.

September 6th, 1932.—His temperature the previous evening had been 40·5°. The wound was therefore re-examined and, as the sinus was covered with granulations, it was opened. It was found to contain thick pus with an underlying thrombus, on the removal of which, no bleeding occurred from the lower end, nor was any bleeding from the upper end obtained until the sinus was further exposed posteriorly. The internal jugular and common facial veins were ligated.

Fairly normal convalescence followed until *September 24th*, when the temperature suddenly rose to 39° C., and the boy complained of pain in the lower abdomen, but further detailed examination revealed nothing abnormal except a tenderness referable to a localized swelling in the muscles of the left flank.

September 30th.—Owing to a continued septic temperature the sinus was again inspected and as there was only slight bleeding from the upper end, this was exposed and opened almost to the torcular, but even then free bleeding did not occur, although a small curette was passed into the opposite transverse sinus. From this time recovery was uneventful and in three days' time all fever had ceased. A drain which had been laid in the torcular for fourteen days was then removed, but only a thin blood-stained purulent secretion followed. The swelling of the left flank gradually disappeared.

In the discussion which followed, Urbantschitsch remarked that in one of his cases in which he had not been able to reach the end of the thrombus by operation, he had tied the jugular on the opposite side, following which, owing to the raised blood pressure in the skull, the thrombus had been expelled and the patient recovered. (Presumably the jugular on the homolateral side had previously also been tied but this was not definitely stated.—A.R.T.)

Recurrent Infection after Antrotomy. Old Prolapse of the Brain, Meningitis. Operation. Recovery.

—E. SCHANDLER.

An adult patient was admitted to the Hospital Medical Wards on *July 12th*, 1933, in an unconscious condition (from which he soon

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recovered) and with the history that when three years old he had undergone an operation on the right ear in another hospital, when considerable inflammation of the dura had been found ; that since, he had had two severe attacks of headache which had been attributed to this involvement of the dura whilst, the day before admission, a frontal headache with slight earache had occurred. After a period of observation the patient was transferred to the Aural Department.

August 12th, 1933.—*Examination.* Cerebrospinal fluid, 4,500 cells (mostly polynuclear) to the c.cm. Normal mentality. Temperature 36·8°. Pulse 52.

Eyes : Pupils react normally. Slight paresis of both third nerves. Fundi normal. Eyeballs tender. Babinski positive, right. Kernig, positive both sides.

Muco-purulent rhinitis. Mouth and throat normal.

Ears : Right, retro-auricular scar normal in appearance but tender. No otorrhœa, membrane dull, slightly injected, details visible. Left, nothing abnormal detected.

Hearing : Right, whisper at 1 metre. Left, whisper at 6 metres.

Rinne : Right, negative. Left, positive.

Weber not lateralized. No giddiness, spontaneous nystagmus or fistula symptom.

Operation.—Incision of the old scar. The mastoid was found to be occupied completely by a bluish-red pulsating mass, ? granulations, ? brain tissue. The surrounding bone was, therefore, removed, when the mass was found to be a brain prolapse obviously coming through an old incision of the dura. The radical operation was completed, but no free pus was found and the malleus and incus were intact. Intravenous injection of 20 c.cm. Cylotropin.

August 14th, 1933.—Headache, completely conscious. Herpes labialis. Cerebrospinal fluid, 35 c.cm. of cloudy yellow fluid removed. 13,000 (almost exclusively polynuclear cells) to the c.cm. Injection of Cylotropin.

August 15th, 1933.—Cerebrospinal fluid, sterile. Temperature 39°. Headache and conscious. Lumbar puncture, 30 c.cm. removed. Intravenous injection of Cylotropin, 10 c.cm.

August 20th, 1933.—In spite of daily lumbar puncture which still remained sterile, and injections of Cylotropin, headache, tenderness of eyeballs, Kernig positive, and a temperature raised to 39°, persisted.

Puncture of the right sphenoidal lobe was therefore made but no pus was found. Daily lumbar punctures were continued till *August 31st* with general improvement of the patient, a reduction of number of cells to the c.cm. and a healing auricular wound, though with complete atresia of the meatus and a hearing range reduced to conversation a.c. The patient, however, recovered sufficiently to

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be discharged on *October 25th.* (The cerebrospinal fluid had remained sterile throughout.)

The Exhibitor remarked on the fall in the cell content of the cerebrospinal fluid, but particularly wished to draw attention to the headache which followed lumbar puncture, and which was presumably associated with the physical effect of withdrawal of the fluid. Normal saline solution and Ringer's fluid had been shown to be harmful for re-injection into the lumbar sac, and as the cerebrospinal fluid of another individual was not generally available, nor did they know how the fluid from one person would re-act on another, they had devised an artificial cerebrospinal fluid and had injected a quantity of this equal to that which had already been withdrawn. He now showed comparative tables (details not reported) of this artificial fluid as compared with normal saline solution and Ringer's fluid.

He did not in any way wish to suggest that, as this patient had recovered, such artificial fluid should be regarded as a sovereign remedy for meningitis, but he could claim that pain following lumbar puncture had been considerably reduced by this method, and also that the artificial fluid had been harmless.

In the discussion which followed, LEIDLER reported an effort he had made to treat two children, aged 4, suffering from meningitis by injection of cerebrospinal fluid, taken from one of the parents whose cerebrospinal fluid he had attempted to immunize. Unfortunately both children had died so that he could not claim that the treatment had been of any use, but he had reason to suppose this treatment had caused some temporary improvement, and he had thus been able to demonstrate that the injection of actual cerebrospinal fluid from a parent did not in any event cause any harm.

SINGER stated that in Professor Meyer's Clinic they had injected air (two-thirds of the volume of the fluid previously withdrawn) with good results as regards obviating subsequent headache, and he could recommend this form of therapy, a complete description of which had been published by Professor Meyer.

LOWY reminded the Meeting that Thomas, in 1922, had published a case in which the hydrocephalic fluid of one child with cerebrospinal meningitis had been injected into another child suffering with epidemic "neck-stiffness" and that no harm had resulted therefrom. (N.B.—In this case the cerebrospinal fluid was sterile.)

Specimen from a case of Acute Suppurative Otitis Media, Labyrinthitis, Abscess of Left Temporal Lobe. —E. SCHANDLER.

A man, aged 49, was admitted to Hospital on *July 28th*, 1932, stating that five weeks ago he had suffered with earache on the right

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side and spontaneous discharge which had lasted for about a week whilst, twelve days ago, earache had occurred on the left side, also with spontaneous discharge, and for the last two days severe pain in the ear had supervened with increased secretion, giddiness, vomiting and tinnitus.

Examination.—Temperature 37·5°. Pulse 72. No meningeal symptoms. Pupils and cranial nerves, nothing abnormal detected. Nose, chronic rhinitis with polypi right and left and chronic naso-pharyngitis.

Ears: Right, tympanic membrane, grey, opaque and indrawn. Left, mastoid tender. Otorrhœa, tympanic membrane injected.

No details visible. Lumbar puncture. Cerebrospinal fluid clear. Pressure raised slightly. Four lymphocytes to the c.cm. Chest, diffuse bronchitis.

Oculist's report: "No sign of optic neuritis."

X-ray examination: "Haziness of both maxillary areas. Mastoids show no certain sign of bone involvement."

July 29th, 1932.—Morning temperature 38·3°. Otorrhœa increased. Wassermann, positive. Report on cerebrospinal fluid and blood all negative.

Operation, left ear.—Granulations and pus in cells and antrum. Dura of the middle fossa exposed, with evacuation of pus under pressure. Sinus exposed and found to be normal. Pus from mastoid wound reported as containing hæmolytic Streptococci.

August 9th, 1932.—Temperature had gradually fallen to 38° but now definite aphasia with perseveration had developed and cerebrospinal fluid showed 800 cells to the c.cm., partly polynuclear, and these symptoms, together with the further report from the neurologist, were thought to indicate intracranial disturbances and led to the decision for a further examination of the wound, at which puncture of the temporo-sphenoidal lobe released a large amount of offensive pus.

August 12th, 1932.—With a further intermediate anxious convalescence, the lumbar fluid was now found to be cloudy with 4,000 cells to the c.cm., mostly polynuclear. The condition gradually became worse and the patient died on *August 18th*.

Further examination of the pus in the brain abscess and, later, the fluid on lumbar puncture still remained sterile.

The Exhibitor drew attention to the fact that the finding of an extra-dural abscess at the first operation, associated with the absence of other neurological symptoms, and an almost normal cerebrospinal fluid was the reason why an exploratory puncture of the brain had not been made before. The large size of the abscess was remarkable, as also was the fact that it had appeared to be almost completely empty during the last twelve days of life.

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Empyema of the Sphenoidal Sinus with Purulent Thrombosis of the Cavernous Sinus and Superior Petrosal Sinus on both sides and the Right Sigmoid Sinus. Septicæmia. Multiple Abscesses.—L. HOFMANN.

A boy, aged 5, was admitted to the Hospital on *February 20th*, unconscious, and with the report that his illness had commenced five days ago with lassitude, pain in the neck, abdomen and head, and vomiting.

Examination.—Temperature 39°. Nose and ears normal.

Pupils reacted to light and accommodation. Left-sided abducens and facial paresis. Brisk patellar and abdominal reflexes. Marked neck stiffness. Kernig positive right and left. Babinski left. Ocular fundi normal. Wassermann negative. Cerebrospinal fluid, pressure slightly raised, cloudy. 2,500 cells to the c.cm. Leucocytes and lymphocytes as 4 to 1. No bacteria.

March 2nd.—Patient still unconscious. Some two fingers' breadth in front of the left ear a fluctuant swelling was now noted, puncture of which revealed pus with gram-positive diplococci; and, as before admission some redness of the tympanic membrane had been reported (although when first seen these were apparently normal) it was decided to explore the left mastoid process. But this was found to be normal, as also was the sinus on exposure. On further exploration, the purulent area was found to be located beneath the temporal muscle and, as the underlying bone in this situation appeared to be unhealthy, a trephine opening was made there (through the greater wing of the sphenoid), when the dura was opened and an extra-dural collection of pus was also found here. The brain was also explored for a possible abscess but with a negative result.

The patient never regained consciousness and died a few hours later. At the *post mortem* examination, the condition described above was found, which the Exhibitor regarded as a meningitis following a septic intranasal condition which, however, had not been able to be determined during life, and he also drew attention to the fact that the usual symptoms, protrusion of the eyeball, œdema of the lid, and chemosis had been lacking in this case.

The discussion which followed centred around the variations and varying degrees of the symptoms connected with cavernous sinus thrombosis and inflammatory lesions in immediate connection with the same.

Notes on a case of Tuberculous Meningitis with conflicting response to the Caloric and Rotation Tests.

—L. HOFMANN.

A boy, aged 10, who had been under treatment in the Children's Hospital for tuberculosis, was discharged free from fever and

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discomfort on *June 1st*, 1933. On returning home, however, he had more or less continuous headache and was always dull, whilst at the commencement of *December* his temperature began to rise to over 39° with complete loss of appetite and, as these conditions were becoming more and more marked and a sudden squint had also developed, he was again admitted to Hospital on *September 9th*.

Examination.—General enlargement of the lymphatic glands, vesicular breathing, convergent strabismus with paralysis of the right sixth nerve. Left pupil greater than the right, but both pupils reacted to light and accommodation. Patellar reflexes exaggerated on both sides. Babinski and Romberg, negative. Slight ptosis. Right Pirquet positive.

Ears: Right and left, tympanic membranes and hearing normal. No spontaneous nystagmus. Weak caloric response right and left, but right slightly more active than left.

Nose and throat: Normal.

Cerebrospinal fluid, pressure raised, slightly turbid. Pandy positive. Ninhydran negative. Eighty-nine cells to the c.cm.

September 12th.—Re-examination of Ears: Fundi and hearing normal. No spontaneous nystagmus or by-pointing. No trace of reaction to caloric test.

Eyes: Marked papillitis right and left. Paresis of right sixth nerve. Neck stiffness. Vomiting, general condition bad. Wassermann reaction negative. Temperature 38° to 39° C.

September 16th.—General condition improved. Rotation tests with ten rotations to the right, horizontal rotatory nystagmus to the left, producing about forty twitchings, occurred. Ten rotations to the left, horizontal rotatory nystagmus to the right, producing about forty twitchings, occurred.

Caloric reaction, applied to the right side, irresponsive. Applied to the left, weak but distinct nystagmus to the right.

September 18th.—Neurologist's report and report on ventriculography, indicated moderate internal hydrocephalus, probably due to tuberculous meningitis.

September 30th.—After a gradual decline the patient died. At the *post mortem* a general tuberculosis with tuberculous meningitis and acute internal hydrocephalus was found.

The Exhibitor suggested that the neurological symptoms had pointed rather to the presence of a tumour than to any diffused lesion, and that the confliction between the caloric and rotation tests, associated with an almost normal hearing, would have prompted the diagnosis of some luetic lesion. It was, therefore, interesting to note that such symptoms could be referable to tuberculous meningitis as this case demonstrated.

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