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REPORT OF A CASE OF THROMBOSIS OF THE LATERAL SINUS EXHIBITING SYMPTOMS OF CEREBELLAR ABSCESS; OPERATION; RECOVERY.

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J. P.—, male, aged fifteen. This patient was sent by Dr. Alston to the Central London Throat and Ear Hospital on January 21, 1910, to be placed under the care of Dr. Abercrombie. The following history of his illness was obtained. Fourteen days previously he complained of a sudden pain in his left ear. The onset of the pain was accompanied by shivering and nausea, but no vomiting. Between Saturday, January 8, and Thursday, January 13, he had six rigors. Ear discharge was denied, but his mother stated that he had suffered from giddiness and headache for over six months.

On Admission.—He looked very ill. The temperature was 98° F., the pulse 94, and the respirations 22. The bowels were constipated; headache was complained of, severe and constant, and referred to the vertex and the occiput, more especially on the left side of the head.

The pain was occipital. There was marked tenderness over the site of the mastoid emissary vein, but no swelling or redness. The pain radiated down the left side of the neck, and he had slight tenderness along the line of the internal jugular vein.

Giddiness.—He had extreme giddiness of the rotatory type,

which was as marked when the eyes were closed as when they were open. Objects appeared to rotate from right to left, in the lateral plane. He also had slow, spontaneous nystagmus on looking to the extreme right.

The patient was too ill to rotate or to apply other nystagmus tests, except the fistula nystagmus test, which was negative. Rombergism was marked, the tendency being to fall to the right side.

Eyes.—There was paresis of the left external rectus and slight ptosis; diplopia, spontaneous nystagmus to the right, and photophobia. The pupils reacted to light and accommodation. Optic discs: Some swelling and rolling of the edges of the disc, which were not distinct, and appeared to be in a "fog." The veins were markedly congested and tortuous.

Reflexes.—Knee-jerks exaggerated—mostly on the left side. Ankle-clonus, left side only. Babinski plantar flexion both sides. Kernig's sign absent.

Dynamometer.—Right hand 50, left hand 56; right hand weaker than left. He is a right-handed boy.

General Condition.—No patches of anæsthesia or paralysis. He lay on the left side principally. Somnolence and aprosexia. No local swelling or redness of the mastoid process.

Right Membrana Tympani: Normal.

Left Membrana Tympani: Large perforation involving practically the whole of the anterior inferior quadrant. Meatus filled with inspissated pus. *Tuning-fork tests:* C. 256. Meatus — 40". Mastoid + 12". Weber, referred to left side. Rinne negative. High-pitched tinnitus in the right ear. His mother stated that he had been deaf for some considerable time.

Diagnosis.—Chronic suppuration of the left middle ear with thrombosis of the lateral sinus and signs of labyrinthine irritation.

January 21: Operation; Radical Mastoid (Left).—In the absence of Dr. Abercrombie, Dr. Dundas Grant performed the first operation. Usual incision behind ear. Bone exposed and outer bony wall of antrum removed. The mastoid process was found to be of the cellular type and in a state of acute inflammation, bleeding very freely. The antrum contained granulations and some sticky, gluey-like mucus, but no pus. Whilst removing the outer attic wall there was considerable hæmorrhage from a small vein, which seemed to indicate some blockage in the bulb. The bridge and ossicles were removed. The whole of the mastoid cells down to the tip were opened up,

but no pus could be found. The post-auricular incision was then continued backwards over the occipital region, and a large trephine opening made over the lateral sinus, which was exposed. The sinus was then found to be completely thrombosed with apparently a pure, healthy blood-clot. The clot was curetted away until fluid blood was reached. The upper and lower ends of the sinus were plugged with iodoform gauze. Occipital incision closed, but post-auricular incision left open, the whole wound being plugged with plain aseptic gauze.

Later, 5 p.m.—Half an hour after the operation patient had a shivering fit lasting ten minutes. Temperature taken, but no rise recorded.

January 22.—General condition shows little improvement. Giddiness is very great, and is increased by the slightest movement. Complains of severe headache, and does not like to be spoken to or moved. Marked pain and tenderness over the upper end of the internal jugular vein, and also down the muscles of the back of the neck. No head-retraction. Kernig's sign not present. *Tâche cérébrale* not present. The nystagmus has now become more marked on looking to the left side (*i.e.* the same side). Knee-jerks sluggish, the left one being almost absent. No ankle-clonus. Pupils dilated. Paresis of external rectus continues. Marked photophobia.

Vomiting.—Patient has vomited several times. The sickness is of the typical pumping character, unlike post-anæsthetic sickness. Temperature subnormal. No more rigors. Pulse 80.

On the foregoing symptoms and history Dr. Abercrombie decided to explore the cerebellum.

Second Operation: January 22, 1910. The operation was performed by Dr. Abercrombie, assisted by Drs. Dundas Grant and Walker Wood.

Old wound re-opened. Lateral sinus followed back almost to the torcular Herophili. The thrombus was completely removed with the curette, and the sinus was then plugged. The posterior fossa was explored through the posterior membranous wall of the sinus. On incising the dura there was a gush of clear serous fluid; the cerebellum was then exposed and probed with the "pus seeker," but no abscess located. Careful inspection of the external semi-circular canal failed to reveal any sign of caries or fistula. A second incision was made vertically upwards, and a second trephine opening made directly above the meatus. The temporo-sphenoidal lobe of the brain was explored without success, its exposure being

accompanied by a similar gush as that on exposing the cerebellum. During this part of the operation there was a considerable rush of cerebro-spinal fluid from the lateral ventricle of the brain. Before leaving the operating table lumbar puncture was carried out by Dr. Walker Wood.

PATHOLOGICAL REPORTS BY DR. WYATT WINGRAVE.

(1) *Pus from meatus*: Staphylococcus; diphtheroid bacilli.

(2) *Lumbar puncture fluid*: Amount 14 c.c.; cloudy, sanguineous, contained leucocytes and erythrocytes. No bacteria found. *Culture*: *Staphylococcus albus*.

(3) Fluid from middle fossa: Leucocytes and erythrocytes. Endothelium. No bacteria. *Culture*: *Staphylococcus albus*.

(4) Clot from lateral sinus: Staphylococcus.

January 23.—Wound dressed; very dry; no discharge. General condition has improved greatly. Complains mostly of sickness. Giddiness less. No ankle-clonus; knee-jerks present. Left hand-grip much weaker than right. Can perform associated movements quite well.

January 24.—Marked and great improvement. No headache, giddiness, or vomiting. The movements of the left eye were normal. No diplopia or nystagmus. No ankle-clonus. Knee-jerks still absent. Patient is much more intelligent and bright. Wound dressed; very little discharge.

January 24 to February 14.—Steady and marked improvement. Wound dressed daily and plugged with iodoform ribbon-gauze. To-day he developed more cranial symptoms. Headache and giddiness. Slight nystagmus to the left.

February 14.—The symptoms disappeared again after the administration of 5 gr. of calomel.

March 2.—Patient was unfortunate enough to contract scarlet fever, and had to be sent away to Metropolitan Asylums Hospital. The post-auricular wound was practically healed; still a little discharge from meatus. No headache. Hearing good.

June, 1910.—Wound healed; no discharge. Hears quite well.

REMARKS.

The diagnosis of cerebellar abscess is always attended with considerable difficulty. In the case described above there could be no doubt as to the diagnosis of thrombosis of the lateral sinus; but, in addition, there were signs and symptoms which more than

suggested some cerebral or cerebellar lesion. The symptoms at the time of the first operation were compatible with a labyrinthine lesion, such as a serous labyrinthitis, but later they were more suggestive of some cerebellar implication. These latter symptoms were headache, sickness, and giddiness. Optic neuritis, which is found in about 50 per cent. of cases of cerebellar abscess, was also present. The change in the direction of the nystagmus was of great importance in evidence of cerebellar abscess. According to Neumann, when nystagmus, which was previously more marked on turning the eyes towards the sound ear, changes, and becomes greater on looking towards the diseased side, abscess in the cerebellum is very probably present.¹ The temperature and pulse were not reduced to the extent that is usual in brain abscess, probably on account of the thrombosis. Cerebral symptoms were evident in the dull, morose, sleepy condition of the patient. His position in bed was rather characteristic of cerebellar abscess. He was curled up in bed with his head thrown back, always lying on the affected side, as he said "he was not so giddy then." Other signs in favour of an abscess in the cerebellum were the weakness of the hand-grip on the affected side, and the inability to perform associated movements—ataxia, without the loss of the sense of position. Paresis of the oculo-motor (although not infrequently observed in cases of thrombosis of the lateral sinus) was more suggestive of an abscess in the temporo-sphenoidal lobe. I believe symptoms of cerebellar irritation are frequently found in thrombosis cases, and may be explained by an increase in cerebro-spinal fluid pressure in the posterior fossa. In this case all the symptoms of which the boy complained were relieved by opening his posterior and middle fossæ, and by lumbar puncture, probably in consequence of the relief of tension thus brought about.

I desire to express my indebtedness to Dr. Peter H. Abercrombie and Dr. Alston, who have kindly given me permission to publish this case.

THE ROYAL SOCIETY OF MEDICINE—OTOLOGICAL AND LARYNGOLOGICAL SECTIONS.

The combined annual dinner of the above sections will be held at Oddenino's Imperial Restaurant, Regent Street, W., on Friday, May 19th, at 7.15 for 7.30 p.m. Those who have not already received invitations are requested to communicate with the secretaries, Messrs. H. J. Marriage and Sydney R. Scott.

¹ Gray, "Diseases of the Ear," 1910, p. 258.