A CASE OF NEW GROWTH OF THE CEREBELLUM.

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The patient, E. C., age about 41, was admitted to Netley October 26th, 1906, with the diagnosis "non-malignant new growth of brain, probably of cerebellum."

The Following History was Elicited.—The family history was unimportant, while the patient himself had been a more than usually healthy man. He was home from the East two years ago and was then a very smart soldier. He was a Sergeant-Major, and had no history of, or signs of having had, venereal disease. His present trouble commenced at Nagpur, Bengal, about Christmas, 1905. At first there was severe frontal headache and giddiness, the latter being so marked that the patient was unable to stand. At this time vomiting was severe and persistent, and the pulse very slow. There was also incoordination, and very indistinct speech. The treatment was antisyphilitic. A medical board held at Fort William recommended change to England, and the patient was shipped as a cot-case on H.M.T. "Assaye," for transfer to Netley.

State on Admission to Netley, October 26th, 1906.—A fairly well-nourished man of 41, quite unable to stand upright; mental condition very dull, and cerebration slow; speech slurring and indistinct; knee jerks present, equal and exaggerated; pupils react normally, both to light and accommodation; nystagmus present; no ankle or patellar clonus; Babinsky's sign is very easily elicited, very marked and bilateral; cranial nerves are normal, allowing for feebleness of intellect; no tremor of any kind, intention or otherwise; optic neuritis present; no control over sphincters; chest, abdomen and urine normal. Incoordination is not marked; patient can readily approximate his forefinger tips with his eyes closed. Pulse very slow, temperature and respiration normal. Patient was put to bed on a milk diet with reasonable extras, and a mixture containing potassium iodide given.

Progress of Case.—For the first few days no change was apparent. Early in November the headache returned, being very severe, frontal in position and intermittent; it was treated by means of an ice-bag and phenacetin and citrate of caffeine. Patient's condition got gradually worse till about the middle of November, 1906, when his pupils ceased to react to light, though the accommodation reflex was still present. The mental condition was worse than ever, and an increasing difficulty in feeding became noticeable. This was apparently due to paresis of the palate and pharynx, and was specially urgent in relation to liquids. Minced chicken was accordingly substituted for milk diet, and for a time the difficulty was overcome. Constipation appeared about this time and was treated by aperients and occasional enemata.

On November 13th, 1906, patient's pupils again reacted to light, and

he commenced to improve; he recognised his relations and spoke intelligently to them, but the pulse now became very much accelerated (114), and was rather weak. The pupils ceased to react to light again on November 28, 1906, but the mental improvement persisted.

On December 4, 1906, patient's condition became much worse, the headache returned, and from now onwards convulsive attacks occurred. These lasted for from one to three minutes. During these the respiration was stertorous, face congested and muscles rigid. They were treated by means of oxygen inhalations when possible, but were usually over before any treatment could be carried out. Amyl nitrite and chloroform were considered, but the pulse was too poor to take any risk that could be avoided. The diet was altered to plain milk and the feeding cup with short tube used, with poor results.

On December 6th the fundi were again examined by Captain Gill, R.A.M.C., who reported "Extremely well-marked optic neuritis present." On the same day the reflexes were again taken; Babinsky's sign elicited as before; knee jerks both present though difficult to obtain; accommodation reflex perfect, light reflex present but very sluggish.

An extract from the notes at this time is as follows:—"The case is apparently one of slow-growing tumour of the cerebellum, which is slowly affecting, by pressure or direct extension, the medulla and pons. This would account for the paresis of palate and pharynx, and the undue stimulation of the vital centres in the medulla would account for the respiratory and cardiac symptoms. There is considerable bronchitis, making a steam-kettle necessary."

The patient died at 2.30 a.m., January 7th, 1907.

Latterly, respiration approximated to the Cheyne-Stokes' type. Strychnine and oxygen were freely used during the close of the case, as well as alcohol. At no time was pyrexia marked; 101·2° F. was the highest temperature charted, and occurred on the day before death.

For the *post-mortem* report I am indebted to Captain Babington, R.A.M.C., pathologist at Netley. Appearance thirty-three hours after death.—*Rigor mortis* well developed. *Post-mortem* lividity present. The brain alone was examined. The meninges show no well-marked pathological changes. Cerebro-spinal fluid is increased in amount. Inspection of the base of brain shows that the interpeduncular space forming the floor of the third ventricle is distended with fluid. The right side of the cerebellum appears to be larger than the left. While examining the cerebellum about six drachms of clear fluid escaped from a cyst occupying the right lateral hemisphere. The fluid is amber yellow in colour. On section, the right cerebellar hemisphere is occupied by a cyst, which extends also into the median lobe. The cyst is about the size of a small hen's egg, and has a wall about a quarter of an inch in thickness. For the greater part it is smooth internally, but in places has a rough, tuberculated appearance. The cyst wall is very friable and can

be separated easily from the surrounding brain substance. The latter is not invaded. The third and lateral ventricles of the brain are very much distended from the pressure of accumulated cerebro-spinal fluid. On microscopic examination the tumour showed the characteristics of a cliosarcoma which had undergone cystic degeneration. Very little infiltration of the surrounding brain substance was seen. In a section stained by Van Giesen's method the fibrous tissue of the tumour was seen to be rather scanty in amount, and the walls of the blood-vessels showed signs of degeneration.

The following seem to be the points of interest exhibited by the above case :—At one time there was a suspicion that the true explanation might be general paralysis of the insane. This was based on the presence of slurring speech, sluggish pupils, seizures and stertor, coupled with bladder and rectal troubles. The absence of any specific history of any tremor of the tongue or lips, and the presence of well-marked papillitis, caused the abandonment of this idea. The classical features of brain tremor, headache, vomiting and optic neuritis, all appeared during the course of the case, though they were not all present at the same time. Attention was directed to the cerebellum as the site of disease by the following considerations. There was absolute inability to stand, and yet coordinated movements were tolerably carried out when the patient was prone. Nystagmus was present and the knee jerks retained, both signs described in pure cerebellar lesions, while the cerebral cortex was apparently sound, as there was no actual paralysis except of the sphincters, and the patient's intellect, though usually dulled, was fairly good at intervals. This condition could hardly have occurred in the presence of any gross lesion of the intellectual or motor areas of the cerebellum. Two points which might have been expected to occur never actually did so: Glycosuria and hyperpyrexia, due to injury to the medulla. Other signs of injury in that locality, presumably due to pressure, did occur. These were: The speech affection due to the involvement of the hypoglossal nucleus, and the paresis of palate and pharynx, and the stertor.

AN UNUSUAL CASE OF FEVER.

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Corporal M., Army Service Corps, aged 23, service five years, was admitted to the Military Hospital, Chatham, on December 11th, 1906.

On admission he complained of slight headache and muscular pains, and his temperature was 100·6° F., rising to 105° F. the same evening. At this time a good many cases of influenza were being admitted, and it was thought that he was probably suffering from that disease, as he showed no symptoms of pneumonia or other acute illness. But the course