A Case of Tumour of the Brain associated with Epilepsy and Catalepsy. By FLETCHER BEACH, M.B., M.R.C.P., Medical Superintendent of the Darenth Asylum.

(Read before the Annual Meeting of the Medico-Psychological Association, July, 1879.)

S. B., aged 16 years, was admitted into the Clapton Asylum, May 7th, 1875, with the following history. She was born a healthy girl, having no mental defect. She enjoyed good health up to nine years of age, when she became the subject of chorea, supposed to have been caused by exposure to the sun. She was sent to Margate, in the hope that the change might prove beneficial to her, but the chorea continued. Four years ago, while bathing, epileptic fits came on, and soon afterwards the chorea ceased. Her intellect is said to have become weak after the fits were noticed. She has never since been free from them. She was sent to Caterham and afterwards to Hampstead Asylum, whence she was transferred to Clapton.

There was no history of intemperance or mental disease in the parents, who were not connected by consanguinity. The mother suffered from rheumatism during her lifetime, but had died three years before, the immediate cause being two fits, the last of which "took her speech away." There had been seven children in the family, but two had died of accident and one of whooping cough. The three remaining (S. B. excepted) were healthy, and showed no signs of mental defect.

On admission, S. B. was a tall, well-nourished girl, of fair complexion and lymphatic temperament. There was no sign of paralysis or chorea, but she was decidedly hysterical. A well-marked mitral murmur was noticed. As to her intellect, she could read and write fairly, count to 100, say the multiplication table, had a good ear for music, and knew all the colours. She was fond of sewing, and could knit antimacassars. In consequence of her heart disease and somewhat weakly constitution, she was not put to household work, but spent her time in school, where she made such progress that about ten months after her admission she was employed as a monitor. She was subject to epileptic fits from time to time, and on two occasions had distinct attacks of catalepsy, the first of which was so perfect, and attended with so much pallor, that the attendant in charge of her summoned me hastily, saying that S. B. had suddenly died. On each occasion the attack lasted from half an hour to an hour, and then she slowly regained consciousness, the next day being as well as usual. She was noticed to be drowsy for thirty-six hours before the second attack. On the 10th of May, 1876, she had a severe attack of acute rheumatism, from which she had nearly recovered when a relapse took place. She suffered a good deal from palpitation of the heart, and

the murmur before noticed now became more marked. Soon her breathing became affected, and she died on the 30th of June, 1876, in a fit, which chiefly affected the left side.

At the necropsy made twenty-eight hours after death, the cranium was found to be symmetrical and the calvaria of normal thickness. The dura mater was very closely adherent, so that it was found necessary to remove calvaria and dura mater together. A little to the right of the middle line of the frontal bone it was especially adherent, and in this position it was congested and thickened. The brain weighed 2lbs. 15oz. On inspecting the upper surface, the first and second frontal convolutions of the right hemisphere were seen to be somewhat pressed together in front, and on palpating this region there was found to be hardness and resistance over a space of $1\frac{1}{4}$ in. long by $1\frac{1}{2}$ in. broad. This hard resistant part commenced about half an inch posterior to the anterior border of the hemisphere, and was bounded internally by the longitudinal fissure. On close inspection the hardness was found to be due to the presence of a tumour (exhibited) the size of a large walnut, the upper surface being situated below the convolutions in the position just stated, and the lower partly in front of and partly above the anterior portion of the right lateral ventricle to which it contributed to form the roof. The convolutions directly over the tumour were flattened out, while those outside were closely pressed together. The tumour, the upper surface of which was calcified and hard, the under surface fibrous and yielding, was yellowish in colour, had a well-defined outline, was not encapsuled, and weighed two ounces. On cutting into it yellow grumous matter escaped. On further examination the tumour was found to consist of a fibrous shell or capsule about one-eighth of an inch in thickness, in which calcareous matter had been here and there deposited. The interior was nearly filled with caseous matter, a small cavity which had previously been occupied by pus being evident.

The brain substance in the vicinity of the tumour was yellowish in colour, but not softened. With this exception the cerebral structure was normal, and the arachnoid and pia mater were unaffected.

The pericardium was found to be much thickened, and on the inner surface of the external layer were a number of villous processes. The internal layer was in places adherent to the heart, which was much hypertrophied and dilated, the dilatation being chiefly marked on the right side. The aortic and mitral valves showed a slight deposit of fibrine on their edges.

The lungs were congested and œdematous, and both pleura contained a quantity of serous fluid. The left lung was partially adherent by recent lymph.

The other organs presented signs of long continued congestion due to mechanical interference with the return of blood from them in consequence of the disease of the heart.

The bronchial and mesenteric glands were enlarged and congested.

This case presents several points of interest. First, what was the nature of the tumour? It can hardly have been tubercular, since no tubercle or even caseous glands existed in any portion of the body. The enlarged bronchial glands no doubt owed their condition to the congested state of the lungs. The more probable theory seems to be that it was originally a sarcoma, which in course of time had degenerated, caseation and ultimately conversion of the external portion of the tumour into fibrous tissue, in which calcareous matter had afterwards been deposited, being the ultimate result. A case of tumour of the brain in which the tumour (a sarcoma) had undergone a similar change is related by Dr. Magnan in the fourth number of "Brain." As to the cause of it there is no evidence.

Secondly, had the tumour any relation to the epilepsy? If we may trust the history, the epilepsy had been in existence for four years. I am not aware of any evidence on record showing the time necessary for a sarcomatous tumour to undergo the change described; but supposing the tumour to have commenced growing at that time, it might have been the cause, not by directly irritating the convolutions in apposition with it—for the frontal are, as far as we know, non-motor—but, according to Dr. Brown Séquard's theory, by setting up irritation in others (motor) at a distance. The frequent occurrence of epilepsy having been established, any slight cause—as, for instance, interference with the proper circulation of blood through the brain due to disease of the heart, and the pachymeningitis found post-mortem—would be sufficient to produce epileptic convulsions, even after the tumour had ceased growing and begun to deteriorate. It will be remembered that the fits were chiefly noticed on the left side, that opposite to the tumour.

Thirdly, had the catalepsy any relation to the epilepsy? The catalepsy did not come on until the epilepsy had existed for some time. The epilepsy had no doubt weakened the brain, for previously to her admission into the asylum she had been considered a clever girl, and had carried off prizes at school. In addition, she was of a hysterical temperament. Given these conditions, very slight excitement would upset the stability of the brain, and the action of the will being suspended, catalepsy might ensue. While on the subject of catalepsy, it may be interesting to note the reason given by Niemeyer for the limbs remaining in the position in which they happen to be placed at the commencement of the

attack, or in which they may be placed by a bystander. He considers that "all the motor nerves are in a state of medium excitement in this disease, and hence all the muscles of the body are in a state of contraction sufficient to counteract the resistance afforded by the weight of the limbs." There is, in fact, increase of the normal tonus of the voluntary muscles.

There are many other points which might be touched upon in connection with this case, but time will not permit me to enlarge upon them.

A Detached Left Occipital Lobe and other Abnormalities, in the Brain of a Hydrocephalic Imbecile.

By A. CAMPBELL CLARK, M.B., Assistant Physician, Royal Edinburgh Asylum.

(This paper was read, and the microscopic appearances were shewn, at the Quarterly meeting of the Medico-Psychological Association, in Edinburgh, on 14th Nov., 1878, and the Intra-gyral Association system was microscopically demonstrated at the meeting of the Association, in Glasgow, on 26th March, 1879.)

John R., admitted into the Melrose Asylum on the 29th May, 1875, æt. 38.

The history of the case is, that he was one of the illegitimate children of a drunken woman, in whose custody he was allowed to remain, until one of the Commissioners in Lunacy interfered, and ordered his committal to the Asylum; and the feeling then was that this interference had not been exercised an hour too soon, for he presented an appearance of dirt and general neglect, surpassing anything that, in the experience of Dr. Grierson, the Superintendent, had ever been witnessed since the opening of the Asylum.

The following facts regarding his early history were ascertained: (*a*) that he was born hydrocephalic; (*b*) that the hemiplegia, from which he suffered, was pronounced by the late Professor Syme to be congenital; (*c*) that there is no history of syphilis in the mother.

The physical conditions were essentially those of deformity and extreme helplessness. Incapable of progression in the ordinary manner, he had been accustomed to move about for short distances of a few yards on all fours, and while in the Asylum required to be carried about from place to place.

The head attracted attention from the large cranium and small face, the frontal bone being very prominent in the region