

On amaurosis, accompanied by pains in the head, two years' duration : convulsions, three months : examination p.-m., cyst in the cerebellum / by James Reid.

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A M A U R O S I S,

ACCOMPANIED BY PAINS IN THE HEAD, TWO YEARS' DURATION—
 CONVULSIONS, THREE MONTHS—EXAMINATION P.-M.—
 CYST IN THE CEREBELLUM.

By JAMES REID,

SURGEON TO THE KENT AND CANTERBURY HOSPITAL.

Read on Thursday, March 27, 1851.

F. A., aged 15, the son of a labourer, was of fair complexion and tolerably robust frame. From an early period he had suffered occasionally from head-aches, which were usually attended by vomiting, but in other respects he had enjoyed good health, passing through measles and small-pox without any bad result. One of his brothers is liable to periodic head-ache of the same kind, but, with this exception, the whole family, consisting of ten, are healthy. He was known amongst his neighbours as a quick, intelligent boy, and was generally referred to in matters requiring calculation, such as the valuing articles to be bought or sold, and his decision was generally accurate. In the poor kind of education that his parents could afford him he exhibited great proficiency.

In October 1848 he perceived that he could not discern objects so well as usual, especially by candle-light; he experienced difficulty in writing in the evening at the school he went to, but, by the aid of some glasses that were lent to him, he managed to continue his work. His parents did not notice this particularly at the time. Subsequently, whilst serving as a stable-boy, he was very much frightened by the movement of a horse in the yard,—it was thought afterwards owing in some manner to his imperfect sight; and he remained at home ill from the effects of the alarm for two or three days. His

mother now perceived that his sight was defective, and the boy complained occasionally of pain in his head. In the spring of 1849 these symptoms increased, and medical advice was sought for the first time. He became an out-patient of the Kent and Canterbury Hospital, under the care of one of the physicians. Vision was then very imperfect, being only sufficient to enable him to guide himself about; the pupils were widely dilated and fixed. He suffered pain in the occiput and forehead, which was sometimes very severe. Whilst under treatment at the hospital, he was suddenly affected with excessively severe pain in the forehead, that was constant for three or four days. Nothing afforded relief, until a profuse discharge of offensive matter burst from the nose, when the pain at once remitted. The discharge, however, continued abundant for some time, and did not entirely cease, though issuing very scantily, until his death.

Mercury and all the other remedies tried had no effect upon the amaurosis. A seton was passed in the nape of his neck, but he was so soon depressed by the irritation and the discharge from it, that it was obliged to be removed.

He gradually became totally blind. For a considerable time beforehand he could discern objects indistinctly by placing himself in such a position that the light fell on the outside of the right eye, and consequently upon the left

portion of its retina. The pain in his head increased as he became blind; it was most severe posteriorly, but pangs were felt through the entire head, passing towards the forehead; it was not constant, being accompanied by irregular intervals of ease, which lasted sometimes more than a day, when he would join his companions in play. He was much troubled by strange sounds and noises in his head. His intellect remained good, but his temper was much altered; he became sullen and reserved, and was very irritable. His movements were quick and sudden, but there was no peculiarity or unsteadiness in them; latterly, he became weak and emaciated, and his power of movement was affected in consequence. He always sat in one corner of the fire-place with one hand supporting the back part of his head, whilst the other occasionally rested on the forehead. In this position he would remain for the whole or greater part of a day, impatient of every disturbance, but not complaining; now and then by an acute remark showing that he noticed what was going on, though apparently observing nothing.

Eleven weeks before his death, whilst sitting in his usual position, he was suddenly attacked by a convulsive tremor of his whole frame, accompanied by a partial loss of consciousness. After this, fits occurred at irregular intervals; he would remain free from them for one, two, or more days together, and then during one day he would have a rapid succession of attacks; or, during two or three following days, several seizures would take place. The attacks were of an irregularly convulsive character, in a few respects resembling epilepsy, but in others the spasmodic fits of severe hysteria. They commenced with severe pain in the head, passing from the occiput to the forehead; the boy would put his two hands in these situations, uttering in rapid succession the exclamation, "Oh, my head!" until apparently overpowered by the pain, and the spasmodic movements which followed. Consciousness did not, at this period, seem entirely gone; for if touched by a hand he would violently catch it, and draw it upwards by a convulsive grasp, from which it was with difficulty extricated. The spasms were principally noticed in the muscles of the face, extremities, and body; those of respiration were not apparently af-

ected; there was no premonitory scream or expiratory sound, no foaming at the mouth, nor stertor. As the attack passed off, a very copious perspiration would burst out over the head, face, and neck, continuing for some time, and saturating the pillow. A heavy, drowsy state succeeded, from which, sometimes, he could not be roused for the remainder of the day, and often, when there had been a succession of fits, for the greater part of the following day. When this drowsy condition ceased, during a variable period he would remain curled up in his bed sullen and irritable, with the saliva dribbling from his open mouth. After these fits had occurred for a few weeks, vomiting of an obstinate character took place; mucus mixed with bile was generally ejected. The boy became thin and weak, and was almost confined to his bed, though still, when a temporary cessation of symptoms allowed him, he would crawl down to his accustomed place by the fire.

He died January 26th, 1851, sinking quietly a short time after a paroxysm of pain.

Examination 27 hours after death.—The body was rigid. The head alone was examined. The scalp was readily separated from the skull. The bones of the head included in the section of the skull were remarkably thin, and were marked over the whole interior with depressions and ridges which resembled a model of the convolutions of the brain; some of these fossæ, near the middle, were ascertained to correspond exactly with the convolutions. The bone was so thin at the bottom of some of the grooves as readily to allow the transmission of light.

The membranes of the brain were natural; its convolutions on the superior and posterior surface were slightly flattened; both its grey and white structure were remarkably firm. The ventricles contained about six ounces of clear fluid; there was no undue vascularity; and their surfaces, together with the septum lucidum, were firm. All the central organs of the brain were explored, but no traces of disease were found. The optic nerves in their whole course within the cranium were natural. The ethmoid and sphenoid bones appeared healthy.

Between the lobes of the cerebellum, and projecting slightly in the superior

fissure, behind the vermiform process, which was flattened out, there was found a cyst, the size of a small apple (about $1\frac{1}{2}$ inch diameter). When it was opened, a quantity of transparent yellow fluid escaped, and it collapsed considerably; the internal surface was uniform, presenting a soft semi-transparent appearance resembling jelly, and possessing a certain degree of vascularity; small vessels were seen ramifying in its thickness at various points, and at one or two spots a minute effusion of blood had taken place into its substance. The wall of the cyst was about a line thick, and, owing to the softening of the contiguous substance of the cerebellum, could be readily separated, leaving a ragged surface: the cerebellum was otherwise healthy. The cyst had originated in the central portion of the cerebellum, apparently in the inferior vermiform process, and had pressed into the lobes on either side, but more especially the left; with which, after it had been separated from its connection with the right, it was removed.

This case, in common with all belonging to that class of cerebral disease which includes the development and growth of bodies in the encephalon, possesses many points of interest, but I can only briefly allude to some of them.

With regard to the symptoms, as indicating the locality and nature of the disease, we see the same want of appreciable relation between the disease and its effects upon the system which is so frequently noticed in affections of this kind, and which necessarily causes our knowledge of them before death to be so obscure and indefinite. It is true that there was sufficient to warrant the general conclusion that *some organic* lesion existed in the encephalon; but the more particular determination, upon which rational and effective treatment must depend, of *what* that lesion was, and *where* it was situated, involved questions that were at most, with our present knowledge, hidden in uncertainty, and could only be answered indefinitely. In the midst of such uncertainty, it becomes of great importance to know the true value of particular symptoms with regard to the conclusions that may be drawn from them; and herein, I think, the special interest of the present case consists. It

implies also a physiological question of some importance.

It is by the earliest, and, at the same time, best marked symptom, in a case of this kind, that we are led to form an opinion of the locality of the growth; for, as the disease progresses, symptoms are added depending upon neighbouring parts becoming involved, or various changes taking place in the brain; and it is then very difficult—nay, frequently impossible—to separate the symptoms so as to point with confidence to the exact situation of the disease.

The existence of an affection of a special sense as the *earliest* symptom led me with some confidence to consider the disease as originating in the track and localities assigned to that sense, and to search for it there after death. I was somewhat disappointed to find nothing in these situations, feeling that the value of a prominent and important symptom in this relation was thereby depreciated. The symptom of amaurosis, taken in reference to the localisation of the disease in those parts where the sense of vision is thought to originate, was in this case deceptive. How, then, can the amaurosis be accounted for? This is a question of much difficulty, and one which I cannot at present solve in a satisfactory manner. Pressure will not account for it. We know that this symptom accompanies the development of tumours, and many other diseases of the brain, where no direct communication of such disease with the organs of vision can be traced. It is usual in such cases to offer an explanation by remarking that the connection of the brain-fibres of such parts with the thalami, the geniculate or quadrigeminal bodies, will afford a solution of the difficulty; but this is merely offering, in most cases, a probable explanation which requires more extended and accurate observation to confirm or refute. It will be better, perhaps, to leave the question open than to hinder inquiry by an incomplete explanation. In connection with the frequency of amaurosis, as one of the symptoms noticed with tumours existing in or about the cerebellum, it may be mentioned that Andral, in 36 cases which he had collected from various sources, found that it existed, in a more or less complete state, in *six* only.

The symptom which pointed most

correctly to the region of the disease was the severe occipital pain; but it would not be safe to depend on such evidence.

More important than the locality of the disease was the question, of what was its nature? About this there was greater obscurity, the relation between the disease and its symptoms affording no evidence upon which to form a conclusion. A conjecture was all that could be made; and, considering the age and general appearance of the patient, I surmised, from the comparative frequency of the disease, that tubercle might exist in the brain: the result proved the conjecture wrong. It is interesting, however, to observe that Abercrombie mentions a disease he met with, and regarded as nearly analogous to tuberculous disease, which he describes as cysts containing albuminous matter or fluid, in a pure state: in some cases (even of long standing) the fluid was found serous. He cites four cases,* one of which—a woman, aged 50—resembled the present case as regards some of the symptoms, its duration, and the position of the cyst. I am sorry that I could not examine the fluid contained in the cyst, owing to its escape; for the presence of albumen would, I think, have left no doubt of the identity of the present disease with that

mentioned by Abercrombie. It is an interesting consideration how far these formations are simple cysts, having their structure and contents modified by the organ in or near which they are developed, or by a strumous diathesis.

The existence of tubercle is not mentioned in any of the cases referred to above. I regret that, in the present case, I was prevented making a further examination, which might have cleared up this point. The soft vascular appearance of the interior of the cyst closely resembled that observed in the sacs surrounding tuberculous matter which is undergoing softening in other parts of the body. I was forcibly reminded of this comparison a short time afterwards, when examining a tuberculous tumour removed from the back of a girl.

Briefly, then, to review the symptoms in connection with the condition of the parts after death, it may be said that the affection of vision, with the headache, probably indicated the first development of the disease: the pain in the forehead, followed by discharge of matter from the nose, was an independent disorder, originating in inflammation of the frontal or other sinuses, from cold: the occurrences of convulsions and obstinate vomiting were probably owing to the irritation from softening taking place around the cyst, and the effusion of fluid into the ventricles.

* Abercrombie on Diseases of the Brain, 4th edit. p. 175, Cases 90, 91, and 92.