

## CLINICAL NOTES AND CASES.

*Craniectomy for Idiocy, with Notes of a Case.* By T. TELFORD-SMITH, M.A., M.D., Medical Superintendent, Royal Albert Asylum, Lancaster.

The boy R. H., of whose case I here give some brief notes, has recently (17th March, 1897) been admitted to the Royal Albert Asylum, and so has not yet received any special or systematic training; but, as it is now approaching two years since he underwent surgical treatment in the form of linear craniectomy for his mental defect, it seems worth while to record any changes in his mental and physical condition which have taken place since the operation, as we can thus, to some extent, arrive at an estimate of the degree of improvement more or less directly due to the surgical procedure. The boy has, however, both before and since the operation, had attentive care and ordinary home training under his parents' supervision. I may here mention that the fact of the boy's being operated on came about through the parents having read a tale in *The Strand Magazine* called "Creating a Mind"—a tale which I fear has given rise to exaggerated hopes in the minds of the parents of many idiot children.

The boy R. H. was born 31st May, 1889, and is the second-born child. The first-born child is still living, and is normal in physical and mental condition.

The parents are healthy; the father's present age is 45, the mother's 42.

The mother is not robust, and is inclined to be emotional; she had been a schoolmistress before marriage.

The father is a strong, active man.

In mental capacity the father and mother are above the average, and both parents have been teetotalers for life.

R. H. was born at full time; his parents say that he was "hurt at birth with the instruments," but, from what I can gather from the father, they rather assign this cause in the absence of any other more tangible one. The boy was delivered with instruments, but the labour had been a protracted one, and the patient was asphyxiated when born, so that probably there was some injury to the brain tissue, during labour, owing to venous congestion and effusion, with, perhaps, a small amount of meningeal hæmorrhage, as a result of the prolonged pressure in the genital canal—a condition which the timely use of the forceps often relieves or prevents, but which, unfortunately, is frequently attributed, afterwards, to instrumental delivery.

\* "Stories from the Diary of a Doctor." By L. T. Meade and Clifford Halifax, M.D. *The Strand Magazine*, January, 1895.

Up to the age of about three years the patient's mental deficiency was largely a matter of conjecture. At about two years walking began to be attempted, but speech has never manifested itself, and up to the present the patient does not articulate.

His senses of sight and hearing seem normal, and, as far as can be ascertained, his senses of smell, touch, and taste are not deficient.

There are no signs of any paralysis, the limbs are in perfect use, and the patient can walk and run unaided. He can use his hands sufficiently to feed himself with a spoon, but he cannot dress himself. His habits are faulty; he is occasionally wet and dirty. In manner he is rather restless, and inclined to be fretful, but he has a fair amount of curiosity, although little power of fixing his attention. He has rather a comely face, with well-formed features; eyes, ears, nose, and mouth are normal in shape and size. Palate considerably higher than normal. Teeth well placed and sound; slight tendency to dribble. Skin healthy, although rather pale.

I have no record of the boy's head measurements taken before he was operated on, but, judging from his present measurements, I think the case could hardly be classed as one of microcephalus; from the history of the patient I think we might more correctly describe it as a case of traumatic idiocy, the traumatism being due to prolonged labour and asphyxia at birth. Judging from the boy's rather saddle-shaped palate, and from his mother's somewhat emotional nature, there may be superadded a slight congenital tendency to mental feebleness.

April, 1897.	Head Measurements, R. H., in inches.
Circumference ... ..	19½
Transverse (a) ... ..	12½
" (b) ... ..	4½
Longitudinal (c) ... ..	12½
" (d) ... ..	6½
Width of Forehead ... ..	4½

Circumference taken above ears and over occipital tuberosity.

Transverse (a).—Tape measure from ear to ear over vertex.

(b).—Calliper

Longitudinal (c).—Tape measure from nasal notch to occipital tuberosity.

(d).—Calliper

Width of forehead between external angular processes of frontal. Shape of head: Brachycephalic. Cephalic index: 82.

Measurements, R. H.			
Date.	Age.	Height.	Weight.
		Inches.	lbs.
April, 1897.	8 years.	42½	45

Mr. Edward Cotterell performed the operation of linear craniectomy in three sections, removing portions of the cranium on August 13th, August 27th, and September 12th, 1895. The boy recovered quickly and well from each operation.

As to the result, so far, of the operations (20 months after) the parents assert that they can see no actual mental change, that is to say, no increase in the child's intelligence. The boy is still speechless, and seems almost to quite lack ideas.

The one marked result they see is a cessation of head-knocking and a freedom from the restlessness and crying out which he formerly exhibited. They say that before the operation the boy used to knock his head most violently with his hands, or against the wall, or furniture; he used, also, to cry out as if in pain, and was very restless. His condition, for these reasons, was most distressing to witness. Since the operation they say he has given up these knockings of the head and the crying out, and certainly at present these symptoms are absent. He is only slightly restless, and somewhat inclined to be fretful.

Another point they notice is that before operation he did not seem to feel pain in a normal manner; the violent head-knocking did not appear to cause him any discomfort, but now he is sensitive to ordinary degrees of pain, like an average child of his age.

It cannot but be admitted that this cessation of head-knocking and extreme restlessness is a marked improvement in the patient's condition, and both the parents say that they would willingly again submit the child to operation, even if they knew beforehand that this would be the full extent of the improvement; and they think the risk, anxiety, and expense were worth incurring for this change in his symptoms, and with this sentiment I think most people would agree.

The following extracts are quoted from the notes of the patient N. L., a microcephalic idiot boy, on whom linear craniectomy was performed by Mr. Victor Horsley:—

*Before operation.*\*—"Constantly puts his hands to his head, and cries out as if in pain there; knocks and slaps his head with his hands."

\* "Craniectomy, with the After-History of Two Cases," by T. Telford-Smith, M.D. *Journal of Mental Science*, January, 1896. Also see *British Medical Journal*, September 21st, 1895, and "On Craniectomy in Microcephaly," by Victor Horsley, B.S., F.R.S. *British Medical Journal*, September 12th, 1891.

*Two years after operation.*—“ He does not knock his head, nor cry out. On the other hand there is no improvement in his speech; his vocabulary has not increased, and he still slavers, and he is, as far as I can see, a restless and, I fear, a hopeless case of idiocy.”

The similarity between the symptoms of head-knocking and crying out in these two boys N. L. and R. H., before the operations, and the cessation of these symptoms afterwards, is remarkable, and probably has a pathological foundation. In both patients this is certainly a great improvement on their former state, but one would hesitate before saying there was an increase of intelligence. A mind has *not* been created.

What this improvement is due to would be difficult to say without a macro- and microscopic examination of the brains, as well as an examination of the skulls; that it is due to the relief of pressure could, perhaps, be accounted for in the case of R. H. by the supposition that this pressure was caused by subdural hæmorrhages, which probably took place during labour, and their after-effects. That there has in both cases been relief of irritation of some kind seems highly probable, but whether this irritation was inside the skull (brain) or outside the skull (scalp) is a question of interest. That the improvement is due to “a profoundly disciplinary effect upon the idiot,”\* or that it is “largely through its pedagogic influence that an improvement in these cases takes place, and that an operation is allied in its effect to a severe piece of castigation,” seems an hypothesis which, to say the least, is beyond the ordinary range of pathology, and would be difficult to prove by any ordinary methods of research.

As to the actual dangers of the operation, there is no doubt that these are now very small, the two great risks of hyperpyrexia and of shock being avoided by the method of performing the operation in sections, and only excising a small portion of bone at each sitting, and by taking care not to bruise the subjacent brain substance or interfere with the cortical thermotaxic centres in the cerebrum.

\* “Craniectomy for Idiocy and Imbecility,” by Charles L. Dana, M.D. *Pediatrics*, March 15th, 1896.