COMPOUND COMMINUTED FRACTURE OF THE SKULL:

WITH EXTENSIVE LOSS OF OSSEOUS COVERING TO THE BRAIN; RECOVERY.

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ON the night of Dec. 20th, 1892, a carter aged twenty-four was brought to the Cumberland Infirmary suffering from a severe injury to the head. It appeared that he was returning on an empty lorry with two other men and that, when sitting in the front part of the waggon, he probably fell off whilst asleep and was run over, for his companions suddenly missing him retraced their steps for about a mile and found him on the road unconscious and bleeding from a wound on the right side of the head. He was placed by them on the waggon and brought into the hospital, a distance of twelve miles. On admission to the infirmary Mr. Mathews, the house surgeon, found the patient to be unconscious and breathing stertorously; the scalp was reflected from the greater part of the right side of the head and was hanging over the

FIG. 1.

right ear and face; the bone was seen to be broken up into large plates, which were partly loose and tilted out of position and evidence of extensive hæmorrhage was present. Both eyes were ecchymosed and the lids swollen and there was bleeding from both nostrils. The injuries were, however, limited to the head. It was found needful to administer a little chloroform to restrain unconscious movements, and it was then seen that the soft parts were laid open from near the vertex towards the angle of the right orbit, as shown by the cicatricial line which crosses the shaded area in Fig. 1. The condition seemed so hopeless and the fracture so extensive that I almost hesitated to touch the patient; but on removing one bit of bone after another and finding that the dura mater was uninjured, there was more encouragement given to make the best of the case. The bone removed corresponded to the area shown on the engraving by the dark shade, and it will be seen that portions of the temporal, parietal and frontal bones were included in the injury. From the site of fracture the fissures extended in all directions towards the orbital plate on the right side, the base of the skull in the temporal region and backwards towards the occipital bone. All blood which had accumulated between the vault and the dura mater was syringed out, and after inserting a large horsehair drain the scalp was stitched up and the patient removed to bed. A blue appearance of the dura mater within the area of fracture was suggestive of subdural hæmorrhage, but no symptoms of

cortical lesion appeared. For three days the man was in a drowsy condition with a slow pulse (60) and passing urine involuntarily. In ten days, however, the wound healed, power was recovered over the bladder, he ate and slept and expressed himself as feeling quite well. The brain was seen to pulsate over a large area and, with the exception of a drooping of the right eyebrow and a smoothing of the wrinkles on the right forehead no trace of paralysis appeared. The patient was discharged on March 2nd after being provided with a protection of leather and metal for the right side of the head. It is to be observed that the hearing when tested was nearly as good on the right side as on the left. The engravings, which are from photographs taken in the ward, show the area of brain uncovered by bone, a pencil mark on the skin having previously defined the edge of the bone. The four vertical lines seen in Fig. 1 indicate the disappearance of the uncovered surface of brain behind the zygoma. The engraver has accurately represented the paralysis of the right occipito-frontalis muscle in Fig. 2. The broken fragments when fixed together measured eleven centimetres long by six centimetres broad but the actual aperture in the man's head was probably somewhat larger, as all sharp points and edges were smoothed away with pliers. I have had many head injuries under observation, but the present one strikes me as exceptionally remarkable on account of the great destruction of bone without injury to the dura mater, and

FIG. 2.

herein, no doubt, lay the reason why the man made so good a recovery. Doubtless larger spaces have been bared by the trephine for operative procedure on the brain without harm resulting, but these circumstances are wholly different from the rude violence of a cartwheel. As regards temperature, the highest point reached was 103° F. two days after the accident, and then there was an almost immediate fall to about normal.

Lowther-street, Carlisle.

THE SURGICAL AID SOCIETY.—The promoters of this society have recently resolved to extend its operations by the formation of branches in various provincial towns, and the citizens of Manchester have in public meeting expressed their wish to participate in the benefits of such an auxiliary. The mayor is to act as president and the committee will be composed of gentlemen of high standing in the city.

NOTTINGHAM CHILDREN'S HOSPITAL.—The annual meeting of the friends of this institution was held on the 18th ult., and a very favourable report was presented with regard to its pecuniary resources and the amount of good work accomplished by its means. The number of patients cured or relieved during 1892 was larger than in any previous year, whilst the income of the charity was steadily increasing. Six cots are now supported by special donations, and two of them have now been endowed. A resolution was moved and carried that the Duchess of Portland be asked to act as president during the ensuing year.

STENOSIS OF THE TRACHEA AFTER TRACHEOTOMY.

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THE following case is interesting for several reasons :

(1) It is an example of what is thought to be a rare occurrence—namely, stenosis following the use of a metal tracheotomy tube ; (2) the recovery in so young a child after tracheotomy and thyrotomy shows, I think, that the well-known fatality of tracheotomy in young children is due not so much to the operation itself as to the disease—diphtheria—for which it is generally performed ; (3) it also shows the necessity, which has so often been insisted upon, of replacing the metal tube as soon as possible by a rubber tube ; (4) it is also another instance of the necessity for exploration of the larynx and tracheotomy wound when the patient is unable to breathe through the natural passage after tracheotomy for a foreign body ; and (5) the sudden death of the child some time later (probably from a recurrence of the stenosis) indicates the advisability of keeping under observation the cases of tracheotomy in which there has been stenosis of the trachea. At the time this case occurred the paper by Messrs. Pitts and Brook on “Stenosis of the Trachea and Larynx”¹ had not been published or I might have tried intubation to overcome the stenosis. If, however, another case were to present itself, I think I should be more inclined to try the T-shaped tube described by Mr. C. J. Bond in THE LANCET of March 7th, 1891, until the tendency to contraction had been overcome ; for the contraction in my case was confined to the end of the trachea immediately above the tracheotomy wound. I see no reason why this T-shaped tube should not be made of strong rubber, thus minimising to some extent the irritation caused by a metal tube.

The patient, a male child nine months old, was sent on Sept. 9th, 1890, to the Halifax Infirmary by Dr. Windle of Oviden. The mother said the child had been playing with a nutshell in its mouth, and whilst doing so had suddenly commenced coughing and the nutshell had disappeared. She had been unable to find the nutshell, and as the child continued coughing and began to breathe in a peculiar manner she had taken it to Dr. Windle, who immediately sent her to the Halifax Infirmary.

On admission the child's respiration was stridulous, the stridor was heard whilst standing near the child and without any auscultation. My colleague, Dr. S. C. Smith, saw the child with me and we came to the conclusion that tracheotomy ought to be done at once. The child was placed under the influence of chloroform and I immediately performed tracheotomy. The low operation was done and a bivalve tracheotomy tube was used. The child was placed in a cot and directions were given to the nurse that any vomit or expectoration was to be kept and carefully examined to see if the piece of nutshell came away. Four days later, no nutshell having been found, the tube was removed and the finger placed over the tracheal opening, but dyspnoea immediately occurred and I was obliged to replace the tube when respiration became normal. On Sept. 16th the child was again chloroformed and an attempt was made to find the nutshell by a probe passed into the larynx from the tracheal wound, but in vain. No nutshell having been discovered either in the expectoration or in the vomit, and the child being still unable to breathe through the natural passage, I was driven to the conclusion that the piece of shell was in the larynx and that thyrotomy ought to be performed. On Sept. 20th the thyroid cartilage was exposed by a median incision and divided with a scalpel. On holding the two halves apart no nutshell was seen and the interior of the larynx was perfectly normal. A curved, blunt-pointed director was then passed down the trachea from the larynx but it was arrested at the lower end of the proximal portion of the trachea. The trachea was then slit from above down-

wards where it was found that the obstruction was due to cicatricial contraction of the portion of the trachea in contact with the upper part of the tracheotomy tube. No foreign body was to be seen. The tube was replaced at a higher point in the trachea—i.e., nearer the larynx in order to prevent recontraction of the stenosed part—and the wound was sewn up, no stitches being placed in the thyroid cartilage as the two halves came well together. The patient went on very well and four days later, the child being able to breathe through the natural passage, the tube was removed. The wound gradually closed and the child was discharged from the hospital on Oct. 16th, perfectly well and able to say “mamma,” the only word it had been able to utter previously to the operation. I learnt afterwards from Dr. Windle that the child died some weeks later quite suddenly, probably from subsequent stenosis accompanied with some spasm of the larynx or trachea.

King Cross, Halifax.

RADICAL CURE OF HERNIA, THE RESULT OF INFLAMMATION SUBSEQUENTLY TO HERNIOTOMY.

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IN performing the operation of herniotomy the primary object of the surgeon, it is needless to say, is to remove the obstruction causing the strangulation, but there is a secondary object—viz., to effect as far as practicable such a cure as will prevent the descent of the gut that had indirectly led to the strangulation which had necessitated the operation. In exceptional instances the means usually employed for this purpose cannot be resorted to, and this occurred in the case mentioned below. Occasionally, under such circumstances, nature brings about what the surgeon for sufficient reasons had not attempted to perform. In the undermentioned case the patient was in such an exhausted condition that it was necessary to get him off the operating-table as quickly as possible after dividing the stricture and reducing the hernia.

A Mahomedan aged about thirty-eight, by trade a shop-keeper, was admitted into the Civil Hospital, Satara, on March 2nd, 1893, suffering from strangulated inguinal hernia. He stated that he had been ruptured for a considerable time and that on two occasions there had been difficulty in reducing the hernia. He was put under chloroform and reduction by taxis was tried, but without avail. Herniotomy was therefore performed in the usual manner, the sac being opened, and the bowel, which was of a port-wine colour, returned into the abdominal cavity without any difficulty. He was in a very exhausted condition, and it was considered unadvisable to prolong the operation beyond the time that was absolutely necessary. The incision was closed by means of catgut sutures and a dressing of iodoform and cotton-wool was applied. There was no vomiting after the operation, but the patient had four stools slightly tinged with blood. He passed a good night. On the following morning the temperature was 99.8°, which went up to 101.6° in the evening. The bowels were moved four times, the stools being tinged with blood. A dose of laudanum checked the diarrhoea. On the 5th the temperature went up to 103°. On the 7th the scrotum was found to be enormously swollen and cedematous, with much thickening of the structures round the cord. The temperature was 103° and there was some discharge of pus from the wound. At first sight the swelling of the scrotum appeared as if caused by a return of the hernia, but such was not the case, it being due to inflammation of the testicle and scrotum. Cold applications were applied. On the 8th the temperature in the evening was 103.2°. The bowels had not been moved since the 3rd.

March 9th : The bowels were not moved ; there was no vomiting ; temperature 101°.—11th : The bowels were moved for the first time since the 3rd ; the morning temperature was normal, the evening temperature 100°.—15th : The swelling of the scrotum has much subsided.—18th : The patient is free from fever ; the swelling is subsiding. Up to

¹ THE LANCET, Jan. 10th, 1891.