CASE
OF
INJURY OF THE HEAD,

BY DR. ROGERS.

WITH REMARKS

BY MR. TYRRELL.

Read December 13, 1825.

MARK GEORGE, ætat. 19, on Sunday morning July 10, fired off a gun at some crows, which, being overcharged, burst, and injured his face and head in a most dreadful manner.

He was able to walk some hundred yards immediately after the accident, but at length, being overpowered by loss of blood, he fell, and was conveyed to a neighbouring house. Shortly after he became convulsed, and was totally deprived of his senses.

In this condition I first saw him, when the assistance of three or four persons was required to keep him sufficiently still to enable me to examine a wound of considerable extent on the forehead, just above the centre of the left superciliary ridge.

After enlarging the external wound I discovered an aperture, about the size of a crown piece, in the frontal bone, through which a considerable quantity of the substance of the brain was oozing, and as much as a table-spoonful adhered to the hair and integuments around.

Having fully exposed to view the nature of the injury, I gently carried my finger round the jagged edge of the bone, and introduced it within the aperture, in order to ascertain whether any fragments of bone were lodged there; but as far as I could feel I did not discover any.

The wound was lightly dressed, and about sixteen ounces of blood were taken away from the arm, when he became more composed, and passed a tolerably quiet night. Both the eyes were closed from tumefaction of the palpebræ, and the face was also much bruised and swollen.

The next morning he was more tranquil, and appeared sensible when questions were put to him; the bowels were properly attended to, and saline medicines with antimony administered every fourth or sixth hour. Fomentations were applied to the face.

July 12. — Symptoms favourable, except the pulse, which, although not exceeding forty, was extremely tense and full. Fourteen or sixteen

ounces of blood were therefore taken from the arm, and a purgative given. His nourishment consisted of tea and thin gruel.

July 13.—The pulse was somewhat quicker and softer. The dressings were removed altogether, and a soft poultice applied, except immediately over the wound, where a light dossil of lint with a pledget of cerate dressing was placed. The surface of the skin was moist and temperate, his sleep undisturbed, and he appeared quite rational and collected in his answers to the various questions put to him by the attendants.

July 14.—Went from this period until the 21st with little alteration in his symptoms, when, from fresh accession of febrile heat and irritation, it was judged expedient to repeat the bleeding from the arm to the amount of ten or twelve ounces, and, to counteract the stimulus excited by the heat of the atmosphere at this time, the room was kept as cool as possible, and his body and extremities were frequently sponged with cold vinegar and water.

July 22.—Passed a better night, and appeared altogether more comfortable. The wound was lightly dressed in the centre, and the surrounding parts continued to be fomented and poulticed three or four times in the course of the day: the foetor from the wound was great, and the dis-

charge very copious, but the surrounding soft parts had a healthy aspect.

July 25.—Symptoms generally favourable, no increase of heat, pulse tolerably soft, sleep almost natural, bowels regularly relieved, perfectly sensible, but the discharge from the cavity very abundant on each removal of the dressings.

July 27.—More pain in the head, bowels not relieved, some stiffness in the lower jaw, greater reluctance in answering questions.

July 28.—The bowels relieved by a purgative enema, stiffness of the jaw gone off, more collected.

July 29.—Able to take more nourishment than during the last two or three days, but still some sense of choking in the throat, and difficulty in swallowing; the discharge from the wound profuse; a little inclination to drowsiness, but nevertheless perfectly sensible; pulse about sixty, soft and regular.

August 1.—The difficulty of deglutition nearly subsided, and he was able to take a draught of port wine and water, broth, &c.

August 2. — The discharge continued very abundant, and the bodily strength apparently af-

fectured by it; but by improvement in diet, and giving pulv. cinchonæ ʒj every six hours, no other unpleasant symptom followed.

August 4.—Upon touching a point within the cavity, thinking it looked like a portion of bone, I was astonished that it resisted the probe like a harder substance than bone, and upon examining it with my finger I thought it felt like a portion of iron. I attempted to get hold of it with a pair of common forceps, but it repeatedly slipped from my grasp, and as it appeared to give the boy excessive pain (like drawing out his eye, as he expressed it) I desisted.

August 5.—I more distinctly found that the substance was iron, and that the projecting part of it resembled a screw. I now procured the assistance of four persons, in addition to that of Mr. Smith, a medical practitioner who attended with me, and after many efforts and considerable manual exertion, I succeeded in removing the substance from the head. I found it impossible to get sufficient hold of it to extract it by means of the forceps, I therefore made use of the common trephine elevator, with which I raised it from its bed, when the subsequent part of the operation was very easy. The body extracted proved to be the breach-pin of the gun, consisting of solid iron, three inches in length and exactly three ounces in weight, and of the form here delineated.

I left him tolerably quiet and easy, betraying no additional unfavourable symptoms, the wound was dressed light and simply. The operation did not occasion any hæmorrhage.

August 7.—For many days from this time no interruption occurred to his gradual improvement; but two or three small portions of bone came away with the dressings.

On the 16th he was carefully removed to his own home about a mile distant: he bore the removal without much fatigue.

August 25.—Going on well, the cavity is gradually filling up, and the adjacent parts look healthy; he is able to sit up an hour or two in the day.

September 4.—Remains in an improving state, free from any stupor, weight, or lightness of the head; is able to walk about a little in the house; sleeps well; bowels regular, without the assistance of medicine; appetite good, and perfect recovery appears certain at no very distant period.

September 27.—Very much improved; some more small pieces of bone have come away, and probably more will be thrown out before the wound closes.

November 8.—The boy has continued in a favourable way, a few more small portions of bone have separated from the wound. He walks about, but is not allowed to exert himself in any way.

November 20.—A further separation of bone has taken place, but yet not altogether sufficient to make up the quantity destroyed, more however appears forthcoming. The boy continues extremely well.

December 10.—The boy is now in good health, no further exfoliation has taken place since the last report.

The following particulars have been obtained from the boy and from his mother, who has closely attended him throughout his confinement from the accident :—

The boy says that he remembers hearing the report of the gun when he shot at the crow; also that his little brother (who was with him at the time) walked with him into the yard, but that he was obliged to stop several times from faintness. He remembers his father coming to him in the yard.

Of what took place for the space of a week after his being taken into the house, he does not appear to have any recollection, although he certainly answered questions, put to him after the first day from the accident, correctly and consistently.

After the first week he readily knew persons who came to see him by their voices, when his eyes were perfectly closed from swelling of the palpebræ.

The sight of the left eye is totally destroyed, but that of the right remains perfect. The smell and hearing are both perfect, which his mother has had frequent opportunities of ascertaining, and she has not found any defect in regard to his memory or general mental faculties since the accident. There does not appear to be any difference between the two sides of the face and head, in point of sensation or power of motion.

REMARKS ON THE PRECEDING CASE,

By F. TYRRELL, Esq.

SURGEON TO ST. THOMAS'S HOSPITAL.

MANY cases are recorded in which large portions of the cerebrum have been lost without any immediate or subsequent derangement of the mental or corporeal functions; but I am not aware that any case has been attended with the lodgement of so large a foreign body in the cavity of the cranium, for so long a period as twenty-seven days, with the production of so little mischief.

In the first instance we may easily suppose that a portion of the cerebral mass, adequate to the

bulk of the breach-pin, escaped from the aperture in the frontal bone immediately the injury was inflicted, and that thus the surrounding parts of the brain could not suffer from compression; but it appears strange that the violence which must have been necessary to force so large a body into the cranium should not have produced more concussion of the cerebral mass than seems to have taken place; perhaps the loss of blood soon after the injury may have prevented the appearance of more urgent symptoms.

The position in which the breach-pin lay was with the screw to the aperture, and the other extremity towards the ear of the same side; the long limb was placed outwards, the short one inwards. From the length and situation of the breach-pin it appears certain therefore that both the anterior and middle lobes of the left side suffered; the former must have been very extensively lacerated at its anterior, inferior, and outer parts, the latter probably at its outer part only: thus the mischief appears fortunately to have been confined to parts of the cerebrum unconnected with any nerves essential to the support of the vital functions.

When we consider that not only this solid iron body, but that numerous irregular portions of bone were also lodged for so long a time in the substance of the brain and pressing upon its membranes, it does seem most extraordinary that the

boy should have experienced so little inconvenience or suffering.

From the force necessary to extract the iron, I think it not improbable that the extremity of the long limb had penetrated the skull at the lateral part, and that it was thus fixed. Had it been perfectly loose in the cerebral mass, I should imagine that its motion, when the boy changed the position of his head, must have occasioned great suffering, and have given rise to symptoms much more severe than those experienced.

The next extraordinary feature in this case is the trifling effect occasioned by the removal of the breach-pin; the surrounding parts must in a degree have accommodated themselves to its presence, and from a fresh disturbance I should have expected considerable irritation and inflammation to have followed. As the hæmorrhage produced by its removal was very trifling, it could not have had any effect in preventing unpleasant symptoms.