Clinical Lecture

ON

INJURIES OF THE HEAD.

Delivered at St. Thomas's Hospital,

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Fracture of the Base of the Skull, with Symptoms of Extravasation; Paralysis; Recovery.

GENTLEMEN,—Fractures of the base of the skull are not unfrequent in a large, busy, crowded labouring city, like London, but the recoveries are few and far between. When I say recoveries from this injury, I speak advisedly. I think we are as justified in asserting, in those cases where the symptoms are very marked, that the skull is positively fractured, as we are when we see the skull bared before us in the dead-house.

The following case will, I think, convince you that a fractured base is not always fatal.

Bartholomew M'C—, aged thirty-nine, ship-porter, admitted into Abraham's ward, Sept. 23, 1857. While raising some timber from a lighter into a ship, one piece fell back and struck him down in the barge below. In this case, the blow coming from above must have struck the vertex of the head. When picked up, he was senseless. On admission, there was bleeding from the nose and from both ears, but no serum. Pulse 92, labouring; breathing stertorous; pupils—or, at least, the left, for the ecchymosis and swelling of the right eyelid prevented the pupil of that eye being observed—moderately dilated and insensible. Head to be shaved and an ice-bag applied. To take eight grains of calomel in powder, immediately, and two grains in two hours. He remained insensible during the rest of the day, and lay quiet, occasionally moaning; twice he has been sick. The bleeding from the right ear continued up to the evening. The bowels not being opened, he had a common enema, after which they were twice moved during the night.

Sept. 24th.—During the day he continued much in the same condition; pulse 96, full. Towards evening he became more conscious, and referred to his head as the seat of pain; breathing became natural though still heavy. Mr. Solly, finding the pulse full and hard, ordered forty leeches to the scalp, which had the effect of softening the pulse, but did not diminish it in volume.

25th.—Has been sleeping the whole day; breathing heavy; when questioned he pointed to the vertex and forehead as the principal seats of pain.

26th.—Less drowsy, but dislikes being disturbed; a good deal of hesitation in his speech; (it was afterwards ascertained that this was usual; there is considerable in-turning of the right eye, and its pupil is always more dilated and less responsive to light than that of the left.

This inward squint has been the result of paralysis of the abductor oculi, through pressure on the sixth pair of nerves; the dilated pupil of this eye is to be considered as the result of pressure on the optic nerve, or more or less palsy of the retina.

28th.—Being quite under the influence of mercury, it was discontinued, and an alum gargle ordered. This man owes his recovery, I believe, to the rapidity with which he was brought under the influence of mercury. Bowels open.

29th.—Mouth very sore. Ordered, a chlorinated soda gargle.

30th.—Complaining of accession of pain in the head and across the forehead; hot scalp; a good deal of pyrexia. Thirty leeches were ordered; these did good service, but it was thought necessary to repeat them on the 2nd.

The continued heat of head was to my mind an indication of the persistence of inflammation, and hence my reason for calling in the aid of my black allies, and the niggers did good service to the state.

Oct. 5th.—Since the last application of the leeches he has progressed very favourably. Continues to complain of pain in both supra-orbital regions, particularly the right; tongue pale but not coated; bowels open; pulse tranquil; appetite good, and he asks for a better diet, but he was kept on milk, of which he was to have one pint extra.

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I believe that the slightest improvement in this man's diet would have again roused the inflammatory action which the leeches had subdued. Our London patients do not bear much pulling down, and very soon require a nourishing diet, or typhoid fever attacks them; or erysipelas, in cases of scalp wounds; or, as you have lately seen, that pleasant complication in a case of erysipelas, delirium tremens. Still, in this case I felt the necessity of a low diet, and therefore adhered to the milk.

8th.—Pupils both act on admission of light, but the right remains permanently the more dilated, and vision with it is much less distinct. Paralysis of the portio dura on the left side; food collects between that cheek and gum. When told to smile it is all on the right side; when told to puff out his cheeks the wind escapes at the left corner of the mouth, and the cheek flaps passively; there is total want of expression on that side. He cannot close the left eyelids, and there is always some ptosis of the upper lid, which may depend on paralysis of the third, or on want of tone in the orbicularis from the paralysis of the facial. He can project his tongue quite straight, and turn it to either side indifferently. He complains of numbness in the distribution of the infra-orbital division of the fifth. He has also quite lost all taste. To have cantharides blister to the temples; mercury ointment afterwards.

11th.—The application of the mercury to the blistered surfaces has made no impression on the pain in the temple, nor improved the sight of the right eye.

18th.—Feverish; tongue brown and dry; hot skin; headache. Effervescing potash mixture, one ounce and a half every four hours.

19th.—Powdered rhubarb and mercury, one scruple, to be taken directly. Less feverish; tongue clearer, moist. He always now wears a shade, which he says helps his vision. When he closes his left eye he feels a giddiness; when he uses both eyes, a fog obscures his vision. He complains of a difficulty of swallowing, unless it be liquids or solids that are well "greased," as he expresses it; but he has recovered taste.

Nov. 5th.—Complains of accession of pain in the head; some pyrexia. He was ordered twelve leeches, with linseed poultice.

6th.—Much better.

7th.—Mixture of bichloride of mercury, one ounce three times a day.

20th.—Able to get up and walk about, though with some feeling of vertigo. Pupils act equally; vision of the right still much less clear than the left. Paralysis of left facial lessened; no ptosis; more expression; numbness less in distribution of infra-orbital; now he experiences frequent tingling sensations in the course of the same nerve. In-turning of the right eye persists. Swallowing much better. Complains of frequent lacrymation; when he endeavours to fix his attention on any object, it increases the fog over his vision; when he shuts either eye he can see better with the other, though best always with the left; when he shuts the left eye he cannot point with his finger straight to any object; always goes wide of the mark; any effort makes him feel a little giddy. He says that all his face feels different from what it used to feel before the accident. General health very good. Still kept on low diet, much against his inclination.

A few days subsequent to this date he was presented, at his own desire, the only paralyses remaining being of the left facial, of the right abductor, and of the right optic. When dismissed, the greatest caution was enjoined upon him as to diet and regimen.

In this case the number of nerves which were paralyzed indicated the great amount of injury and the extent of the extravasation.

In contrast to the above case, and in order to point out forcibly the difficulty which sometimes occurs in detecting fracture of the base, and still more the difficulty of persuading the patient and his friends of the serious nature of the injury, I shall detail briefly a case which came before me in my private practice. The time will come when you will be surprised by the incredulity of non-professional men as to the danger to be apprehended in a case of injury of the head, in which the symptoms are not severe in the first instance. If the consciousness of the sufferer is not entirely obliterated, or if obliterated for a short time is soon recovered, they think you are exaggerating the danger, and if they are low-minded, vulgar people, they will even suspect that you want to make the most of the case; and often the poor patient himself, as soon as the power of thought returns, feeling weak and depressed, will accuse his medical attendants of unnecessary caution, and say decidedly, as in the instance now to be related, that all he wants is good nourishing diet, and the same amount of wine, &c., that he has

been accustomed to. We, of course, meet with these fancies in hospital practice, but they are more easily managed than in private. But neither in public or in private, if you are clear, as you ought to be, in your conviction of the true pathology of the injury, yield your opinion, or alter your practice. It is far better to give up the case than agree to a line of treatment which you do not approve.

On the 20th of May, 1856, D. S— was thrown from his horse with great violence, as the animal was galloping at full speed. He pitched on the right side of his head, the skin of which was grazed. There were bruises on the whole of the right side of the neck, limbs, and body. He bled freely from the ear on that side, making, I was told, a pool of blood in the road. I learnt from a man who saw the accident, and picked him up, that he was then quite unconscious. But he soon partially recovered his senses; for when the medical man of the neighbourhood, Mr. Chapman, saw him, about ten minutes after the occurrence of the accident, he was able to answer a few words, though not very distinctly or continuously, in reply to his questions. So slight at this time were the symptoms of severe injury to the head, that Mr. Chapman thought him well enough to be removed from Norwood, in a fly, to his residence in London. Mr. Chapman's judgment might, perhaps, have been a little biassed by a conscientious feeling of not wishing to retain D. S— as his patient in a country inn, away from the comforts of his own home.

I saw him first in London, about six hours after the receipt of the injury, in the presence of Mr. Chapman, who had kindly accompanied him to town. From this gentleman I learnt that when he first saw the patient the pupils of both eyes were natural in appearance, slightly but equally dilated, and that they contracted normally to the influence of light; that the pulse was feeble and regular, and the breathing natural. He said that it was like a case of simple concussion. When I saw him he was partially conscious, though dull; he at once asked who I was, and, though he did not recognise my face, which was not unknown to him, he evidently remembered my name. We ordered him a purgative of calomel and rhubarb, to be followed by a senna draught in the morning; these cleared the bowels well.

I shall not detain you with the daily notes of this case, but merely mention that the cerebral symptoms did not assume any serious character until twenty-four hours previous to his death, which took place on the fourteenth day from the date of the injury. At each visit he was quite conscious, though rather lethargic, and answered all questions rationally. He complained that we did not allow him enough to eat, and told his usual medical attendant that all he wanted was his usual diet, and that if we would allow him that he would soon be quite well. The symptoms which I did not like, and which induced me after each visit to give a very guarded opinion as to his progress, were, a continued though slightly-increased beat in the head; a slightly-dilated pupil of the left eye; a sluggish and peevish manner; and his complaint that he was not free from headache, though he said it was nothing to signify; he had had an injury to the eye and slight squinting from a former injury, so that this symptom was not thought of much importance. The accident occurred on a Tuesday, and he spoke but little, except in answer to questions from his nurse or medical attendant. He answered slowly, but never incorrectly; he seemed to require time to collect his thoughts. But on the Friday he talked to his brother, who was his partner, perfectly rationally about business, and from this time his intelligence improved until thirty-six hours before his death.

On the Thursday week following the accident—that is, on the ninth day, he seemed so well that his brother, who up to that time had slept every night at his house, went home. It was on this day that, in a consultation with Sir B. Brodie and Mr. Headland, we yielded to his repeated solicitations that he might be allowed to sit up a little during the course of the day; we agreed to his doing so in the arm-chair for an hour the next day, but that he was not to see any of his numerous friends, who called in great numbers to inquire after him. All this precaution he thought very absurd, showing how well he felt himself.

The following morning, at half-past eight, he got up, partially dressed himself, went into his sitting-room, got out his geological hammer, and began to work at some of his fossils. He had not been occupied in this way above a quarter of an hour before he became drowsy, and soon comatose, and was a corpse in about thirty-six hours from the time of his thus leaving his bed and exercising himself in this imprudent manner.

After his death, I heard that on every occasion his bowels

acted he got out of bed and went to the watercloset up stairs. I mention this fact, because it certainly never did occur to me during my attendance that such a thing would be allowed, for he had an excellent nurse, who I thought knew her business. It has, however, been a warning to me for the future to ascertain how such matters are provided for, and to guard against any such imprudence.

If it is wrong to permit a man in a state of delirium, having fractured either arm or leg, to leave his bed, for no man in his senses would do such a thing, it is still more dangerous to permit a man who has fractured his skull to move about as if nothing was the matter. I know that in many such cases, when patients are tolerably conscious, and when they are obstinate and self-opiniated, it is extremely difficult to manage them; but you must not hesitate to speak the truth, and tell your patient distinctly, that his skull is fractured. This may seem harsh, but it is really kindness, if by it, and by that alone, you can control your patient.

Mr. Hilton, in his valuable lectures on "Fractures of the Base of the Skull," has forcibly pointed out the importance of keeping the head still, and not allowing your patient to assume the upright posture until five or six weeks have elapsed, and the injury is repaired. He dwells upon it especially in reference to the rupture which takes place in the water-bed on which the brain rests in a normal state. In fracture of the base of the skull, extending through the petrous portion of the temporal bone, the cerebro-spinal fluid escapes at the external ear, and this flow is itself an indication of the severity of the injury, but its absence is no proof of the absence of fracture. But to return to the management of an unruly patient. When either you have ample proof of fracture of the skull or only suspect it, as in the case just related, I again wish to impress upon you the absolute necessity of keeping your patient as quietly and unintermittingly in bed as if his leg was broken, and that you are justified in telling him plainly, if such an extreme measure is necessary to attain your object, that his skull is fractured, and that absolute rest is necessary to preserve his life.

A post-mortem examination in this case revealed the frightful amount of mischief which had been inflicted on this poor fellow's skull and brain. External to the skull there was a large ecchymosed spot over the temporal muscle on the right side, and, corresponding with this there was a large coagulum of blood between the bone and dura mater, extending downwards as low as the petrous portion of the temporal. By the removal of the calvarium, the dura mater on the left side, corresponding with the superior posterior angle of the parietal, exhibited unmistakable indications of blood extravasated beneath by its purple hue and bulging surface. The clot which produced this extended from the base of the brain to the vertex. On removing the brain, we found the lower part of the left middle lobe superficially lacerated, discoloured by blood, and slightly softened; there was also superficial laceration of the under part of the left anterior lobe, with an accompanying sanguineous infiltration. The remainder of the brain was firm and healthy; no suppuration nor other morbid appearance. There was a fracture of the skull, extending from the upper part of the squamous plate of the right temporal bone downwards through its petrous portion, and thence across the occipital, but not quite reaching the foramen magnum.

From this account, you will perceive that the laceration of the brain was on the opposite side to the fracture; it was occasioned, therefore, by the *contre coup*. This laceration and a certain amount of extravasation must have been contemporaneous with the injury; but I doubt if the whole amount of coagulum found after death was poured out at the time of the accident, but that this second flow of blood followed his resuming his favourite occupation with his geological hammer. It is not, however, probable that, with this amount of injury to the brain, any amount of rest or judicious antiphlogistic treatment could have averted the fatal result; but the whole course of the case, with its post-mortem revelations, will show how extremely careful—aye, and obstinate, you must be in the treatment of any injury of the head, where there is even the slightest ground for suspecting fracture of the base.

CHOLERA AND CRINOLINE.—Letters from Stockholm announce that the physician of the Princess of Gothland assures the ladies that crinoline is as fatal to its fair wearers as cholera. He assures them that if they follow that absurd fashion they will rue it when they become mothers, as a mortal disease supervenes after child-birth, in all cases where it has been worn. This diatribe does not appear, however, to have had any effect.