FRACTURE OF SKULL. CONTRE-COUP.

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The following case may be found of interest, not only from a surgical, but also a medico-legal point of view, as showing how a serious injury may exist without definite evidence of its presence. At first there was no history or appearance of injury having been inflicted, until attention was drawn to its possibility by rumours that the man had been assaulted. The patient himself was sensible, and could talk and answer questions, but did not allude to the fact of having been injured. Later, on being closely questioned on the point, he gave a somewhat confused account of having been struck or fallen down, being evidently under the effects of liquor at the time. Below I give the case in detail, as taken from the medical case sheet:

July 26, 1903.—Pte. Henry G——, Glo’ster Regt., aged 24, reported sick to-day at the Station Hospital, Naini Tal, complaining of pains in the head, and stating that he had been getting fever lately; tongue very dirty, temperature normal; rather drowsy condition, and had undoubtedly been drinking. Being under orders to go down to the plains, he was detained for observation. Bowels acted freely after calomel and white mixture; evening temperature normal.

July 27.—Morning temperature 99°. Not being considered fit to travel, he was admitted to hospital. Still complains of headache; drowsy, confused state; tongue very dirty; saline purgatives and bromide of potassium. Evening temperature normal.

July 29.—Temperature has been normal since last note. I was told to-day that it was said he had been struck on the forehead and knocked down. There are no signs of a blow on the forehead; on examining head a small swelling was noticed, 1½ inches to the right of median line of vertex and 4 inches above eyebrow. Right side of head shaved; swelling was evidently a small haematoma, about ½ inch in diameter, boggy, no contusion or bruising of skin over it. Complains of
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pain, especially on right side of head; hæmatoma is evidently not due to direct external violence. Cold evaporating lotions applied to head. He continues in a very drowsy lethargic state; tongue very foul; only speaks when spoken to; pupils regular and respond to light. There is slight facial paralysis on left side; tongue slightly affected. No paralysis of limbs on left side; moves freely in bed, tries to get up, and seems generally dazed and confused. Salines, bromide. Evening temperature 101°F.

July 30.—Morning temperature 100·4°F; much the same condition. Evening temperature 99·6°F.

July 31.—Morning temperature, 99°F; facial paralysis is more distinct; pupils not affected. Complains of pain on vertex and back of skull. Answers when spoken to. Tongue still very foul; bowels opened by salines and enema; in the same drowsy, confused state. Free motion of limbs on left side, but sensation seems affected; speech is rather blurred and indistinct. Respiration 18; pulse 76; evening temperature 100·4°F.

I was sent for about 10 p.m. Patient had a convulsive seizure, face very livid, convulsions general; but left side said to be most affected. On my arrival at the hospital convulsions had ceased, and he was sleeping quietly. Respiration 18; pulse 72. The patient's condition and symptoms clearly pointed to compression of brain, probably due to hæmorrhage.

August 1.—Temperature normal. Had a fairly good night; bowels freely moved this morning. Has had three convulsive seizures this morning; they are increasing in intensity—very livid during the attack. Facial paralysis of left side is well marked. He is roused with difficulty, but answers when spoken to. Respiration 16; pulse 56. Patient's condition most serious.

After consultation with Capt. McCarthy, R.A.M.C., I decided to cut down and examine condition of skull in region of hæmatoma. Head completely shaved. Two slight bruises at back of scalp on right side below occiput; no bruising or contusion over hæmatoma, which was boggy to touch. All instruments, dressings, &c., well boiled and sterilised. Capt. McCarthy administered chloroform, and Capt. Hulbert, I.M.S., kindly assisted me during the operation. A large D-shaped flap was taken around hæmatoma on right side of skull, base down-
wards, and right parietal and frontal bone well exposed. The hematoma was found to be due to hemorrhage, caused by a small spicula of bone projecting outwards from the coronal suture, and a linear fracture was seen in the course of the coronal suture, or rather what appeared to be a separation of the suture, forcing outwards the small spicula of bone, probably the result of "contre-coup." At the spot where the small piece of bone was projecting, slight oozing of blood was noticed, apparently from within the cranium. The fragment of bone was cut away, the pin of the trephine applied over the spot, and a circle of bone removed in the course of the coronal suture. On exposure of the interior of the cranium, the dura mater above the coronal suture was seen to be normal, but below the line of the suture a blood clot was found lying on the dura mater, and extending forwards below the frontal bone. The clot was gently picked out and removed, and fragments washed away by weak perchloride solution. There was some oozing from what was apparently a small anterior branch of the middle meningeal artery, which soon ceased after exposure to the air for a few minutes. The circle of bone removed by trephine was kept covered by the skin flap during the operation. It was then washed in a weak antiseptic solution, and replaced in situ. The flap was readjusted and stitched, except at the lower anterior part, which was left open for drainage. Wound well dried and dressed with dry pad of boric wool. Patient bore operation well. In the afternoon there was a slight convulsive seizure which did not last long. Evening temperature 98.8°; pulse 84; respirations 18.

August 2.—Temperature normal; good night; quite sensible; eyes clear and bright. Says he has no pain, and speaks quite distinctly; bowels open. Evening temperature normal. Dressings not disturbed.

August 3.—Temperature normal. Says he feels quite well; no pain. Wound dressed; upper and inner part of flap where stitched almost healed. Evening temperature 98.8°.

August 6.—Temperature normal. Stitches removed; flap quite healed except at lower portion, which was kept open. Speech normal; no pain. Says he feels very hungry. Tongue clean.

August 12.—Good appetite; lower part of wound almost healed.
August 20.—Up and about; no symptoms of paralysis. Sleeps well, appetite good, wound entirely healed. Convalescence was uninterrupted. He appeared before a Medical Board on September 18; was recommended change to England, and left Naini Tal en route to England on October 19, 1903, looking well and strong. It will be seen from the above description of the case that there were at first few symptoms to point to any serious injury of the skull or existence of meningeal haemorrhage. The evident symptoms of a drinking bout before admission, absence of history, or external signs of injury, completely masked the brain symptoms. When symptoms of facial paralysis supervened they were of slight character, and there was complete absence of paralysis of limbs. It was not until the fifth day after admission that I felt assured that the symptoms were due to brain pressure, and the assurance was strengthened by the convulsive seizure, which occurred on the evening of July 31. The case is, I think, a satisfactory one from a surgical point of view, and the fracture was, from its appearance, undoubtedly due to "contre-coup."