

ing swelling of the shoulder and pectoral regions is more marked and presents a soft spot in its centre.

August 7th: Under chloroform this soft spot was opened into by a free incision and a quantity of dark fluid blood let out; the bare, rough upper end of the shaft was then felt, and posterior to it, and lying in a direction at right angles, another piece of bone. Extension on the humerus, assisted by all the pressure I could make from above through the wound with fingers, instruments failed to move the bones; the wound was then enlarged downwards, as if for excision, and the head of the humerus exposed. Further attempts at reduction having failed, the head of the humerus, which was fractured transversely at the surgical neck, was removed; the shaft was then brought into line; a posterior opening was then made for drainage and the wound stitched and dressed. Outside the dressing a large pad, hung from the neck, was placed in the axilla and the arm bound to the side. The shoulder wound did very well on the whole, though we failed to keep it perfectly aseptic. Some days subsequent to the operation the slight discharge which came from the posterior drainage tube smelt, and the protective was discolored; in all probability the sling of the pad in the axilla had worked under the dressings.

Sept. 20th: He moves the arm slightly, and can flex the forearm; passive motion to be continued daily.

Oct. 1st: A small fluctuating spot at the extremity of the elbow; scar incised and a drop or two of pus let out.

Nov. 21st: On my return from a three weeks' holiday, I found him in bed with a side splint controlling the elbow, and learnt that when playing on the stairs he had fallen and wrenched the elbow. Flexion and extension, with pronation and supination, could be fully made, but the power was feeble. He uses the deltoid much better than when last examined. There is still a little oozing of purulent matter from the sinus at the lower angle of the shoulder wound. Under chloroform the shoulder wound was opened, the shaft of the humerus exposed, and an inch of soft reddish bone removed. From the medullary canal thus opened a loose piece of necrosed bone three-quarters of

an inch in length was extracted. The medullary tissue was soft and red, and mixed with small particles of necrosed bone, which gave a gritty sensation to the scoop with which the canal for three inches was cleared out. After antiseptic flushing and filling the medullary canal with a 10 per cent. solution of iodoform in glycerine, a drainage tube was passed down the canal. The wound was dressed in the ordinary way.

The drainage tube was shortened from time to time as the discharge diminished.

Dec. 26th: Small piece of loose bone removed through the elbow sinus.

Jan. 21st, 1891: Two small loose pieces of bone were removed from the shoulder.

Feb. 10th: Discharged. A small sinus exists at lower angle of shoulder wound. The elbow is solidly healed.

During his six months residence in the hospital, the highest temperature recorded at night was 101° F., thirty hours after the shoulder excision. On only two occasions subsequent to this does the chart show an evening temperature of 100° F., and one of these corresponds with the date of his fall.

March 16th: Seen at office. There has been no discharge from the shoulder for three weeks. The right humerus is two and a half inches shorter than the left.

May 24th: I found that the old sinus at the elbow had reopened, the probe showing bare bone at the lower extremity of humerus. As notice had been given to the society of my desire to report the case, I determined to do so notwithstanding.

So far from the limb being flail-like and useless, as was predicted, the boy has a very useful member in his right arm. He dresses and undresses himself, cuts his meat, and has been working for some weeks in the cotton mill at his old job and earning the same wages. The shoulder motion is not so great as I would have liked, but improvement in this respect is still going on. Abduction is limited to an angle of 30° to 35° F. The forward and backward movements are good.

He can completely flex and extend the forearm, and pronation and supination are perfect, as was to be expected. The attempt to flex the forearm gives a pull of 16 lbs. on the spring