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AMPUTATION AT THE SHOULDER-JOINT.

BY E. K. SANBORN, M.D., LOWELL, MASS.

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THE patient, Mr. Wm. Mason, 18 years of age, had been for a short time employed in the Tremont Cotton Mills, of this city, as a tender of a machine called the "picker." On the morning of the 6th of May last, while in the act of slipping a belt on to a pulley, the sleeve of his frock (probably) was caught by an iron shaft revolving with great rapidity, drawing him over it, and finally tearing the left arm completely off just below the shoulder. The point at which the humerus separated was about six inches below the shoulder-joint. The laceration of the soft parts extended into the axilla, and to a considerable distance over the left pectoral muscle.

In addition to the injury to the arm, above described, the *skull* was laid bare by three distinct wounds four or five inches in length, commencing at the left eyebrow, and extending in a radiating manner over the frontal and temporal region.

At the time the accident occurred, the patient was *alone* in the room, which is in the 2d story of the building; and his appearance in the room below, in the mutilated condition described, was the first intimation his fellow workmen had of the accident. He described the manner in which the accident occurred, and one of the men went up and found the arm lying on the floor beside the machine and the wall of the room (which is about eighteen inches from the shaft), covered with blood, showing that the man must have accompanied the revolutions of the shaft for a certain length of time before the arm finally separated.

I saw the patient twenty minutes after the accident. He was then lying on the floor of the basement room of the mill, suffering a good deal of pain, but retaining his strength and faculties to a wonderful degree. There was no hæmorrhage of consequence from the stump. Brandy was administered to him pretty freely, and he was immediately removed to the Hospital, where, in the absence of Dr. Kimball, the patient came under my charge.

There was no doubt as to the course to be pursued, and accordingly, with as little delay as possible, the patient was brought under the influence of chloric ether, and I proceeded to disarticulate the humerus at the shoulder, assisted by Drs. Green, Davis and Kendrick, of this city. The

integuments of the axilla and anterior part of the shoulder being gone, it was necessary to form, from the tissues of the superior and posterior parts, a flap of sufficient size to cover the wound. This was done by dividing the attachments of the pectoral muscle, passing the knife into the joint from the front, around the head of the bone, thence outwards to the surface, forming the large posterior flap alluded to. In the course of the operation a fracture was found to extend through the neck of the scapula; but as the periosteal investment seemed entire, it was not deemed necessary to remove the fragment.

At this stage of the operation an unexpected difficulty presented itself; and the patient was for a short time in extreme peril. It has been noticed that there was no hæmorrhage from the lacerated stump. Neither did any *immediately* follow the operation; and on searching for the axillary artery, it was found that it had been torn off *higher up*, and therefore had escaped the knife altogether. The sinus-like track of the vessels was found, running upward under the clavicle, and a tenaculum thrust in, which was almost immediately followed by arterial hæmorrhage—slight, at first, but which increased finally to a degree that threatened the life of the patient. The thumb and forefinger of the left hand were thrust up the wound in the direction whence the blood proceeded, and the extremities of the vessel caught, at the point where they emerge from between the clavicle and rib. The wound was then enlarged in the direction of the clavicle, a tenaculum thrust through the mass held by the thumb and finger, as high up as possible—and finally a stout ligature applied above, arresting the bleeding entirely. No other vessel required to be ligatured.

The patient at this time was looking very badly, and required pretty active measures—with stimulants, frictions, &c., to restore him to any degree of consciousness. He soon began to rally, however, and the edges of the wound were then drawn together by three or four sutures, and a cold-water dressing applied.

During the night following the operation, the pulse rose to 130, and the patient was delirious. These symptoms continued, with little variation, for three or four days, when the wound commenced to suppurate freely, and the patient to improve.

The subsequent details of the case it is not necessary to give, excepting that the final closure of the wound was somewhat delayed by the presence of the ligature, which did not come away until the *thirty-fifth* day. On the *forty-ninth* day the patient left the Hospital, well.

The above case is given, not as being a rarity in surgery, but as affording a good illustration of the power of a young, healthy subject, to withstand shocks of the severest nature, and of the success which may follow primary operations in the most unpromising cases.

The conduct of the young man at the time of the accident was also most remarkable. It was noticed above, that he was at work *alone* in an upper story of the building. To reach the stair-case—which was at the opposite end of the room—he was obliged to climb over a pile of cotton which surrounded the machine—in all not less than twenty bales—and on reaching the room below, retained his self-possession perfectly, and detailed the circumstances of the accident with remarkable calmness.