AN ACCOUNT OF A CASE
OF
RESECTION OF THE SHOULDER AND
ELBOW JOINTS OF THE SAME ARM
FOR
GUNSHOT INJURY.

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I AM not aware that it has before happened to any surgeon to have to remove during the course of one operation the two principal joints of the upper extremity.

Some particulars of the case I am about to describe have already been made public, but since the ultimate usefulness of the limb under such circumstances must prove the chief question of interest, I trust I shall not trespass on the attention of the Society if, at the expiration of nearly eighteen months, I narrate what the issue has been.

Louis St. Aubin belonged to a French corps d'élite, the 3rd Chasseurs d'Afrique. During the early part of the day on which the Battle of Sedan was fought his horse was shot under him in a cavalry charge, and while struggling on

foot he received a severe bayonet wound in the face, the only instance of the kind I observed amongst a large number of wounded. He then got separated from his comrades. But although wounded St. Aubin was anxious for more fighting, and later in the day joined a party of marines for the purpose of engaging the enemy. But it was no long time before he became completely disabled by a shell explosion. The fragments severely lacerated the bones and soft parts of his right arm in the region of the shoulder- and the elbow-joints.

For twelve days, until September 12th, he lay without receiving any special attention, in one of the makeshift ambulances near the scene of action, and then he became my patient in the Caserne d'Asfeld, a large barrack converted into a hospital, of which I had charge in Sedan.

When I first saw the patient I found a large suppurating wound in the deltoid region, and another on the posterior aspect of the elbow-joint. The soft parts were extensively injured, and the bones much comminuted. It almost seemed as if amputation at the shoulder-joint were indispensable. I nevertheless determined, if practicable, to save the limb.

Soon after admission I proceeded to remove the injured bones. We endeavoured to make the man inhale chloroform but without avail, and the first half of the operation was completed without it. He bore it, tedious as it was, without a murmur. But to save needless suffering we constrained him to inhale chloroform before removing the other joint.

For both joints the original wounds afforded by their position facilities for utilising them, and I merely extended the wound upward and downward in the straight line.

The shoulder-joint was first excised. Four inches of the upper extremity of the humerus were removed, the bone being sawn through at the limit of the fractured portion.

The specimen shows the extent to which the bone was injured.

The elbow-joint was next carefully examined. Only the external condyle of the humerus was implicated, and only the thinnest possible slice was removed by the saw. The ulna

was extensively fractured, the olecranon process pulverised, and the shaft split throughout its upper third. The fragments were removed subperiostially, and the irregular extremity of the shaft cut through at the junction of the middle and upper third. A further portion of shaft split off for an inch further down the posterior surface was also removed, so that the divided extremity of the ulna only presented about two thirds of the section of the bone. As the radius was not implicated beyond its articulating head, this only was removed. The bones of the forearm were therefore divided at very different levels, but the tubercle of the radius was preserved with the muscular attachments belonging to it, and I trusted to the preserved periosteum to regenerate in part the portions of ulna removed. To have sawn off both bones at the lower level would most certainly have precluded all hope of a useful result. The sequel shows, I think, the propriety of this proceeding.

The after-treatment consisted in supporting the injured arm on pillows, and providing for the free outflow of matter.

Neither in this nor any other case of resection of elbow- or shoulder-joint did I employ splints, and from choice I always employed a single straight incision in the soft parts.

Until September 23rd, a week subsequent to the operation, the patient progressed well. Then his temperature rose, the skin and conjunctivæ became yellow; he had rigors, sweating, and delirium. I gave him up for lost, as I had been obliged to give up so many other operation cases from a similar cause; but he rallied contrary to our expectations. An abscess formed deep in the neck. On being opened it gave exit to a quantity of fœtid pus. The wound now began to improve in appearance, and the patient regained appetite and strength. He never lost pluck and would often exclaim, "*J'ai du courage moi, j'en guerirai.*"

After I left Sedan St. Aubin remained under the care of Dr. Duplessy in the Military Hospital. Subsequently he was sent to Constantine in Algeria, whence he wrote to me he was sorry he was not well enough to carry arms against the Arabs, at that time in revolt. The condition of his arm was, how-

ever, steadily improving. The elbow had healed, and so had the shoulder, save a sinus leading to some necrosed piece of bone. I caused him to come over to London, partly in order to remove this sequestrum, and partly to better observe his actual condition. I proposed extracting the piece of dead bone and then presenting the patient for the inspection of the members of the Society, but an attack of home-sickness caused him to take an abrupt leave of us and return to France.

I can therefore only present to you a photograph, recently taken, and give you the description of the man's actual present condition.

The elbow-joint is thoroughly healed, and the ulna so far reproduced that there is scarcely any appreciable deformity or loss of shape in the joint. He can flex and extend it, and also pronate and supinate the forearm. The power of the hand is being rapidly and completely regained. As the shoulder-joint is not yet healed its condition is not so satisfactory, but by means of the pectoralis and latissimus dorsi muscles he moves the joint freely backward and forward. He cannot raise the arm very high from the side, but this is no uncommon result after excision of this articulation, and in this particular instance the greater portion of the deltoid muscle was destroyed by the shell fragment causing the original wound.

I can entertain no doubt that as soon as the necrosed piece of humerus is removed the sinus in the region of the shoulder will close, and the usefulness and power of the limb become greatly increased. Meanwhile I submit that the man's present condition is extremely satisfactory, and while it affords an ample justification of the operation as performed, it also warrants me in placing this case upon record as one of successful resection for gunshot injury of the elbow- and shoulder-joints of the same arm.

DESCRIPTION OF PLATE I.

The illustration, copied from a photograph taken about sixteen months after the injury, serves to show the appearance of the arm after the resection of its two principal joints. The satisfactory condition of the elbow-joint is well seen in the plate. The sinus leading to a piece of necrosed bone in the humerus is noticeable in front. The man is otherwise well nourished, and completely convalescent save for the piece of necrosed humerus, which has doubtless ere this been removed.