

performed excision. This was soon followed by relief from suffering, restoration to a very great degree of the functions of the hand, improved health, and a capability of enjoying life.

The successful result that I am able to record to-day, three years after the operation, is, I believe, ample justification for any little risk incurred in its performance.

ON THE FINAL RESULT OF A CASE IN WHICH THE SHOULDER AND ELBOW-JOINTS OF THE RIGHT ARM WERE EXCISED FOR GUN-SHOT INJURY.*

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As a contribution to the question under discussion, the resection of joints, I desire to bring before you the final result of a case which I treated during the war of 1870-71. This case has already been recorded in the *BRITISH MEDICAL JOURNAL* and *Medico-Chirurgical Transactions*; and the reader of the surgical address, at the meeting of this Association last year, was good enough to refer to it in flattering terms. But the final result has not been made public, and I trust it may prove interesting if I now communicate it to the members of this Association.

The subject of my remarks was a French chasseur d'Afrique named St. Aubin; he was twice wounded during the memorable day of September 1st, at Sedan, the severer injury being one which extensively involved both shoulder-and elbow-joints of his right arm. It was caused by a shell explosion. The bones were much comminuted, and the soft parts lacerated. Twelve days after the injury, when I first saw the patient, I excised the shattered head of the humerus and the fractured elbow-joint; and I show you the portions of bone then removed, which are faithfully rendered in the drawing (Fig. 1). Owing to the unfavourable circumstances



Fig. 1.—Portions of Shoulder- and Elbow-Joints removed in the first instance, and the Dequestra subsequently extracted.

in which the patient was placed, he made a slow recovery, and narrowly escaped death by septicæmic poisoning. Presently, I returned home, and so did the chasseur; but I kept up relations with him, and with Professor Sarazin, lately of Strasburg, under whose able care he was fortunate enough to fall. This distinguished surgeon removed from the humerus a piece of necrosed bone, evidently a central necrosis of the shaft, which I also show you. It is, however, much reduced in size, and without the bony spicula which it had at first, as St. Aubin kept it in his own possession as a kind of fetish; and here is the upper extremity of the bone, comprising the entire thickness of the shaft, on which may be seen the marks of the saw. This was removed by Dr. Goede of Bourbon Lancy, in February 1872; while the other piece, originally eleven centimètres long, was extracted by Professor Sarazin in November 1875, a description of the operation being given in the *BRITISH MEDICAL*

JOURNAL (January 22nd, 1876). The presence of these pieces of necrosed bone had, of course, retarded the healing of the shoulder wound, and maintained a continuous suppuration from several sinuses in this region. The elbow wound healed well in the first instance, and with very complete reproduction of bone, so that the external configuration of the joint is but little changed, as the photographs plainly show, and the power of movement is excellent (Figs. 2 and 3).

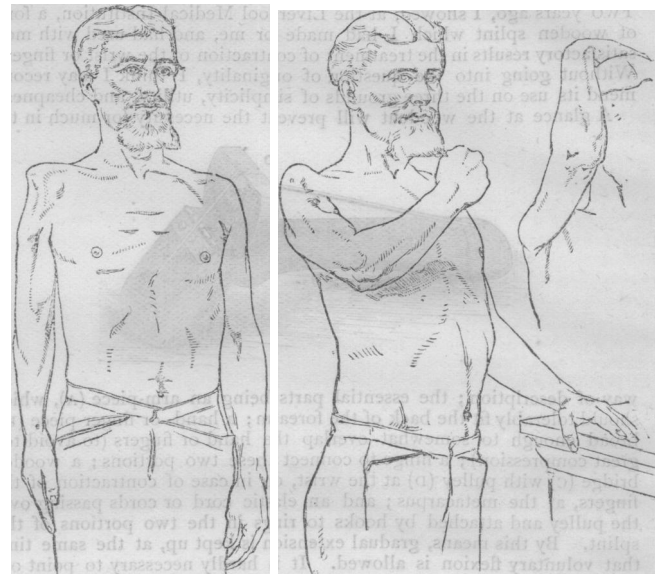


Fig. 2.—Appearance of Extremity when passive. Fig. 3.—Appearances of Arm and Elbow-Joint during Active Movement.

Every new year, St. Aubin writes to me a letter full of cheerfulness and gratitude, and gives flourishing accounts of his injured arm. I consider that the interesting and unique character of the case justifies me in rendering an account of what this man can do with his arm, now that a sufficient time has elapsed for it to gain strength, and also to establish the definitive character of the cure. I wrote to ask him, therefore, for the information, and received a reply in January last. He also sent me three photographs, which were taken at the same time; and I am able to give measurements, taken at my request by Dr. Goede, who lives at Bourbon Lancy, where St. Aubin resides. These are, first, from the posterior angle of the acromion to the styloid process of the radius, which measures on the right side, 45 centimètres; on the left side, 54½ centimètres; so that the total shortening is 9½ centimètres: from the acromion to the external epicondyle of the humerus measures, on the right side, 24 centimètres; on the left side, 28 centimètres; the shortening being 4 centimètres. ("This measurement", Dr. Goede says, "was difficult to take", but he guarantees its accuracy. Dr. Goede thus gives an unconscious testimony to the actuality of the reproduction of the bones and form of the elbow.) The comparative length of the forearms is, on the right side, 21 centimètres; on the left side, 26 centimètres; the shortening is consequently 5 centimètres. The circumference of the arm, taking the average of six measurements, is upon the right side, 24.6 centimètres; and on the left side, 28 centimètres. The right hand is somewhat atrophied. The circumference of the forearm is not given. The power of abduction is extremely limited.

"I now tell you", writes St. Aubin himself, "what I am able to do with my arm. Although I am no great player, I play at billiards from time to time with one of my friends, and I play very well with my right arm. I dig and hoe in my garden without difficulty. I occupy myself in leisure hours at a carpenter's bench; and I can use the trying-plane, the jack-plane, and even the German saw with my right arm perfectly well; the trying-plane fatigues me the most. I hunt, and shoot birds as well as any other sportsman, but not like a soldier, as I cannot raise my elbow to the level of the shoulder. A young fellow here has a lathe, and I often go to amuse myself with it, turning boxes and such things. I can easily carry a large pailful of water; and, in short, I do not feel any inconvenience, or even that I have been wounded at all, as I can do everything I require to do with my arm; and, were you to see me, you would scarcely believe it was the chasseur d'Afrique on whom you operated at Sedan."

This statement requires no comment. In previous letters, similar accounts were given. St. Aubin is clearly well satisfied and contented with the result, and we surgeons may, I think, be the same.

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.