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NOTES OF CASES OF FRACTURE ILLUSTRATING THE VALUE OF SILVER WIRE AND STEEL NAILS.

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A. B., æt. 47, was admitted to the Western Infirmary with a compound comminuted and oblique fracture of the tibia. Union did not take place, and several of the comminuted portions were removed, the oblique surfaces were rawed, and held in contact by soft silver wire. In two months the patient was walking about, and is now, two years after the operation, quite well, the wire having given no trouble.

C. D., æt. 34, was admitted with a compound fracture of the tibia in the lower third. The tibia was drilled, and silver wire passed through the broken ends. In eight weeks the bone was quite solid, and the patient has now a useful leg.

A. E., æt. 10, was admitted with a compound oblique septic fracture of the right tibia, with fracture of the upper third of the femur and also its lower third in the left leg. The child had septic absorption, which was evidenced by suppuration in both ankle joints, and delirium to such an extent that it was with difficulty the splints and dressings could be kept applied. The two fractures of the left femur united without any operation, but the right tibia did not unite. It was therefore drilled and held in contact by soft silver wire, the surfaces of the tibia having previously been refreshed by a fine saw. In six weeks the bone had firmly united, and the child is now walking quite well.

E. F., æt. 30, was admitted to the Western Infirmary suffering from a fracture of the humerus. It was oblique and comminuted, and could not be reduced. A skiagraph taken by Dr. M'Intosh showed the obliqueness of the fracture, and also the splitting of the humerus downwards towards the joint. Under chloroform, an incision was made over the fractured bone, and a considerable

portion of the triceps was found between the fractured ends ; this was removed, and the parts brought in contact. At the end of six weeks there was no attempt at union, and therefore silver wire was carried through the fragments. In other six weeks the patient was quite well.

Six cases of fractured patella came under treatment. Four of these were treated by reflecting a flap over the patella, clearing out the clot from between the broken surfaces, and bringing these into contact with silver wire, according to the method of Lord Lister. The other two were treated by the subcutaneous method of wiring recommended by Professor Barker of University College, London. All the cases did well, and patients had good movement. One advantage of Mr. Barker's method is that the patients can be allowed out of bed somewhat earlier.

D. J., æt. 26, was admitted with ununited fracture of the radius. The broken ends were exposed, the surfaces rawed by means of the electric saw, and retained in contact by soft silver wire. In six weeks the bone was quite solid, and the patient now has a useful arm.

J. B., æt. 35, was admitted suffering from an oblique ununited fracture of the left femur. A long incision was made on the outer side of the thigh, the bone surfaces rawed, and a steel nail passed through the bones. The nail was removed at the end of eight weeks, the bone being found quite firm.

R. C., æt. 28, came under observation with a simple oblique fracture in the lower third of the tibia, and as no union took place in three weeks I advised the patient, who was a joiner, to allow me "to put a nail through the broken portions." This he agreed to on condition that he received the nail to keep after it was removed ; this I at once promised, and put a steel nail across the tibia. At the end of three weeks the bone was quite solid and the nail was removed.

O. B., æt. 30, was admitted suffering from compound dislocation of the ankle joint with fracture of the external malleolus obliquely. The dislocation was easily reduced, a steel nail being driven into the external malleolus and fibula to keep the broken surfaces in contact. In three weeks the dressings were changed, the wounds were healed, and the nail was removed. In eight weeks the patient was dismissed with a plaster of Paris case, which was taken off in four weeks, and he has now a useful ankle joint.

Remarks.—The above cases illustrate the value of fixing the broken surfaces of bone, more especially in oblique fractures. Silver wire has long been employed as a means of securing this, but the method by steel nails is of more recent date; and since wound treatment became so much safer they have been used more freely in simple fractures, more especially the oblique variety. Professor Annandale drew attention some years ago to their value, and since his paper was written their use has become much more general. Indeed, wherever an oblique fracture cannot be kept satisfactorily in position, a steel nail will in most cases be found of service.