Original Communications.

Observations on some Cases of Injuries and Diseases of Joints, by WILLIAM FULLER, M.D., Professor of Anatomy, University of Bishop's College. Read before the Medico Chirurgical Society of Montreal, October, 1876.

GENTLEMEN,—The report of a few cases of injury and disease of joints which I present to the Society to-night are such as occur in every-day practice, but which I hope are of sufficient interest to elicit useful discussion on this important department of surgery. They are drawn from memory, and will of necessity be imperfect in detail. I shall endeavor to be as accurate as possible in description, and to lay down the principles which guided the treatment.

Case 1.—A. P., butcher, aged 28 years, good constitution and temperate habits, was precipitated from a cart drawn by a runaway horse upon a stone road, with such violence as to cause a compound dislocation of the ankle. The sole of the foot was directed upward and inward, while the malleoli projected through a rent about four inches in length across the outer side of the joint. The bones were also forced through a woolen stocking, and the joint was filled with dirt, threads and small pebbles. Upon consultation with two neighboring surgeons it was concluded to amputate, but the patient was unwilling to submit without a trial to save his foot. I was glad to observe the result of conservation in so extensive an injury to a large joint; accordingly, after cleansing the wound and interior of the joint of all extraneous substances—which required time, care and patience—I adopted the principle laid down by Mr. Paget, as my guide in the treatment, "that the healing process is in the inverse to the amount of inflammation," and that to relieve pain is to relieve a difficulty of nature. I gave ⅓ of a grain of morphia to relieve the shock, and waited for the first appearance of pain and heat. I found that it caused great pain to reduce the dislocation, so I left the foot nearly as I found it at the time of accident,. The foot and leg was rested on a pillow with the sole directed inward and the synovial surfaces separated. Excitement commenced in twenty-four or thirty-six hours, which was met by cold wet compresses to the foot and leg frequently changed, and tincture of aconite internally to moderate the circulation. As the heat and the sympathetic fever increased, I lowered the temperature of the *body* by frequent bathing and the leg by pouring water continuously over it; the wound was protected from the water by oiled silk. The means were increased according to circumstances by adding ice to the water and by cooling the blood thrown into the part by placing an intestine filled with pounded ice along the course of the femoral artery. Eight or nine days of this brought us to the climax of the acute stage, when we commenced to moderate the cold applications until in a few days we had returned to a wet cloth applied to the leg; morphia had been given at intervals to relieve pain, which was at times severe. During the acute stage the synovial membrane was red and swollen with very little secretion, and toward the end was covered with a diphtheritic looking membrane which, as the acute symptoms subsided, broke up and was discharged as flocculi in a semi-purulent serum. Starting pains frequently occurred followed by discharges from the joint. An abscess formed upon the inner side of the ankle, which was opened. The secretion from the joint finally lost its flocculent and semi-purulent character, and became a clear yellowish albuminous fluid.

When all acute symptoms had subsided, I commenced to draw the foot gradually into position by means of adhesive straps, desisting whenever pain or excitement was caused by pressing together the two tender surfaces of the synovial membrane. It required about a week or ten days to get the sole of the foot under the leg, and in about ten weeks my patient was able to walk quite well, there was no tenderness and only a slight thickening of the tissues about the ankle, and a slight impediment to the lateral movement of the foot. No lameness or halt could be observed in the gait. He has never had a return of inflammation, or any weakness of the joint, or any effusion of fluid into it.

Case 2.—S. S., aged 50 years, highly nervous and debilitated constitution, while scoring timber, struck the broadaxe into his knee-joint on the inner side of the patella. The cut was about three inches in length in a perpendicular direction. The edge of the axe was buried into the bone, and the finger could be easily passed into the joint. I placed the stave of a flour barrel