

Conservatism was practiced ; that is, antiseptic occlusion and fixation were the rule, but deaths after both operative and non-operative treatment were rare.

Six wounds of the hip-joint gave five recoveries and one death from infection after removal of bullet and fragments of jacket or bones. Sixty-seven cases of knee-joint wounds gave five deaths. Two fatal amputations for infection followed the removal of the bullet or some fragments. Ten cases in all only apparently demanding extraction of the bullet, fragments of bone or shell. Twenty wounds of the shoulder-joint with two deaths, one after amputation, and in a third case a successful extraction of the bullet was done. Of twenty-five wounds of ankle-joints, two died after amputation, one being for gangrene and in one other case a bullet was successfully extracted. Thirty-five wounds of the hip-joint, one death, one typical resection being required. Bullet or ball and bone fragments removed in four more. In three, amputation became necessary later for infection, which infection almost certainly resulted from previous exploration or operation. Nine wrist-joint wounds, no death and only one amputation, making in all only ten out of a total of 161 cases.

The author then quotes from the experience of Mr. Makins in South Africa as follows :

"During the present campaign, direct clean wounds of the joints were little more to be dreaded than uncomplicated wounds of the soft parts alone. No more striking evidence of the aseptic nature of the wounds, and the harmless character of the projectile, as a possible infecting agent, than that offered by the general course of these injuries in this campaign, is to be found in the whole range of military surgery."

The chief factors in producing this result the author believes to be the fact that the wounds were not interfered with, modern methods of drainage are complied with, antiseptics is carried out, and that the modern projectile of rapid velocity tends to make a cleaner wound. Probing and the gratification of the curiosity of the surgeon as to the extent of the tissues injured is a thing of the past.

The idea that a ball in itself is a menace of life and health has led to the infection of joints that would otherwise have recovered.

Treatment: The author again quotes from Mr. Makin as follows : "The general treatment of wounded joints was simple. The old difficulties of deciding on partial as against full excision or amputation were never met with by us. We had merely to do our first dressings with care, fix the joint