

# PROGRESS OF MEDICAL SCIENCE

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## SURGERY

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UNDER THE CHARGE OF

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**War Wounds of the Joints.**—DELREZ (*Arch. Méd. Belges*, May, 1919, p. 513) says that of 190 joint wounds treated within one year, 21 were infected and of these 16 involved the knee-joint. Under treatment he discusses only these 16. Five cases of purulent arthritis were treated without mobilization, the results being as follows: One was amputated with cure, 4 being resected. Two of the resected cases died and 2 were cured, with ankylosis. One of the 2 cured cases had a streptococcic septicemia after the resection. Of the cases treated by arthrotomy and mobilization there were 3 with staphylococcic serous arthritis in which there was complete cure, with total preservation of motion. In 4 cases of purulent streptococcic arthritis normal or very extensive motion was obtained. In an eighth case (streptococcic infection) death occurred on the tenth day from cardiopulmonary complications. In a ninth case with osteo-articular wound of the knee (streptococcic infection), osteo-articular wound of the elbow and multiple wounds of the soft parts the condition of the patient was so feeble as to call for amputation on the twenty-second day. In the tenth case (streptococcic) extensive destruction of muscles by gas gangrene rendered active mortification impossible. Prolonged efforts were followed by cure with partial mobility. In the eleventh case active mobilization was equally impossible, and, as in the previous case, passive mobilization was practised, so that after prolonged treatment and the help of an apparatus fair function was obtained. This (the Willems) method of treating joint infected wounds by active mobilization has furnished very satisfactory results.

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**Blood Transfusion as a Therapeutic Aid in Subacute Sepsis Associated with War Injuries.**—ZINGER (*The Military Surgeon*, 1919, xlv, 75) says that blood transfusions should be used more extensively on the wounded soldiers in the base hospitals. Officers should be especially

assigned to this work in the different base hospitals and base hospital centers, whose duties would be in connection with the performing of transfusions, consultations on medical and surgical cases and the keeping track of suitable donors. The special indications considered here are subacute sepsis, associated with extensive suppurations or with infected compound fractures, with anemia and emaciation of varying grades; also as a prophylactic measure in enfeebled individuals before severe operations and in cases of postoperative surgical shock resulting from extensive loss of blood during operation. Large pockets of pus, suppurating joints or extensive empyemas must, of course, be incised and drained. No blood transfusion will help in the elimination of these sources of continuous reinfection unless they are carefully watched for and taken care of as they arise. Autopsies often bring to light such complications, which should have been taken care of while the individual was still alive. The transfusions should be of moderate amounts of blood, from 250 to 300 c.c., and repeated, if necessary, every seven to fourteen days. Systematic efforts should be made to find these patients in the base hospitals. Special studies should be made and records kept after the transfusions, so as to obtain, as soon as possible, tabulated data that will help in more definitely indicating the value of blood transfusion in cases of subacute sepsis associated with extensive wounds and fractures.

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**Knee-joint War Injuries, with Report of 82 Cases Treated by Willems' Method.**—McWILLIAMS and HETZEL (*Annals of Surgery*, 1919, lxx, 257) says that in the management of septic cases as soon as frank pus is evident, either by signs of inflammation or bacteriological examination, thorough drainage must at once be established by vertical external and internal incisions. The joint is washed out thoroughly with Dakin's solution at the time of operation. Tubes had preferably not be used at first but may be later, if drainage is found to be insufficient. When they are used, the internal ends should project just inside the synovial membrane and no further. The after-treatment is conducted exactly as in the case of non-infected joints by active (not passive) motions carried out to the point of pain. These are begun immediately after the anesthetic has worn off and are repeated every two hours thereafter day and night. Even a day's delay will prejudice the final functional result. Walking is important because the muscular contractions compress the joint and cause a marked increase in the expulsion of the pus. The patient is made to walk the next day after the operation without crutches. It is surprising how much pus will exude from the incisions after each walk. It is very important that sufficient drainage openings be made to allow for an adequate escape of pus. These openings should be sutured just as soon as the discharge becomes serous. If the active motions are performed often enough and vigorously enough, these secretions are expelled through the drainage openings as they are formed. Drainage seems to be more thoroughly accomplished by this method than by any other, thus limiting the infection to the synovial membrane and tending to prevent its spread to the cartilage and bones. In civil injuries the results of operations with débridement, joint closure and immediate subsequent mobilization should be much better than in war injuries, because the patient is operated on more quickly, the infection