

COMPLEX OF HYALURONIC ACID AND IODINE IN WAR SOFT TISSUE INJURIES – FIRST EXPERIENCE (CASE REPORTS)

Plodr M., Čáp R., Páral J., Lochman P.

Dept. of Field Surgery, Faculty of Military Health Science, University of Defence, Hradec Kralove Dept. of Surgery, University Hospital, Hradec Kralove Czech Republic

Introduction

The approach to wound treatment is problematic during war conditions. Especially the treatment of acute infected combat wound in war conditions is complicated. It is important to do debridement without primary suture as the first step. A stimulation of healing process in this stage would be advantageous. As we observed excellent healing process in infected wounds in experimental pigs treated by hyaluronate-iodine (HI) complex, we decided to use this method in acute war injury. The surgical team worked in the Field Hospital of Army of the Czech Republic in Afghanistan. HI complex was used on two injured soldiers.

Case reports

Patient No. 1

The young Afghan soldier suffered from shrapnel injury in right arm soft tissues. Pt was treated in first line medical facilities, where primary suture was done. After 24 hrs he was transported to the CZ Field Hospital. Entry examination revealed signs of infection (*St. aureus* according to microb. exam. – *photo 1*). Under GA the stitches were removed with debridement and rinsing of the wound. HI complex soaked gauze was topically applied and wound was left opened. The HI complex wound dressing was replaced during next 4 days every 24 hours – *photo 2, 3*. After 4 days, the swab was negative; the wound was without signs of infection so the primary delayed suture was carried out. The next course was without complications; the patient was discharged with healed wound after 8 days – *photo 4*.



Patient No. 2

The patient with shrapnel injury of left thigh, transported to our facility 16 hours after the attack without primary treatment – *photo 1*. The wound was opened, with discharge (*St. aureus* according to microb. exam). The way of treatment was the same as in the case of the first patient – *photo 2*. Primary delayed suture was done 4 days after HI complex treatment – swab from wound base was negative – *photo 3, 4*. The wound healed after 8 days.



Conclusion

All war injuries are considered to be dirty and therefore primary delayed suture is preferable. To our best knowledge we are the first who used HI complex for the treatment of acute war wounds before primary delayed suture. According to our first results HI complex has excellent effect during management of these wounds.

This study was supported by grant MSM 0021620820 Czech Republic.

Corresponding author:

Michal Plodr, MD, PhD, Dept of Field Surgery, Faculty of Military Health Science University of Defence, Hradec Kralove, Czech Republic, e-mail: plodrmic@seznam.cz