

CASE STUDY

Profile Wound manager

**General practitioner/
Goldberg Clinic Kelheim GmbH**
Wound care at the general practitioner under guidance of Goldberg Clinic Kelheim GmbH

Patient overview

28-year-old female patient, without concomitant diseases. Skiing accident with dislocated subcapital humeral fracture was treated on site in an emergency hospital with the aid of an osteosynthesis plate.

REFERENCES

Robert Koch Institute. Prevention of post-operative wound infections, KRINKO recommendation (Bundesgesundheitsblatt 4/2018) www.rki.de

National Reference Center for Surveillance of Nosocomial Infections, Robert Koch Institute. Definitions of nosocomial infections for surveillance in the Hospital Infection Surveillance System (KISS definitions), Berlin 2017 www.nrz-hygiene.de

Aghdassi SJS, Schwab F, Hoffmann P, Gastmeier P: The association of climatic factors with rates of surgical site infections—17 years' data from hospital infection surveillance. *Dtsch Arztebl Int* 2019; 116: 529–36. www.aerzteblatt.de

Postoperative wound healing disorder after osteosynthesis in a dislocated humeral fracture of a 28-year-old female patient.

Postoperative wound healing disorders are the third most common nosocomial complication during and after hospital stays.

Even though the prevalence of nosocomial infections in Germany has been declining since the 1990s and only about 4.6% of patients get an infection during a hospital stay, wound infections after surgery account for 22.4%. Mostly it is endogenous germs such as skin germs that are responsible for postoperative wound healing disorders (surgical site infection SSI). However, multi-resistant germs are also playing an increasing role. The risk of getting such an SSI depends on many different factors. The length of the operation, previous illnesses (diabetes, cancer), risk factors such as nutritional status, smoking, alcohol abuse, to name but a few. Even if a young, athletic patient without pre-existing conditions does not belong to this risk group, the case shows that SSI can always occur. Treatment with cold plasma can prevent an escalation of SSI in this case, if applied early.

CASE DESCRIPTION

The patient fell and suffered a severely dislocated subcapital humeral fracture and required emergency surgery. A plate osteosynthesis was performed. The scar initially healed very well and without problems. After the stitches were removed, the wound developed a wound healing disorder of about 1.5 cm in diameter. Purulent secretion was discharged. Despite anti-infective measures, the problem could not be controlled. The patient had an allergic reaction to plasters. Treatment with cold plasma was then prescribed. The area was treated daily for 3 minutes and sterilely covered. After 1 week, significant improvements were seen, no signs of infection were present, and the patient was no longer in pain. The wound secretion was clear. No further anti-infective measures were necessary. After another three days, the wound was completely closed.



Fig. 1: Day 0



Fig. 2



Fig. 3: after 3 weeks