

**PP-136****Surgical strategies for infected megaprotheses****T. Sununu***Orthopedic Department, St. Johann Hospital, St. Johann in Tyrol, Austria*

Introduction: Infection is the most common and, besides recurrence of tumor, the most serious complication occurring after implantation of megaprotheses. Due to new technical solutions of the joint mechanisms mechanical failure rate decreased over the last years. Valuable algorithms exist for management of conventional endoprotheses, while the situation is more difficult in megaprotheses, as removal especially of well-integrated anchorage systems may cause surgical problems. Several studies (Holzer et al., 1997; Harges et al, 2014) as well as experience of our group suggest that retention of the stem of the infected megaprosthesis may not affect the rate of infection control.

Methods: We report on a case of an early infection of a megaprosthesis of the proximal femur with *Streptococcus faecalis*. 6 weeks after the initial operation debridement of the proximal femur was performed. 2 months later the same bacteria could again be cultivated. As the patient presented with no clinical symptoms we attempted a conservative treatment with repeated instillation of Teicoplanin into the periprosthetic space combined with orally applied Amoxicillin. *Streptococcus faecalis* was again cultivated 4 months later. One-stage procedure including debridement and exchange of all prosthetic material to a silver-plated proximal femur replacement was applied. Removal of the well fixed stem caused surgical difficulties including the necessity of strut-graft augmentation of the remaining distal femur.

Results: 6 months after the implant-exchange the patient presents free from infection. Weight bearing still causes limited pain, the reconstructed area of the distal femur is stable.

Conclusion: It is extremely difficult to establish an algorithm for treatment of infected megaprotheses as the individual situations widely vary. In infected conventional arthroplasties highest rates of infection control are received if all implants are removed. Infection control is highest in 2-stage procedures. But as the removal of well integrated stems of megaprotheses may cause severe loss of bone-stock, there may be indications to retain the anchorage system. At the moment no statistical evaluation concerning this procedure is available. Multi-center evaluation could give some more hints, in which situation the well-integrated stem can be retained. Antibiotic instillation into the periprosthetic space seems to be insufficient concerning infection control.