

## Rapid Fire Papers 1

### [O36] COMPARISON OF KNEE ARTHRODESIS WITH KNEE ARTHRODESIS NAIL SYSTEM AND FEMORO-TIBIAL NAIL COMBINED WITH ALAC SPACER AS SALVAGE THERAPY FOR INFECTED KNEE WITH BONE DEFECT

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**Aim & introduction:** Infected knee with bone defect resulting from failed total knee arthroplasty (TKA) or destruction of native joint can necessitate restoration of segmental defect and arthrodesis for therapy of infection and maintenance of walking ability. In segmental knee defect external fixators or KAFO are not suitable, not comfortable and poorly tolerated by elderly patients. Both custom-made Femoro-Tibial Nail (FTN) combined with acrylic cement spacer and Knee Arthrodesis Nail System (KANS) offer maintenance of supportive function of extremity and avoidance of leg length discrepancy after removal of TKA.

**Method:** The group consists of 13 patients. In 12 cases knee arthrodesis has been performed due to infection with bone defect after removal of infected TKA and in 1 case due to inflammatory destruction of native knee joint. In 7 cases FTN with ALAC spacer and in 6 cases KANS (5 cases Orthopedic Salvage System-OSS; 1 case Link KANS) was used. In cases treated with FTN the gap between distal femur and proximal tibia was filled with hand-made acrylic cement spacer loaded with selected antibiotic (2g per 40g cement) so that the spacer finally gained cylindrical shape.

**Results:** Stable knee was noted after 7 years in 4 of 7 knees treated with FTN with ALAC spacer and after 2 years in 6 of 6 after KANS. Infection free knee was gained after 7 years in 4 of 7 cases treated with FTN with ALAC spacer and after 2 years in 5 of 6 cases treated with KANS. Amputation was necessary after 6 years in 3 of 7 cases treated with FTN with ALAC spacer and after 2 years in none case treated with KANS. Complications occurred in 2 cases after FTN with ALAC spacer (1x: FTN breakage, 1x: stress fracture of femoral neck) and in 1 case after KANS (OSS implant failure). Replacement of FTN nail and cement spacer in 1 case and respectively revision of OSS KANS in 1 case was performed.

**Conclusions:** Compared with the KANS, custom-made FTN combined with ALAC spacer proved to be effective up to 6 years, but showed higher rate of complications and amputations after 6 years. It can be considered as a temporary low-cost salvage procedure for infected TKA with segmental bone defect as 1<sup>st</sup> stage in two-stage arthrodesis for infected knee prosthesis.