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A decade's experience with the Integral Leg Prosthesis (ILP): a case series study of design modifications to prevent infection

Horst Aschoff¹, Dora-Lis Juhnke², James Beck³

¹ Sana Clinics Lübeck, Germany ² Norwest Advanced Orthopaedics, Norwest P, Australia ³ Department of Orthopaedics, University o, United States

Methods

Between 1999 and 2011, 54 patients with above-knee (AK) amputations were fitted with ILPs by a single surgeon. Throughout a twelve year case series different changes to improve implant design and surgical technique has been empirically driven and clinically based to reduce the technique's inherent risk of an ascending infection. We divided patient's receiving different designs and procedures in Group I and Group II to statistically compare planned and unplanned surgical interventions.

Results

The data demonstrates an initially high rate of stoma-associated infections. However, the changes made to the design as well as the surgical technique could effectively reduce this risk; between January 2009 and December 2011 no operative intervention for stomal soft tissue or deep bone infections became necessary.

Discussion

Bone-anchored prostheses have to meet the challenge of successful osseointegration as well as the risk of a stoma-associated infection. Using the ILP, formerly known as the Endo-Exo-Femurprosthesis, a stable integration into the remaining femur has been accomplished. The risk of an ascending infection could be dramatically decreased altering the implant's surface at the soft tissue-prosthesis interface and adjusting the surgical approach accordingly. We consider the ILP a safe alternative to the socket

E-mail (main author): horst.aschoff@sana.de