



Conference 2008

Abstracts

Complications of extendable prosthesis in children who survive longer than 10 years

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Introduction:

We report the results and complications of extendable prostheses in 82 immature patients who survived their cancers at a minimum of 10 years following surgery.

Material and method:

82 patients who have survived their disease for longer than 10 years after extendable endoprosthetic surgery were studied. Mean age at time of surgery was 9.7 years. Three types of extension mechanisms have been used: Ball bearing, C-Ring and Minimal invasive. The total number of lengthening procedures was 576, with a mean of 5.3 procedures per prosthesis.

Results:

The mean follow-up was 14 years (range 10 to 25 years). 82% of the patients had undergone one or more revision, 48 % of patients had two or more revision, and 16 % three or more.

The average patient had 1,7 surgical procedures for treatment of complications including aseptic loosening, septic problems, fracture of implant or adjacent bone, mechanical problem due to the prosthesis and rebushing and fixed flexion deformity or extensor problems. The long term rate of infection was 29% (24 patients). Seven patients (8,5%) were amputated because of uncontrolled infection (5) or continuous pain unexplained (2). The introduction of hydroxyapatite collar has led to significant reduction of aseptic loosening and/or fractures of the implants from 80% to 57%. Infection rate in the minimally invasive prosthesis was similar to the older designs.

Conclusion:

The rate of complications after extendable prosthesis remains very high but the limb salvage is still achieved in more than 90% of the patients who have survived their disease.