



Growth plate and soft tissue complications following sepsis in children – implications to orthotic and prosthetic management. A case series.

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Introduction

Orthopaedic and soft tissue complications following sepsis may include angular deformity, altered growth, soft tissue contractures, and fragile soft tissues. Although these issues have been reported in the literature [1], there is limited work describing their effects on prosthetic and orthotic management.

Methods

This retrospective case series presents the prosthetic and orthotic management of three children with amputations and other complications following sepsis. Their specific complications and prosthetic/orthotic management are described. Written consent was gained for publication of patient images.

Results

There were 3 partial foot amputations, 1 trans-tibial amputation, and 1 trans-femoral amputation in the group. Varus alignment was identified in 2 knees and 4 ankles. 2 children used prostheses and 3 used orthoses. 2 children used ankle-foot orthoses to aid walking, while 2 used foot orthoses to alter loading on fragile plantar tissues. Additional posting was required for ankle-foot orthoses used by 2 children, while all foot orthoses were custom and used low density material to distribute plantar pressures and reduce loading rate. Varus growth of a trans-tibial residual limb required altered rectification strategies and lateral placement of the shin tube, due to medial growth of the distal tibia.

Conclusions

Orthopaedic and soft tissue complications following sepsis are common. In this group, prostheses and orthoses were frequently used and required specific considerations relating to varus joint alignment, growth and soft tissue complications.

References

1 - Davies MS, Nadel S, Habibi P, Levin M, Hunt DM. The orthopaedic management of peripheral ischaemia in meningococcal septicaemia in children. *J Bone Joint Surg Br* [Internet]. 2000 Apr;82(3):383–6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/10813174>