

IS THE END-CAP THE END-GAME? TRANSTIBIAL AMPUTATION IN A SEVERE CASE OF AMNIOTIC BAND SYNDROME INCORPORATING OSTEOCHONDRAL END-CAP TO PREVENT STUMP OVERGROWTH

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Introduction: Surgical amputation is commonly performed in neonates with amniotic band syndrome exhibiting severe limb defects such as in utero gangrene. Such amputations usually lead to stump overgrowth and can be difficult to manage later. Here, we report a severe manifestation of said syndrome which caused in utero tibia amputation with gangrene of the distal stump, and discuss a technique utilised during surgical lower-limb amputation to prevent future overgrowth.

Discussion: A baby boy born at term was referred from a nearby private hospital upon birth for congenital abnormality of the left leg, with a severe circumferential constriction at mid-shin and non-viable circulation of the foot and distal leg. The child was afebrile, but there was slight leukocytosis (12.8×10^9 cells/L). X-rays showed congenital amputation of the tibia with spike-like appearance of the amputated ends at the constriction level. We started IV Cloxacillin and on the following day performed a transtibial amputation proximal to the constriction using a standard long posterior flap but incorporating an intra-medullary end-cap fashioned from a length of the amputated fibula epiphysis. IV Cloxacillin was then completed for 14 days, and IV Unasyn for another 7 days. Upon discharge, infective parameters have normalised, and wound healing showed good progress. The patient was later seen in clinic at age 6 months and 1 year with a well-formed stump and no signs of overgrowth.

Conclusion: Stump overgrowth leads to significant morbidity due to infection, requiring multiple stump revisions. To prevent osseous overgrowth, medullary canal capping has been recommended.² Suitable options for caps are bone grafts or synthetic caps such as Teflon. An osteochondral cap has low revision rates (<10%) and is easily obtained from the distal stump during primary amputation. Teflon caps have comparable revision rates to bone grafts and are readily available should there be no suitable donor sites.