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THE OUTCOME OF RECONSTRUCTION OSSEOUS DEFECT WITH ALLOGRAFT IN BONE TUMOUR

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SUMMARY

The management of musculoskeletal tumors has progressed tremendously over the past few decades. Limb salvage surgery has become a standard practice without compromising the oncological outcome. Patients generally will benefit with superior function and a better quality of life compared with definitive amputation. Limb-sparing surgeries for patients with primary malignant sarcomas of the extremities are now well established. Mega endoprosthesis replacement for reconstruction of bony defects following tumor resection has shown to produce good early and late functional results. Delayed prosthesis failure and loosening is well known long term problem, furthermore the cost of these prostheses is very high. Biological reconstructions are long lasting without problems of late loosening and are considered the best option in young age groups with an active lifestyle. Allograft is an option of biological reconstruction; options include osteoarticular allograft, allograft arthrodesis or combination of allograft with prosthesis and fibular composites. A combination of allograft construct with vascularized fibular graft enhances healing and provides almost total biological incorporation in long term follow-up. Augmentation of massive allograft with free fibula osteocutaneous flap is an excellent alternative in reducing the long-term complication of massive allograft. This composite tissue transfer allows one stage skeletal and soft tissue reconstruction combination of allograft and free vascularized fibula is an ideal biological reconstruction because it promotes the advantages of strong bone stock of allograft and the biological potentials of free vascularized fibula. Allograft prosthesis composites provide mobile joint and improved strength by intramedullary-cemented stem to prevent early failure. Soft tissue reconstruction and incorporation provide good functional outcome. Allograft is also a best alternative in children The weight bearing stresses in children is less and bone incorporation is better, thus minimized early complication compare to adult. Allograft reconstruction allows preservation of adjacent bone growth plate and minimized growth disturbances.