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ABSTRACTS – POSTERS

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Soft Tissue Sarcomas around the Knee. Does the type of soft tissue repair really matter?

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Background

The surgical resection of large malignant tumours from the lower limb can pose challenging problems for both the patient and the reconstructive team. This is no more poignant than at the level of the knee joint where the complexity of its composite structures, subcutaneous nature, and requirement for functional capacity demand specific consideration of wound coverage after the removal of these difficult tumours. The tried and tested reconstructive ladder provides a sound framework for repairing complex wounds at any site however due to the functional and anatomical complexity of the knee joint, then any reconstructive option must be tailored to address these important aspects. A number of options exist, from primary closure to free tissue transfer, this depends on amongst other factors, the size of the tumour involved and the resultant soft tissue defect, its site in relation to the knee and the functional recovery anticipated from method of reconstruction chosen. The implementation of plastic surgical techniques have made functional limb salvage surgery more possible and preferred by the informed patient. The import of healthy vascularised tissue into a wound can prove invaluable in covering a potentially exposed prosthesis, reduce potential infective sequelae, provide adequate improved soft tissue cover for a wound due to have adjuvant radiotherapy and avoid tension across the knee joint to both improve chances of wound healing and subsequently range of motion.

To our knowledge there has no large series that has detailed the functional outcome of different methods of wound closure following excision of soft tissue sarcomas from around the knee joint.

Aim

The aim of this paper was to review the experience of treating soft tissue sarcomas in this region and assess their resultant long term functional outcome.

Method

A retrospective search of a prospective tumour database covering the last 25 years and containing over 18000 patients was conducted to identify all the patients referred to a tertiary referral centre for the treatment of soft tissue sarcomas in and around the knee joint (medial, lateral, popliteal fossa, anterior and within the joint). Only cases operated on at at this centre with confirmed diagnoses of malignant soft tissue sarcoma were included. All bone tumours were excluded, as well as cases that were operated on elsewhere unless they underwent re-excision at this centre. The results were analysed and we looked in particular at site, size and extent of the post resection wound/defect in or around the knee. We then considered the type of soft tissue repair/reconstruction performed and looked at the functional outcome using a proven scoring system.

Results

107 patients were assessed who met the selection criteria. The type of soft reconstruction was categorised into wound primarily closed, requiring skin graft, local flap (muscle only or myocutaneous), free flap, other methods. Wound related problems were recorded and functional outcome tabulated whenever this was recorded in the medical notes.

Conclusions

Careful consideration should be given to knee soft tissue defects resulting post-resection of significant soft tissue tumours around the knee, particularly for those wounds over the medial/lateral and anterior aspects of the knee. Import of healthy vascularised tissue can improve wound healing and lead to earlier rehabilitation with improved functional recovery of the knee. This will be presented and a schema discussed for the overall management of defects around the knee.