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SURVIVAL OF TUMOR ENDOPROSTHESIS

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Background and Objectives: Limb-salvage surgery has become the preferred surgical procedure for both aggressive and malignant tumors, as well some metastatic bone tumors of the extremities. Endoprosthetic replacement played a major role. The aim of this study was to evaluate the risk factors that may influence the survival outcome of the tumor endoprosthesis.

Study Design: Retrospective cohort study

Methods: Forty seven patients of Kyungpook National University Hospital over the period of 1991-2010 who had undergone tumor resection and endoprosthetic reconstruction, excluding pelvic tumor cases and a minimum of 2 years follow-up were retrospectively reviewed.

Results: Eleven patients had post-operative complications requiring endoprosthetic revision. Five had metal failure. Three had aseptic loosening. Two had periprosthetic fracture, while the last case had recurrent implant dislocation. One patient had infection but was controlled. We found statistical significance for extraarticular resection and proximal tibial resection as risk factors for subsequent revision. Kaplan-Meier survival analysis revealed significant differences in the survival curves in each variable. The overall 3 and 5 year survival rate for this series was 94% and 74%.

Conclusion: Our experience is similar to the other endoprosthesis survivorship reports in the literature. The long term survival of tumor endoprosthesis will depend on our understanding of the risk factors that may affect the outcome.

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