ENDOPROSTHESIS RECONSTRUCTION FOLLOWING RESECTIONS OF THE PERIACETABULUM AND SCAPULA

Tumors involving the periacetabular and scapular regions remain a reconstructive challenge. The development of new prosthetic implants that provide for stabilization following internal hemipelvectomies and total scapular resections have the potential for improved quality of life, as well as, a more predictable, and reproducible result. This study evaluates the short and long term results of two endoprosthesis: total scapular replacement (TSR) and the periacetabular replacement (PAR). The study involves 9 patients who underwent total scapular resections and 17 patients who underwent Type II internal hemipelvectomy. Patients from 2 institutions were included and were performed by 2 orthopaedic oncologist. Data was collected retrospectively and included: post operative complications, and quality of life assessment. Seventeen of 26 patients presented with pathologic fractures from metastatic disease or myeloma. Nine patients were treated for primary bone or soft tissue sarcomas. In the TSR group, no components had been removed, 3 patients returned to the OR for revision of soft tissue reconstruction. Six of 9 patients had rotational flap coverage at the time of the initial resection and none of these patients had post operative wound complications. In the PAR group, one patient had removal of the component and revised to an ischiofemoral fusion. Three of 17 patients had infections with retention of the components. One patient had a dislocation requiring an open reduction. Twelve of 17 patients were ambulating with a cane or no assistive device and 5 of 17 were using a walker or wheelchair. All TSR patients were able to perform activities of daily living and had full function of their elbow, wrist and hand. Reconstructive options for periacetabular and scapular resections are limited. Shoulder suspension procedures are often fraught with brachial plexus irritation and iliofemoral arthrodesis often results in a painful, short limb. PAR and TSR implants appear to offer improved functional results, however careful patient selection is important to minimize complications.