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## THE OUTCOME OF LIMB SALVAGE SURGERY IN A DEVELOPING COUNTRY, KHCC EXPERIENCE

Ahmad Shehadeh<sup>1</sup>, Iyad Sultan<sup>1</sup>, Sameer Yaser<sup>1</sup>, Abedlatif Al mosa<sup>1</sup>, Hani Al Ali<sup>1</sup>

<sup>1</sup>) KHCC, Jordan

**Background:** Limb salvage surgery (LSS) became the standard surgical treatment for bone sarcomas since the late 1970s; however, LSS has high cost and numerous complications that make it less applicable in developing countries.

**Objectives:**

To Show that LSS in developing countries, can be compared to developed countries, when; team work, expert surgeon and enough resources are available.

**Methods:**

Since July 2006, a multidisciplinary team of sarcoma was established. This team consisted of pediatric and medical oncologists, radiation oncologists, radiologist, nurse coordinator and a full-time orthopedic oncology surgeon. The team was supported by a service for physical therapy. Clinical practice guidelines were established and a special protocol for rehabilitation following surgery was applied.

**Results:** Seventy patients with malignant or benign aggressive bone tumors presented at the study period, 5 patients received primary amputation, 65 patients received LSS (93% of all patients) included in our analysis, with mean follow up of 25 months (range, 6-53 months). Tumors were located in the extremities (n=59), in the scapula (n=3) and the pelvis (n=3). Histological diagnosis was: Osteosarcoma (n=29), Ewing's sarcoma (n=16), Chondrosarcoma (n=7), Giant Cell Tumor (n=5), Bone metastasis (n=5) and others (n=3). Endoprosthetic reconstruction used in 52 patients (47 modular, 3 expandable, 2 custom prosthesis), biological reconstruction in 7 patients, and no skeletal reconstruction in 6 patients. Local tumor control was achieved in 57 patients (88%). Among the complications encountered were: periprosthetic infection (n=5, 8%), traumatic dislocation (n=1, 1.6%), superficial skin necrosis (n=2, 3%), and radiation-induced stem loosening (n=1, 1.6%). Eight patients (12%) developed local recurrence. Limb survival was 95.4% at study end; three limbs had secondary amputation (one for local recurrence and 2 for persistent periprosthetic infection). All other types of complications were managed successfully. The average MSTS functional score for the 62 survived limbs was 87%.

**Conclusions:**

Our early results are encouraging. Patients with sarcoma are managed better within a multidisciplinary team that is familiar with highly specialized procedures including LSS. The early outcomes of our cases are comparable to that in developed countries in term of local control and prosthesis related complications.

*E-mail (main author): ahmadmd2003@yahoo.com*