

Soft Tissue Sarcoma Abutting/Invading The Bone, a proposed guideline for surgical management.

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Background:

The incidence, surgical treatment and effect on overall survival and recurrence of bone invading/abutting soft tissue sarcoma, still poorly described in the literature.

Objectives:

To present an institutional experience regarding; surgical treatment and outcome of soft tissue sarcoma abuts the bone.

Material / Methods:

From July 2006 -Dec. 2013, 125 patients with wide local/compartement resection, at KHCC. Twenty five patients (20%) the tumor were abutting the bone and 6 of them (5% of the total) there was MRI evidence of cortical invasion , 22 patients as first presentation and 3 as recurrent disease, age 15-65 year, Median age 49 years.

Tumor location includes: extremity 21, one case pelvic and one case chest wall, once case sacrum.

Three Surgical options were used: **first**, soft tissue resection along with segmental bone resection , was afforded to all patients with soft tissue sarcoma whom MRI scan show Medullary canal invasion or total/subtotal encasement of the bone by the soft tissue tumor, 2 patients in our group received this kind of treatment. **Second**, soft tissue subperiosteal resection with no bony excision, was afforded to all patients whom MRI scan show bone abutment with no invasion, 18 patients received this modality, and **third**, soft tissue resection along with the involved adjacent piece of bone cortex , and 5 patients received this modality.

Results:

At mean follow up of 38 months, (16-58), 4 patients died due to metastatic disease, 2 of them who had bone invasion and 2 who did not have bone invasion, and 2 patients developed local recurrence (8%).One patient developed radiation related femur fracture. 5 years event free survival was 53% and overall survival 76%, 3/6 patients with bone invasion proved to have true invasion on pathology study.

Conclusion:

This is a small group retrospective pilot study; the results show that STS abutting bone probably do not lead to worse outcome. Our proposed guideline for surgical management of different scenarios of soft tissue tumor with adjacent bone abutment/invasion can be the basis for objective mean to plan the management of this subtype of soft tissue sarcoma. Larger size study is needed to expand this guideline.

