What Factors Are Predictive of Outcome in the Treatment of Soft Tissue Sarcomas of the Foot and Ankle?

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Category: Tumor

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Introduction/Purpose: Soft tissue sarcomas (STS) of the foot and ankle are common, accounting for 10% of sarcomas; however, there exists little published data on the outcome of treatment. Because of the unique anatomy of the foot and ankle, and the fact that benign lesions in this area are 200-fold more common than malignant lesions, these tumors can be frequently misdiagnosed, leading to unplanned excision and poor outcomes. The purpose of this study was to describe outcomes of the surgical treatment of STS of the foot and ankle at our institution, with an analysis on risk factors for local and distant recurrence, as well as overall survival.

Methods: We reviewed the records of 62 foot and ankle soft tissue sarcomas treated with definitive surgery at our institution between 1992 and 2013. The cohort consisted of 35 males and 27 females with a mean age at diagnosis of 45 years and a mean follow-up of 7 years. Age, gender, anatomic location, tumor size, subtype, stage, neoadjuvant and adjuvant treatments, previous surgery, surgical procedure, and disease status at latest follow-up was recorded.

Results: The most common tumor subtype was synovial sarcoma (n = 16). The overall limb salvage rate was 53%. Local recurrence was observed in 9 patients and distant metastases in 15 patients. Tumor size >=3 cm in maximal dimension was the greatest risk factor in mortality. Post treatment complications occurred in 15 patients. Local recurrence and development of distant disease was relatively common following wide excision of a soft tissue sarcoma of the foot and ankle. Tumors that were >=3 cm in maximal dimension were associated with a worse overall survival and patients with neoadjuvant radiation were at increased risk of complications.

Conclusion: The results of our study highlight the aggressive nature of soft tissue sarcomas of the foot and ankle, with smaller tumors than previously reported (<5 cm) behaving like high-grade advanced disease.
| Table 4.  
Factors Associated With Overall Survival*. |
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<tr>
<td><strong>Patient factors</strong></td>
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<td>Age</td>
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<td>≤40 years</td>
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<td>&gt;40 years</td>
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<td>Male gender</td>
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<td><strong>Tumor characteristics</strong></td>
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<td>Location</td>
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<td>Foot</td>
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<td>Ankle</td>
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<td>Superficial to fascia</td>
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<td>Metastatic disease at presentation</td>
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<td>Low grade (FNCLCC)</td>
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<td>AJCC grade II</td>
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<td>Tumor size (maximal dimension)</td>
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<td>Surgical considerations</td>
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*Values in boldface indicate statistical significance (P< .05).