10911 - Oncologic outcomes for patients with myxofibrosarcoma.

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Background: Myxofibrosarcoma (MFS) has an infiltrative pattern of growth, along fascial planes with extension into dermis and muscle. There are reports that the local recurrence rate for this subtype of soft tissue sarcoma (STS) is much higher than for other types, and this has been attributed to the infiltrative nature.

Purpose: Our goals were to examine both local recurrence and overall outcomes for patients treated for myxofibrosarcoma. We also wanted to compare MFS outcomes to those of other STS, and to determine whether any factors could be found for these differences.

Patients and Methods: One hundred and forty five patients treated surgically for a myxofibrosarcoma between 1989 and 2013 were identified from our prospectively collected database to allow for 2-year minimum follow-up. Patient and tumor characteristics including tumor shape/presence of a “tail”, treatment details, local recurrence-free, metastasis-free and overall survival were determined. The comparison group was all non-MFS soft-tissue sarcomas excluding low-grade liposarcoma and dermatofibrosarcoma protuberans (DFSP), which consisted of one thousand four hundred and thirty two patients. Statistical analysis was performed with SPSS and survival was estimated with the method of Kaplan and Meier.

Results: Mean age of the patients was 61 years (range 18-97 years) and 79 (54%) were male. One hundred thirty five were primary presentations, five of whom had concurrent metastatic disease. Ten patients presented as local recurrences. Forty-six patients (32%) had an unplanned excision at an outside centre prior to referral. Seventeen tumors had a tail on MRI imaging. Ninety-two (63%) tumors were in the lower extremity, 72 (50%) were superficial, 36 (25%) were grade 1, 37 (25%) were grade 2, and 72 (50%) were grade 3. Mean tumor diameter was 9.2 cm (median 6.5 cm, range 1-36 cm). Preoperative radiotherapy was employed in 83 cases and postoperative in 9. Flap closure and/or skin grafting was necessary in 73 cases (50%); 1 patient required an amputation. Surgical margins were negative in 121 cases (83%). Ten patients (7%) developed a local recurrence and 35 (24%) developed metastases. One hundred and three (71%) are currently alive without disease.

Estimated 5-year local recurrence-free survival was 91.8%, 5-year metastasis-free survival was 73.1% and 5-year overall survival was 68.8%. There was no difference in local recurrence for those who had a prior inadvertent surgical excision (log rank 0.4). No tumors with a “tail” recurred. Development of metastases was dependent on grade (estimated 5-year survival was 94.1%, 75.7% and 61.4% for Grade1, 2 and 3 respectively), and statistically significant (0.002). On multivariate analysis size and grade were significant for development of metastases.

No differences were seen in local-recurrence free survival (0.562), metastasis free survival (0.351), or overall survival (0.425) between the MFS and STS groups. No difference was seen in metastasis free survival between high grade MFS and high grade STS.

Conclusion: Our experience suggests that when managed with a multidisciplinary approach at a specialist sarcoma centre, the local recurrence rate and overall outcomes of appropriately treated myxofibrosarcoma is similar to those of other soft-tissue sarcomas treated at our institution.