

Outcome after inadvertent excision of foot and ankle sarcoma

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Background

Tumours of the foot and ankle account for around 1% of all sarcomas. Presentation to specialist clinics is often delayed as this disease mimics more common foot and ankle conditions. There is evidence of an increase in distant metastatic disease following inadvertent surgery. However, other outcome measures have been evaluated in less detail, particularly the need for additional reconstructive procedures for limb salvage.

Questions/purposes

The primary aim was to assess rates of missed diagnosis and inadvertent treatment before presentation to sarcoma units. The secondary aim was to determine the impact and need for reconstruction techniques and outcomes. Specifically, we were interested in rates of amputation versus limb salvage and notably flap reconstruction.

Patients and methods

This retrospective study was undertaken between 1999 and 2013. All patients who presented to the sarcoma service at this tertiary referral centre with a histological diagnosis of sarcoma of the foot or ankle were included. There were 41 patients (20 M, 21 F) with mean age at presentation of 44.7 years (range: 15-77). The most common location was the midfoot (14, 34.1%) then the ankle (12, 29.3%), hindfoot (9, 22.0%) and forefoot (6, 14.6%). Mean follow up was 3.6 years (range: 0.2-8.3). Outcomes were determined from MDT proformas and medical records.

Results

23 patients (56%) had a missed diagnosis, of which 14 (60.1%) had inadvertent surgery. The overall 5-year survivorship was 80% (95% CI 65-95%) and missed diagnosis did not affect overall survival ($p < 0.05$) if cases were managed within a dedicated orthoplastic multi-disciplinary team. Inadvertent excision however, caused significant delay to specialist assessment and operation ($p < 0.05$). Furthermore, patients with a missed diagnosis were significantly more likely to require complex reconstructive surgery involving free flap tissue grafting (17 cases, 73.9%) than non-missed diagnoses (3 cases, 16.7%) ($p < 0.05$).

Conclusions

Missed diagnosis of foot and ankle sarcoma remains common – even in specialist services, and causes significant delay in management and oncological treatment. Although the results show no clear evidence of associated increased mortality, there is an increase need for orthoplastic reconstructive surgery. This however,

has a negative impact in terms of the need for complex orthoplastic reconstruction and increased morbidity for patients.

Level of evidence: II