

Distribution patterns of foot and ankle tumors: a university tumor institute experience

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BACKGROUND

Bone and soft tissue masses of the foot and ankle are not particularly rare but true neoplasia has to be strictly differentiated from pseudotumorous lesions. Diagnosis is often delayed as diagnostic errors are more common than in other regions. Awareness for this localization of musculoskeletal tumors is not very high and neoplasia is often not considered. The purpose of this study is to provide detailed information on the incidence and distribution patterns of foot and ankle tumors of a university tumor institute and propose a simple definition to facilitate comparison of future investigations.

METHODS

As part of a retrospective, single-centre study, the data of patients that were treated for foot and ankle tumors between June 1997 and December 2015 in a musculoskeletal tumor centre were analyzed regarding epidemiologic information, entity and localization. Included were all cases with a true tumor of the foot and ankle. Exclusion criteria were incomplete information on the patient or entity (e.g. histopathological diagnosis) and all pseudotumoral lesions.

RESULTS

Out of 7487 musculoskeletal tumors, 413 cases (5,52%) of tumors of the foot and ankle in 409 patients were included (215 male and 198 female patients). The average age of the affected patients was 36 ± 18 y (min.3y, max.92y). Two hundred sixty-six tumors involved the bone (64%), among them 231 (87%) benign and 35 (13%) malignant. There were 147 soft tissue tumors (36%), 104 (71%) were benign, 43 (29%) malignant. The most common benign osseous tumor lesions included simple bone cysts, enchondroma and osteochondroma. By far the most common malignant bone tumor was chondrosarcoma. Common benign soft tissue tumors included pigmented villonodular synovitis, superficial fibromatosis and schwannoma whereas the most common malignant members were synovial sarcoma and myxofibrosarcoma. Regarding anatomical localization, the hindfoot was affected most often.

CONCLUSIONS

Knowledge of incidence and distribution patterns of foot and ankle tumors will help to correctly assess unclear masses and initiate the right steps in further diagnostics and treatment. Unawareness can lead to delayed diagnosis and inadequate treatment with serious consequences for the affected patient.

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