

Abstract 11393: Distribution Patterns of Foot and Ankle Tumors

Andreas Toepfer, Maximiliane Recker, Ulrich Lenze & Rüdiger von Eisenhart-Rothe

Klinik für Orthopädie und Sportorthopädie, Klinikum rechts der Isar der Technischen Universität München,
Ismaningerstr. 22, 81675 Munich, Germany

Corresponding Author:

Dr. med. Andreas Toepfer, MD

Klinik für Orthopädie und Sportorthopädie, Klinikum rechts der Isar

Technische Universität München

Ismaningerstrasse 22

D-81675 Munich

Germany

E-Mail: toepfer@tum.de

Tel.: +49 89 4140 5600

Fax: +49 89 4140 4849

Background: Bone and soft tissue tumors of the foot and ankle are not rare. The foot and ankle, which represents approximately 3% total body mass, is also the site of 3% of osseous neoplasms. Even more important, approx. 5% of malignant and 8% of all benign soft-tissue tumors occur at the foot and ankle region. Nevertheless, 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.

Purpose and Questions: Bone and soft tissue tumors of the foot and ankle and their distribution pattern will be analyzed on the basis of a retrospective single-centre study with a population of 388 consecutive patients. The question is to be answered if there are any unidentified distribution patterns that are related to epidemiologic factors. Moreover, are there any entities that are found predominantly at the foot and ankle and that concentrate on specific localizations?

Patients and methods: As part of a retrospective, single-centre study (EBM Level III), the data of 388 patients that were treated for foot and ankle tumors between 1997 and 2014 was analyzed regarding epidemiologic information, entity and localization. Included were all cases with a tumor or tumor like lesion of the foot and ankle. Exclusion criteria were incomplete information on the patient or entity (e.g. histopathological diagnosis) and all pseudotumors like ganglia, osteoarthritic cysts or Morton's neuroma.

Results: 388 cases of tumors of the foot and ankle were included (190 male and 198 female patients, age 45 ±19y (min.5y, max.92y). 166 tumors were located on the right side, 219 left and 3 bilateral. 150 tumors involved the bone, among them 122 benign and 23 malignant.

There were 238 soft tissue tumors (197 benign, 41 malignant). The most common benign osseous tumor lesions included simple bone cysts, aneurysmal bone cysts and giant cell tumor. By far the most common malignant bone tumor was chondrosarcoma. Common benign soft tissue tumors included hemangioma and PVNS whereas the most common malignant members were synovial sarcoma and myxofibrosarcoma.

Distribution patterns of both soft tissue and bone tumors will be discussed in detail.

Conclusions: Knowledge of typical distribution patterns of foot tumors will help to correctly assess unclear bone lesions and initiate the right steps in further diagnostics and treatment.

Unawareness can lead to delayed diagnosis and may result in undertreatment or overtreatment with serious consequences for the affected patient.