

**FC-172****Clinical and radiological presentation of osteoid osteoma of the foot****M. Bergovec**¹, M.M. Gilg¹, L. Repsa², M. Smerdelj¹, A. Leithner¹¹ *Department of Orthopaedic Surgery, Medical University of Graz, Graz, Austria*² *Department of Orthopaedics, Hospital of Traumatology and Orthopedics, Riga, Latvia*

Introduction: Osteoid-osteoma (OO) is defined as a benign bone-forming tumor with limited growth potential. Literature on OO in the foot consists mainly of case reports and small case series. It is unknown how many patients present with characteristic symptoms and diagnostic appearance, such as local pain with nocturnal exacerbation, pain relief after the intake of NSAIDs, or visible nidus on X-ray and/or CT. Non-typical pain in the foot poses a challenge for orthopaedic surgeons, especially when diagnostic presentation is inconclusive.

Methods: We retrospectively analyzed tumor database from two university orthopaedic departments. All patients with histology finding of the OO distal of the talocrural joint, treated in the time period of 15 years (2000-2014) were included in the study. We analyzed images (X-rays, CT, MRI), major patients' complain, clinical findings, differential diagnoses, and the time intervals from beginning of the subjective discomfort to surgery.

Results: We found in total 14 patients with OO of the foot and ankle. The average age of the patients at the time of diagnosis was 28 years (range: 18 to 57). Tumor was located in talus (n=2), calcaneus (n=3), medial cuneiforme bone (n=2), metatarsal (n=4), and phalanx (n=3). The time from starting of the symptoms until final surgery was at average 18 months (range: 3 to 42 months). Typical clinical presentation with night pain unrelated to activities, decreasing to salicylates, was present in 6 patients (43%). Other 8 patients (57%) had one or more differential diagnoses: synovitis, plantar fasciitis, avascular necrosis, Brodie abscesses, chondroma, Ewing sarcoma, and Sudeck dystrophy. Nidus was clearly visible on conventional X-ray in only 3 patients (21%), on CT in 10 patients (71%), and on MRI in 2 patients (14%). All patients were pain-free after the definitive treatment (open surgery and/or arthroscopy).

Conclusion: OO may occur at any localization. Foot is a less common localisation for osteoid osteoma. Typical clinical presentation was absent in less of the half of patients in this cohort. Orthopaedic surgeon should always bear in mind that foot pain could be caused by a tumor, including OO.