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Different patterns of the Charcot foot in a out-patient diabetic cohort

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Objective: To study the prevalence of different morphological types of Charcot arthropathy (CA) and their relationship with the course of this pathology. **Methods:** 254 CA patients (male/female: 126/128) out of 5404 diabetic pts from local database (2009-2011) were selected (prevalence 4,7%). 15,7% CA were bilateral. Medical history, clinical, Rg-data and MRI were analyzed. Activity of CA was measured with digital infrared thermometer. Stages of CA were classified as an acute or chronic. Types of CA were classified according Sanders & Frykberg and for 3 patterns of pathology: pure dislocation, pure fracture or both. The calculation of the frequencies of the fractures of the different bones according to Rg and MRI data was performed. **Results:** Mean age 50,9±11,8 yrs, diabetes duration 19,1±11,4 yrs. An acute stage was diagnosed in 19,6% of CA feet and only 4 patients were Rg-negative and MRI-positive. Duration of acute CA before diagnosis was 7,08±3,42 months. Mean temperature difference between CA and non CA feet 3,1±1,5˚C. Types of CA according to Sanders & Frykberg: I - 21,1%; II – 30%; I+II – 12%; III – 4%; II+III – 21,1%; IV – 4%; V-1,6% and 6,5% - other combinations. Pure dislocation was diagnosed in 9%; fractures – 51%; both - 40%. The pattern of CA varied according to the affected region: forefoot and hindfoot – fractures only; midfoot: fracture – 5,6%, dislocation – 41,6%, both – 52,8%; ankle: fractures and dislocation. The involvement of bones in midfoot CA was different: 1 metatarsal and 1 cuneiform (48,3 and 58,2%); 2 metatarsal and 2 cuneiform (78%); 3 metatarsal and 3 cuneiform (61,5 and 57%); 4 metatarsal 38,5%; 5 metatarsal 20,9%; cuboid, navicular and talus (31,9; 47,3; 16,5%). Duration of treatment (total contact cast) was 7,08±3,42 months. In patients with CA of the midfoot the number of affected bones and their combinations were not associated with type of deformation (rocker bottom or medial convexity). In 1 patient the exostosectomy was performed. **Conclusion:** Most patients were diagnosed in the late acute stage of CA. It is appears that the late diagnosis was the main cause of the rear pure dislocations and isolated III type of CA. Clinical pattern of CA in the midfoot depends not only on bone destruction but also on severity of dislocation.