

## O10

### **Effect of intranasal calcitonin on healing times in patients with acute Charcot foot:**

#### **A randomized controlled trial.**

Bém R., Jirkovská A., Fejfarová V., Skibová J.

Diabetes Centre, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

**Background and Aims:** Charcot foot is considered a risk factor for foot ulceration and for leg amputation; the treatment is often lengthy and difficult. The aim of the study was to evaluate the effectiveness of intranasal calcitonin on healing times in patients with acute Charcot foot in a randomized controlled trial.

**Material and Methods:** Thirty-one patients with acute Charcot foot treated in our foot clinic during a 16 month period were randomized to receive intranasal calcitonin 200 IU/day together with calcium supplementation 1000 mg/day [study group (n=16)] or on calcium supplementation 1000 mg/day in monotherapy [control group (n=15)]. Acute Charcot foot was defined by clinical signs - warm, swollen foot and skin temperatures  $\geq 2$  °C at the site of maximum deformity of the affected foot compared to a similar site on the contralateral foot and confirmed by plain x-ray and three-phase technetium bone scan. All patients also had standard treatment of the Charcot foot including off-loading by removable contact cast or cast walkers, with no significant difference between groups in the type of used off-loading device. All subjects were instructed to weight bear on their casted extremity using assistive devices (crutches). Healing time was defined as the number of days from initial off-loading device application until cessation of casting. The decision of off-loading cessation was made on the basis of clinical signs (foot without oedema and redness with skin temperature difference  $< 2$  °C during 6 weeks period of intermittent off-loading) and favourable radiological and isotopic examination of affected foot.

**Results:** The midfoot was the most commonly affected site [13 (81%) in the study group, 13 (86%) in controls; NS]. There were a significant shorter healing times in the study group in comparison with controls [mean 159.8 days (95% CI 137.6-182.1) vs. 195.2 days (95% CI 166.8-223.7);  $p < 0.05$ ]. More than 50% of patients were healed after 152 days in study group and after 190 days in controls. The range of healing time was 86-241 days in study group and 123-328 days in controls.

**Conclusion:** This study suggests that patients with acute Charcot foot may clinically apparent benefit from calcitonin treatment, which shortens healing times of the Charcot foot.

This study was supported by the grant MZO 00023001.