

## PCR 1

### The Charcot Foot with bony destruction/ deformity is a part of adynamic bone: pro- for CDUK results concerning bisphosphonate therapy -CASE REPORT (CR)-

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The aim of this case report is to analyze the results of mineral metabolism in patient with diabetic Charcot osteoarthropathy (DCOA). Case (CRNo1), 55y, male, followed from 2008-May, started as fracture, then DM diagnosed (HbA1c 12.7%), after 1month on 20IU insulin, then diagnosed as DCOA (CT- cyst, microfractures, fragmentation), clinically with both deformities (rocker- bottom and medial convexity). Finally, complicated with ulcerations and infection (at the bottom of the foot - on walking; on the dorsum- by applying the non steroidal antiinflammatory creams; on contralateral foot, at dorsum, combustions caused with hot water) - all documented with photos. NDS 8, Neuropad<sup>®</sup> 25minite. We have simply compared his results with two other patients presented in the same time period: CRNo2, 35y, T1DM 27y, presented as acute DCOA (2008- Nov), type 1DM on insulin pump therapy 1y ago (HbA1c 6.7%), after vitrectomy and with nephropathy (proteinuria 2000 mg/dU, creatinin 166 µmol/l), who refused total contact casting (active in fighting sport), but without developing deformity (after 4m on control X ray of foot: sclerosis); CRNo3 (2008-Nov), 53y, „only“ pp. hyperglycemia up to 12mmol/l, chronic renal failure (creat 296µmol/l) with osteoclastoma (brown tumor; patohistology: giant, multinucleated osteoclasts). All three patients on diphosponate triphasic scintigraphy, in the postponed scintigrams, showed intensive pathologic hyperfixation at the sites of clinically presented edema/ tumor: tarso- metarsal region (CRNo1,2), ribs (CRNo1), radius(CRNo2), multiple focuses especially at the III digit l. dex. (CRNo3). Results of mineral metabolism during regular controls were: Ca<sup>++</sup> 1.05\*, 0.99 and 1.06 mmol/l, P<sup>-</sup> 1.00, 1.16, 1.51 mmol/, Mg 0.78, 0.82, 0.695 nmol/L, Vit D3 (25OH) 28, 67.5, 41.6 nmol/l, PTH 32.3±9.6, 48.3±14.6, 1198±141.4 pg/ml, sCrossLaps<sup>®</sup> 318±73.5, 638.4±53, 604±565.7 pg/ml, Osteocalcin 18.9±7.4, 59.6±6.3, >300 ng/ml, ALP 86.5, 62.2, 210.3 U/L for each CRNo1, CRNo2 and CRNo3 respectively. Conclusion: Low blood levels of PTH and osteocalcin in fractured patient with CDOA strongly suggest the presence of adynamic bone. These should be tested in the series of such a patients with randomized trial and one arm an anabolic therapy e.g. teriparatide.