Available online at www.jobpcr.com

ISSN-2394:3076
CODEN(USA) : JBPCBK
Journal of Biological Pharmaceutical And Chemical Research, 2014,1(1): 211-213

(http://www.jobpcr.com/arhcive.php)

Costal brown tumor in a chronic hemodialysis

Marouane Belarbi[1*], Omar Maoujoud[2a], Ismail Akhmouch[2b], Nadir Zemraoui [1b], Mohammed Asserraji[2c]

[1]Nephrology unit, Avicenne Military Hospital, Marrakech, Morocco.
[2]Dialysis unit, 1st medico surgical Hospital, 80000, Agadir, Morocco.

ABSTRACT

Brown tumors are bone manifestations of hyperparathyroidism. They Usually occur during severe forms accompanied by signs of bone resorption subperiosteal. We describe a case of costal brown tumor in a chronic hemodialysis patient.

INTRODUCTION

Brown tumors are bone manifestations of hyperparathyroidism. They Usually occur during severe forms accompanied by signs of bone resorption subperiosteal. We describe a case of costal brown tumor in a chronic hemodialysis patient.

MATERIALS AND METHOD

Patient 67 years chronic hemodialysis for three years on chronic interstitial nephropathy, radial fistula left with three times a week and who had presented three months basi-chest pain left with persistent physical fatigue. Clinical examination revealed the rib pain on palpation of the basi-thoracic left.

Laboratory tests showed a serum calcium to 102 mg / l, phosphate 48 mg / l, iPTH to 3871 ng / mL, hemoglobin 10.9 g / dl, ferritin 385 mg / l.

Chest radiography showed images of osteolysis border with condensation at the average arc of the tenth left side (figure1-2)

Parathyroid ultrasound showed enlarged four glands. Before that tertiary hyperparathyroidism resistant to medical treatment (calcimimetic active derivative of Vitamin D and Calcium) and complex bone tumor, parathyroidectomy 7 / 8th was chosen and the patient was operated. The evolution was good and iPTH returned to 900 ng / ml. With a decline in 03 months.

RESULT AND DISCUSSION

Patients with ESRD have various bone and joint manifestations [1]. Brown tumors are an extreme form of cystic fibrous osteitis which is actually a manifestation of renal osteodystrophy.

The term renal osteodystrophy is used to define the skeletal complications of end-stage renal failure, which in essence is a disorder of bone remodeling. The major pathogenic mechanism

leading to secondary hyperparathyroidism is deficient 1,25-dihydroxycholecalciferol (1,25-dihydroxyvitamin D3), from which flow hypocalcemia and hyperphosphatemia, resulting in increased production and secretion of PTH by the parathyroid glands [2]. Brown tumors are found in 1.5 to 13% of patients with renal failure [3] The main affected sites are the mandible, the maxillary sinuses, sternum, pelvis, femur and ribs, as is the in our patient.

Medical or surgical treatment of secondary hyperparathyroidism is essential for bone healing [4]. The objectives of the prevention and treatment of brown tumors in patients with ESRD include normalization of serum calcium and phosphate to heal skeletal bone abnormalities and prevent extraskeletal calcium phosphate deposits [5]. If medical treatment is insufficient to halt the progression of brown tumors, total or subtotal parathyroidectomy is usually performed to reduce serum PTH.

CONCLUSION

Brown tumors are rare tumors in chronic hemodialysis patients. Diagnosis involves the clinic, the intact PTH assay and radiological studies (plain radiographs, ultrasound, CT). The treatment is based on the medical treatment, but in cases of surgical treatment resistance (para thyroidectomy) is required.

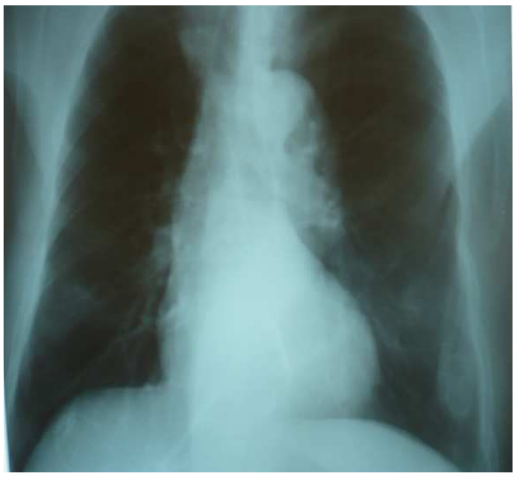

Figure 1

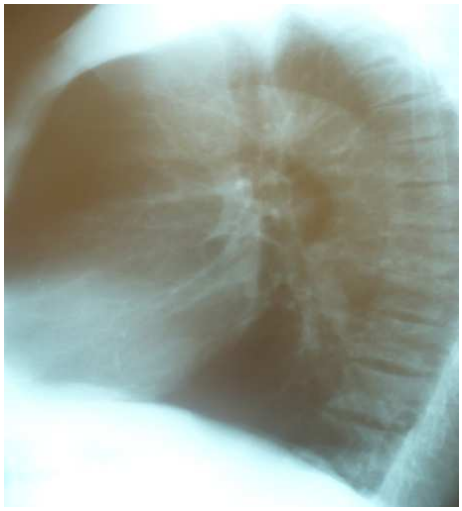

Figure 2

Figures 1 and 2: Chest radiographs (anteroposterior and lateral) showing images of osteolysis border with condensation at the average arc of the tenth left side.

REFERENCES

[1] Fineman I, Johnson JP, Di-Patre PL, Sandhu H. Chronic renal failure causing brown tumors and myelopathy. Case report and review of pathophysiology and treatment. J Neurosurg, **1999**;90: 242–6.

[2] Hruska KA, Teitelbaum SL. Renal osteodystrophy. N Engl J Med, **1995**;333: 166–74.

[3] Marx RE, Stern D. Oral and maxillofacial pathology. A rationale for diagnosis and Treatment. 2002. Chicago, IL. Quintessence Publishing. Secondary hyperparathyroidism. Report of a case, Joint Bone Spine. **2000**;67: 230–233

[4] Takeshita T, Tanaka H, Harasawa A, et al. Brown tumor of the sphenoid sinus in a patient with secondary hyperparathyroidism: CT and MR imaging findings. Radiat Med, **2004**;22: 265–268.

[5] Franco M, Bendini JC, Albano L, et al. Radiographic follow-up of a phalangeal brown tumor. Joint Bone Spine, **2002**;69: 506–510.