



Images in clinical rheumatology

## Non secreting multiple mieloma

### Mieloma múltiple no secretor

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#### Clinical case

We present the case of a 70-year-old woman with no history of interest who had suffered rib pain of 8 months evolution during the day and night with progressive intensity, accompanied by a weight loss of 8 kg in the previous 4 months. Examination revealed a marked decrease in lumbar mobility with intense pain in the chondrosternal joints and knees upon palpation.

Haemogram and biochemical analysis were normal. ESR: 16 mm/1<sup>st</sup> h. Immunoglobulins: IgG 649 mg/dl (690-1400), IgA 118 mg/dl (70-370), IgM 32.8 mg/dl (40-240), IgD <23.3 IU/ml (0-100), IgE

29.5 IU/ml (0-100). Total Protein: 7.1 g/dl. Serum protein (%): 61.9 albumin,  $\alpha_1$  globulins 4.5,  $\alpha_2$  globulins 12.4,  $\beta$  globulins 12.4 and  $\gamma$  globulin 8.8. Immunoelectrophoresis: blood: Kappa chains 180 mg/dl (200-440), Lambda chains 92.7 mg/dl (110-240); urine: Kappa chains 6.7 mg/dl, Lambda chains <0.39 mg/dl; conservation of the IgG, IgA and IgM precipitation arc, balance of light chains in serum with minimal urinary excretion.

A simple X-ray showed osteolytic lesions without sclerotic borders of different sizes and without cortical destruction on femurs (Figure 1), humeri (Figure 2), rib cage, clavicles and skull (Figure 3), and with no uptake upon scintigraphy (Tc99).



**Figure 1.** Simple knee radiograph showing lytic lesions without sclerotic borders of different sizes, with no cortical destruction in both femurs.



**Figure 2.** Detail of the simple rib cage radiograph showing multiple osteolytic injuries with no visible osteoblastic activity in the humerus, clavicle and several ribs.

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**Figure 3.** Simple lateral skull radiograph showing punched out lesions characteristic of multiple myeloma.

Given the differential diagnosis of these lesions [multiple myeloma (MM) as well as metastatic carcinoma of the breast, lung, kidney and thyroid, granulomatous disease, mastocytosis and Gaucher disease] a bone marrow aspiration was carried out. This showed 23% infiltration by dysmorphic plasma cells and confirmed the diagnosis of non-secretory MM (NSMM) (Table).

### Discussion

Non-secretory MM represents about 1%-4% of the total of all MM cases.<sup>1</sup> Its clinical presentation, survival and response to therapy do not differ from those of classical MM, although NSMM cases are usually associated with a lower incidence of renal failure because there is an absence of urinary excretion of light chains.<sup>1,2</sup>

Bone scintigraphy with Tc99 is of little value in the evaluation of MM lesions due to excessive bone resorption and absence of

**Table**  
Diagnostic criteria for multiple myeloma<sup>5</sup>

- Presence of monoclonal (M) component in serum and/or urine plus M plasma cells in bone marrow and/or documented plasmacytoma.
- Plus one or more of the following:
  - Elevation of calcaemia (>11.5 mg/dl)
  - Renal failure (Creatinine >2 mg/dl)
  - Anaemia (Haemoglobin <10 g/dl or decrease of 2 g/dl with respect to base)
  - Bone disease: lytic lesions or osteopaenia

In patients with non-detectable M component, an abnormal serum free light chain ratio may substitute and satisfy this criterion  
For patients with non-detectable M component and normal light chain ratio: baseline bone marrow should represent >10% of clonal plasma cells (non-secretory myeloma)

characteristic osteoblastic activity; however, scintigraphy with Tc99-sestamibi is an alternative procedure that can detect additional lesions.<sup>3</sup>

Non-secretory MM is a disease that is very difficult to diagnose due to its low incidence and scant analytical expression.<sup>4</sup> The result is that a simple, inexpensive test such as a plain radiography becomes particularly relevant. Therefore, NSMM should always be considered in the differential diagnosis of patients with persistent bone pain, particularly of the ribs and vertebrae, since this is a severe disease whose prognosis improves with early diagnosis.

### References

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