A 64 year old woman complaining of a long-lasting bone pain in the lumbar region was admitted to our Institute. Routine laboratory examination on admission disclosed: Hb 10.1 g/dL; RBC 3.35×10¹²/L, WBC 5.9×10⁹/L, PTL 20×10⁹/L. Differential blood count showed occasional plasma cells with atypical features in the peripheral blood. Serum electrophoresis demonstrated a peak in the γ region (56%) compatible with a diagnosis of multiple myeloma. Quantitative evaluation of the immunoglobulins...
was IgG 6,770 mg/dL and κ chains 6,890 mg/dL.

X-ray examination showed multiple lytic lesions of the spinal column (in particular T9, T11 and L1). Bone marrow aspirate was characterized by marked infiltration of plasma cells of uneven size exhibiting numerous azurophilic spindle shape inclusions in the cytoplasm mimicking the occurrence of Auer rods (Figure 1, a and b). These structures did not stain with peroxidase and their electronmicroscopy suggested they had a crystalline nature although no periodic structure could be demonstrated (Figure 2, a and b). The inclusions failed to stain with fluoresceinated antiserum.

Similar inclusions have occasionally been described in the past in cases of multiple myeloma in some lymphoproliferative disorders, such as prolymphocytic leukemia, or even in hypogammaglobulinemia.

The fact that they are positive for β-glucuronidase in some instances strongly supports the contention of the lysosomal nature of these inclusions possibly associated with protein storage.

References