

Clinical images

Osteosclerotic & osteolytic lesions in multiple myeloma

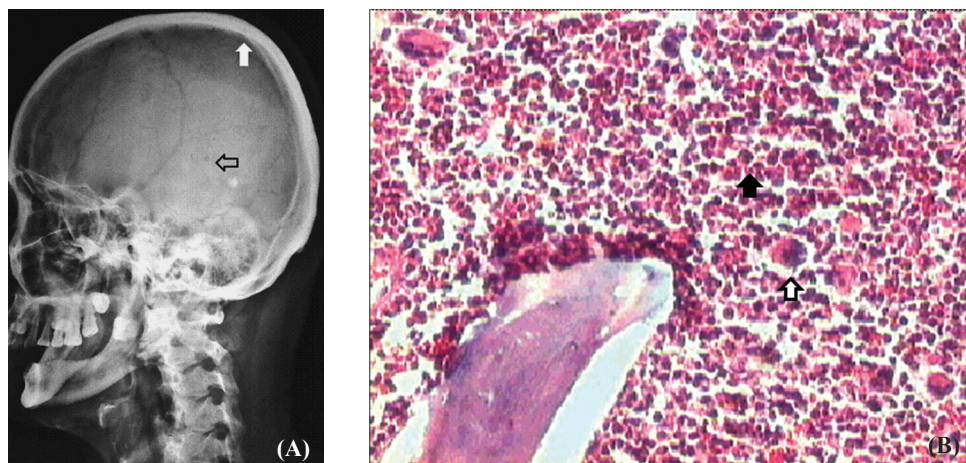


Fig. A. Skull radiograph lateral view: Punched out lytic lesion in the parietal region of skull vault (open arrow). Thickening and sclerosis of the inner and outer table of calvaria with narrowed diploic space (solid arrow).
Fig. B. Bone marrow biopsy: Sections show markedly hypercellular marrow with sheets of plasma cells (dark arrows) replacing the normal marrow elements. Also seen are few binucleate forms. Mega karyocytes (open arrow) are reduced. There are few scattered granulocytes and erythroid precursors. (Haematoxylin & Eosin stain, 40X)

A 63 year old man with no history of previous illness presented in August 2013 to the Nephrology department, Sri Venkateswara Institute of Medical Science, Tirupati, India, with oliguria following several episodes of watery diarrhoea of three days duration. His investigations were: serum creatinine: 10.5 mg/dl (928.2 $\mu\text{mol/l}$), blood urea: 158 mg/dl (56.4 mmol/l), serum sodium: 145mEq/l, serum potassium: 4.5 mEq/l, serum calcium: 9.4 mg/dl (2.3 mmol/l), serum phosphorus: 4.9 mg/dl (1.5 mmol/l), serum alkaline phosphatase: 67 IU/l, haemoglobin: 4.2 g/dl (42 g/l), erythrocyte sedimentation rate: 70 mm after one hour, serum bicarbonate: 14.4 mmol/l, ultrasound: right kidney: 9.4 x 4.0 cm and left kidney: 9.6 x 4.5 cm. He

was initiated on haemodialysis. Further investigations revealed the presence of osteosclerotic and osteolytic lesions in the skull radiograph (Figure A). The diagnosis of multiple myeloma was confirmed by bone marrow biopsy which showed plasma cells up to 86 percent (Figure B) and also by the presence of 'M' band on serum protein electrophoresis. The Patient was initiated on chemotherapy for multiple myeloma and has been on regular dialysis during the last 12 months.

Osteosclerotic lesions are rare in malignant monoclonal gammopathies, and may present as diffuse bone sclerosis, mixed sclerotic and lytic lesions, or with POEMS (polyneuropathy, organomegaly, endocrinopathy, monoclonal gammopathy and skin

changes) syndrome^{1,2}. Diffuse osteosclerosis associated with plasma cell myeloma is apparent in less than 3 per cent of patients³. A combination of both lytic and sclerotic lesions is very rare.

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