

Images in haematology

A male patient with high alkaline phosphatase levels

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A 69-year-old male presented with bilateral lower limb weakness and constitutional symptoms.

His FBC was normal but the blood picture was leucoerythroblastic. ESR was 110 mm/hr. Alkaline phosphatase level was 5604 U/L¹. MRI showed diffuse involvement with spine and multiple enhancing pan-spine lesions compatible with an infiltrative disease.

Marrow aspiration (Figure 1) showed hypercellular fragments with tight clusters of abnormal non haemopoietic cells containing blue foamy cytoplasm and pleomorphic hyperchromatic nuclei. Cells were forming sheets and small glands. Possible primary sites that should be excluded are prostate, lungs, adrenals, kidneys and thyroid².

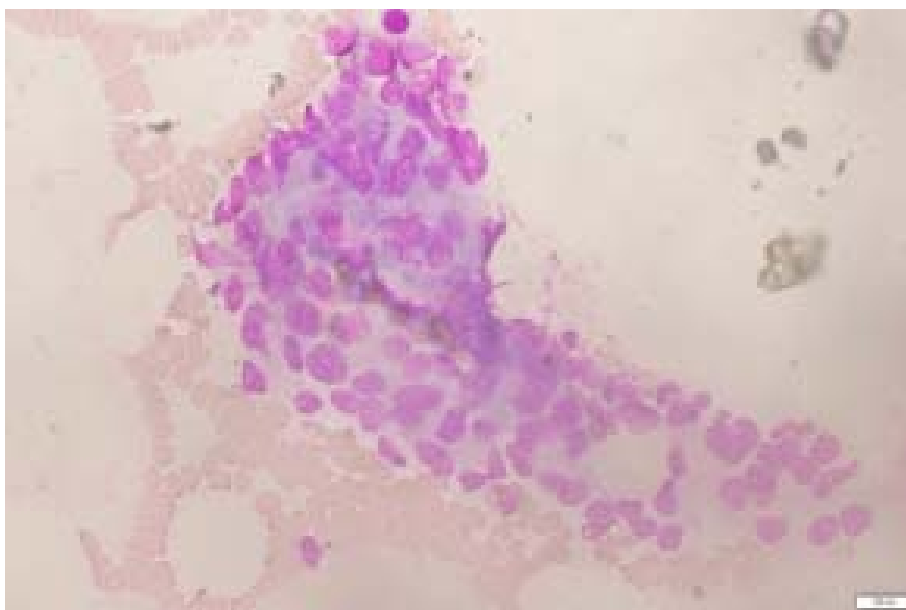


Figure 1. Bone marrow aspiration (H & E stain x 40) showing attempt at gland formation

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Marrow trephine biopsy (Figure 2) displayed thickened bony architecture with conspicuous new bone formation. Inter trabeculae spaces show varied cellularity from sparse to hypercellular areas with frank gland formation. Marked desmoplastic reaction with scanty cellular components, extensive fibrosis and dilated bone marrow sinusoids were suggestive of an extensive bone marrow infiltration of an adenocarcinoma.

PSA >100 ng/mL confirmed prostatic adenocarcinoma infiltrating the marrow.

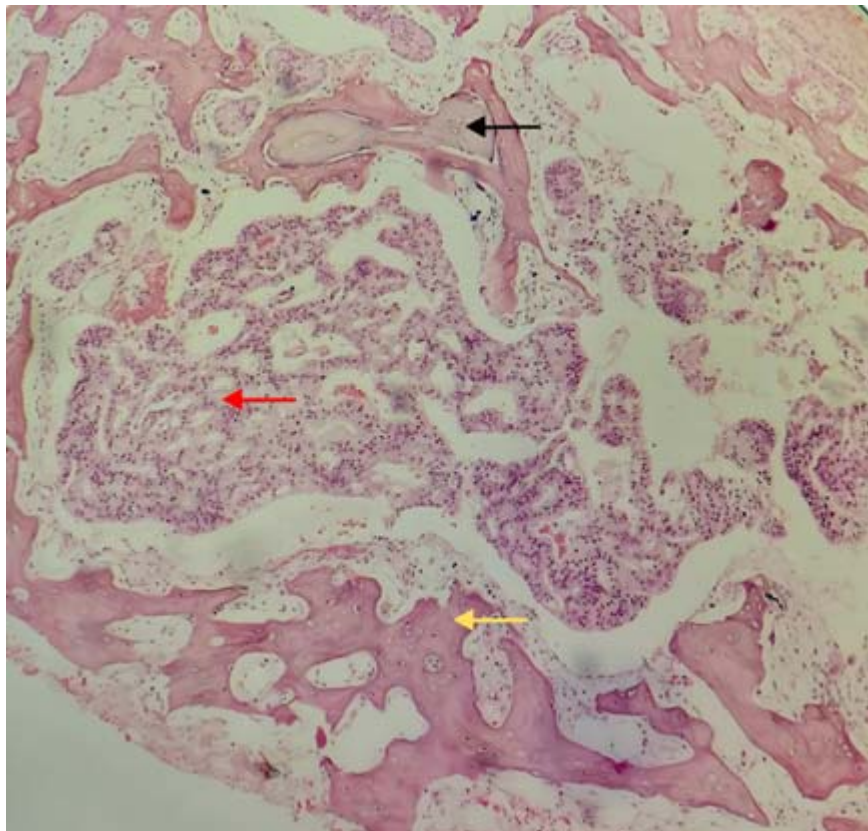


Figure 2. Bone marrow trephine biopsy (H & E stain x 20) showing new bone formation (black arrow), gland formation (orange arrow) and sclerotic bone (yellow arrow).

References

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