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Metastatic Melanoma Presented With Lytic Lesion, Anaemia, Hypercalcaemia Mimicking Multiple Myeloma

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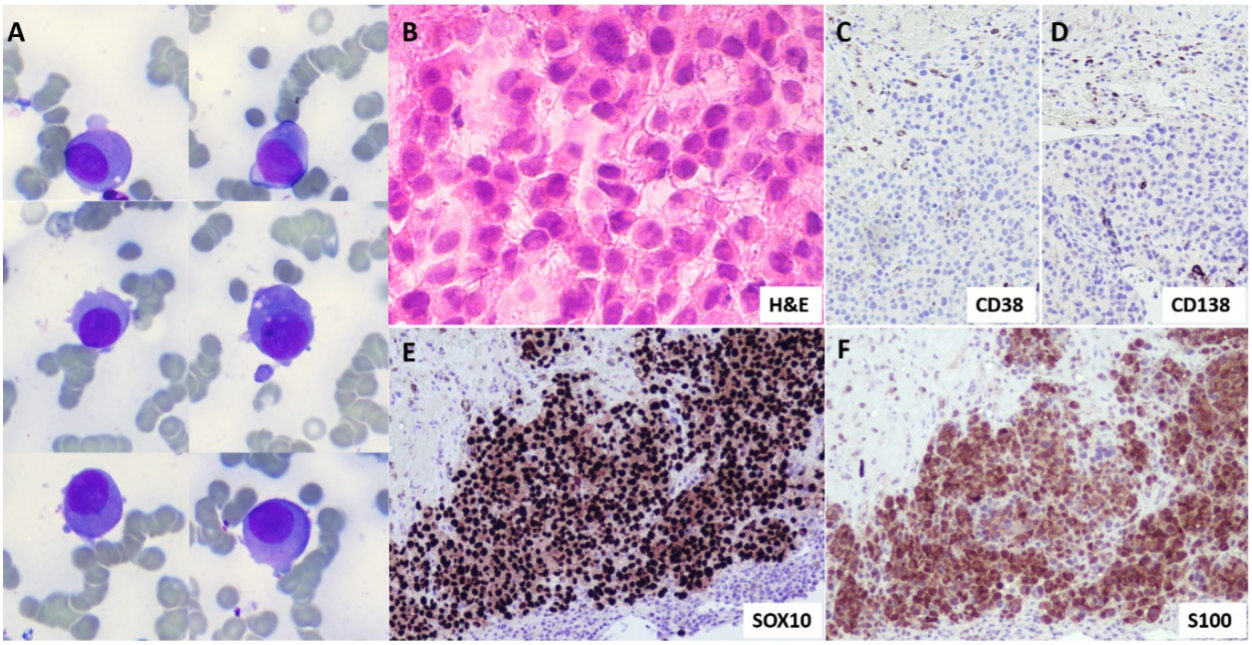

Figure 1: (A) Bone marrow aspirate (May-Grünwald-Giemsa stain x1000 magnification); (B) Trephine biopsy H&E (x400 magnification); (C-F) Immunohistochemical staining of the trephine biopsy (x200 magnification) demonstrates strong positivity for S100 and SOX10 in the neoplastic cells, confirming melanocytic origin. The neoplastic cells are negative for CD38 and CD138, excluding a plasma cell myeloma.

A 53-year-old female presented with anaemia, hypercalcaemia, and lytic lesions on PET/CT. Myeloma was the suspected diagnosis initially. The bone marrow aspirate showed an excess of (58%) plasmacytoid cells with eccentric nuclei (Figure 1A). CD138 cell fluorescence in situ hybridization showed hyperdiploidy with gain at 1q21 in 17% of the 100 cells analyzed, suggesting clonal plasma cells. However, paraprotein was not detected and serum free light chain level was normal. There was also no evidence of immunoparesis, which was not typical for symptomatic non-secretory myeloma. Trephine biopsy showed sheets of malignant cells with plasmacytoid morphology and areas of necrosis (Figure 1B), but immunostain was negative for CD45, CD138, CD38 (Figure 1C-D), MUM1, cyclin D1, immunoglobulin light chains, CD34,

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CD117, CD20, CD3 and CD79a. Further immunostaining was positive for S100, SOX10 (patchy) (Figure 1E-F) and negative for AE1/AE3, MNF116, synaptophysin and chromogranin, confirming the final diagnosis of metastatic melanoma. A review of past medical history confirmed skin melanoma resection 19 years ago.

Melanoma cells can have a variable cell morphology, including plasmacytoid morphology mimicking plasma cells, particularly when no pigment is present. The plasmacytoid variant of melanoma can express plasma cell markers, such as CD138, leading to misdiagnosis, especially when it presents in bones [1]. Cellular features that should raise the possibility of metastatic melanoma include prominent nucleoli, nuclear inclusion, cytoplasmic brown pigmentation, and areas of necrosis. Using an immunohistochemical panel of melanocytic markers is crucial for accurate diagnosis. This case highlighted the importance of clinical, pathological correlation to ensure correct diagnosis.

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References

[1] Lore Low. Metastatic melanoma and rare melanoma variants: a review. Pathology 2023; 55(2): 236-244.