'Morphology can be misleading': small lymphocyte-like plasma cell myeloma

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DESCRIPTION

A 68-year-old woman presented with generalised bone pains and had anaemia (haemoglobin, 79 g/L), skeletal osteolytic lesions, IgG lambda monoclonal protein with normal biochemical parameters except for elevated serum beta-2 microglobulin (5.8 mg/L) and lactate dehydrogenase (293 U/L). Bone marrow examination revealed 75% atypical lymphoid cells morphologically resembling small lymphocytes (figure 1A). Immunophenotyping revealed a bright CD38 and heterogeneous CD138 expression along with expression of CD19 (dim), CD20 (bright), CD200, CD81, CD45 (dim), CD27 (dim) and cytoplasmic lambda light chain restriction. The cells were negative for CD5, CD23, CD10, CD43, CD56, CD79b, surface light chains, surface IgM, IgD and cytoplasmic kappa chain. Fluorescence in-situ hybridisation revealed *IgH-CCND1* translocation (figure 1B) but negative for *TP53* deletion, *IgH-FGFR3*, *IgH-MAF*, *BCL2*, *BCL6*, *MYC* translocations as well as 1q21/1p32 abnormalities. It was diagnosed as a case of small lymphocyte-like plasma cell myeloma.

Small lymphocyte-like myeloma, a potential mimicker of mature B-cell lymphoma is a rare

Learning points

- ▶ Plasma cells are notorious for their varied morphology. Small lymphocyte-like myeloma is a potential mimicker of a mature B-cell neoplasm with a high frequency of CD20 expression and *cyclin D1* translocation.
- ▶ The diagnosis of small lymphocyte-like myeloma can be established based on correlation with clinical features and immunophenotypic profile of these cells.

variant constituting ~3% of myelomas with high frequency of CD20 expression and *cyclin D1* translocation.¹ The strong clinical suspicion of myeloma led us to include plasma cell markers in flow cytometry panel in our patient. However, in the absence of clinical suspicion, clues in the immunophenotype (dim CD19, CD45 negativity and lack of surface light chains and immunoglobulins) should lead to further evaluation of plasma cell markers for the exclusion of myeloma especially in places where plasma cell markers are routinely not included in flow cytometry panels. Awareness about this morphological masquerader helps to make accurate diagnosis and prevents mismanagement.

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Figure 1 (A) Bone marrow aspirate smear showing plasma cells with scanty cytoplasm resembling lymphocytes (Giemsa stain, 1000x). (B) Fluorescence in-situ hybridisation revealed *IgH-CCND1* translocation (600x).

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