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Granuloma whorls

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CLINICAL IMAGE

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Abstract

What is the significance of bone marrow examination in presence of peripheral cytopenias? It is still regarded as a mandatory investigation to diagnose hematological disorders. In this case, bone marrow trephine was initially done as a diagnosis of exclusion for ITP, whereas it revealed multiple granulomas suggesting mycobacterium tuberculosis infection.

KEYWORDS

giant cell, granuloma, thrombocytopenia

1 | INTRODUCTION

We present a case of a 62-year-old gentleman who presented to haematology clinic with history of fever and repeated platelet transfusions due to thrombocytopenia. Bone marrow examination showed multiple granulomas with giant cell formation. The specimen was reported as granulomatous inflammation, and microbiological/clinical correlation was advised.

Examination of bone marrow is an important investigation in patients presenting with pyrexia of unknown origin (PUO),[1] decreased peripheral cell lines and as a staging procedure in lymphomas. In PUO, this investigation has been limited to immunocompromised individuals, for example, human immunodeficiency virus positive patients.[2] The differential diagnosis of granuloma formation in bone marrow includes tuberculosis, sarcoidosis, drug hypersensitivity, and hematolymphoid neoplasms.

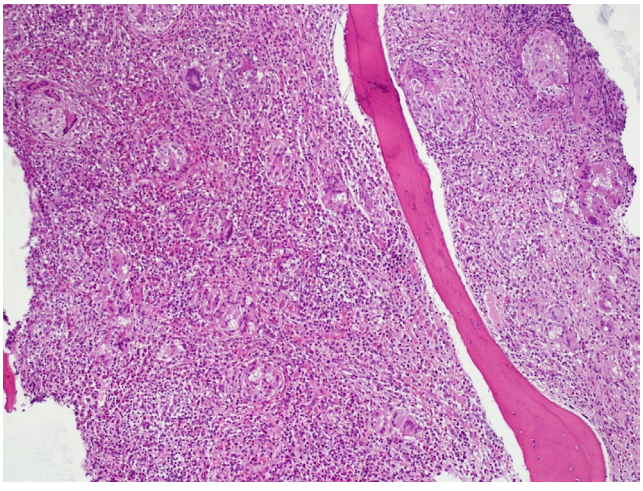

FIGURE 1 Multiple granulomas at 10×

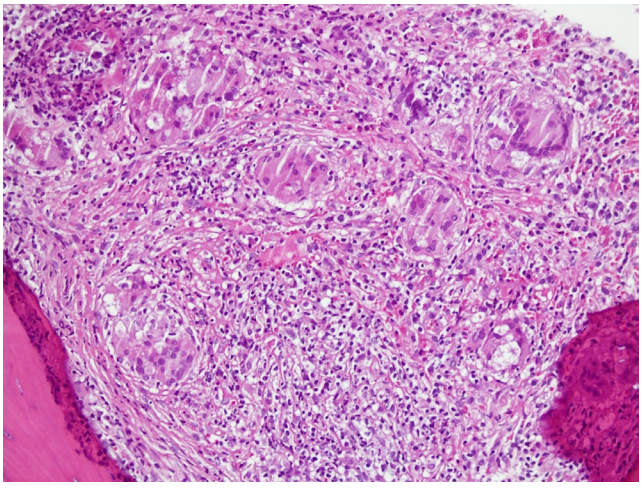

FIGURE 2 Multiple granulomas at 20×

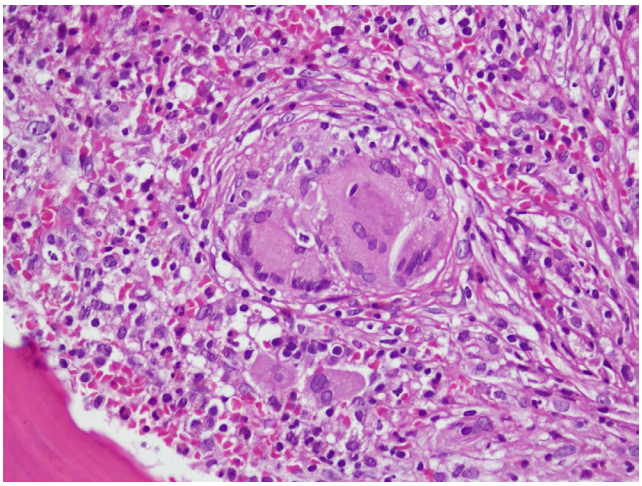

FIGURE 3 Langhan's giant cell at 100×

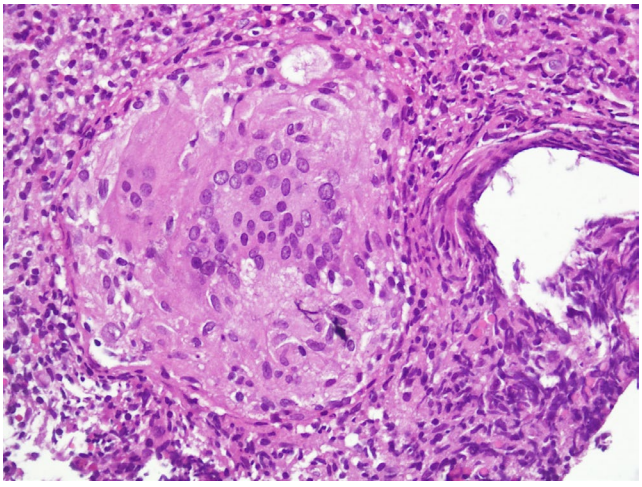

FIGURE 4 Multinucleated giant cell at 100×

2 | CASE HISTORY

A-62-year-old gentleman presented in hematology clinic with complaints of fever and repeated platelet transfusions since one and a half months. On examination, he had petechiae on lower limbs. Complete blood counts showed Hb: 12.5 gms/dL, HCT: 36.9%, WBC: 10.8 × 10^9/L, platelets: 02 × 10^9/L. Peripheral blood film showed normocytic, normochromic red blood cells, white blood cells were normal and platelets were low on film. Subsequently, bone marrow trephine was performed. Bone marrow aspirate was a hemodiluted specimen. However, bone trephine revealed effaced architecture with cellularity of 85%-90%. Cellular areas showed diffuse infiltration with multiple large and small areas of granulomatous inflammation consisting of epithelioid cells, plasma cells, and multinucleated Langhan's type giant cells with background increase in histiocytes (Figures 1-4). Immunohistochemistry panel was applied that showed positivity to CD 68 immunohistochemical stain. Periodic acid-Schiff-diastase (PAS-D) and CD 30 were negative. We reported this case as granulomatous inflammation and suggested infection with mycobacterium tuberculosis was the most likely possibility due to endemicity.

CONFLICT OF INTEREST

None declared.

AUTHOR CONTRIBUTIONS

FZ: drafted manuscript and took pictures. NA: involved in concept and idea, drafted and critically reviewed manuscript, and responded to reviewers.

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