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MORPHOLOGY UPDATE

Bone marrow granulomatous reaction to silicone from breast implants

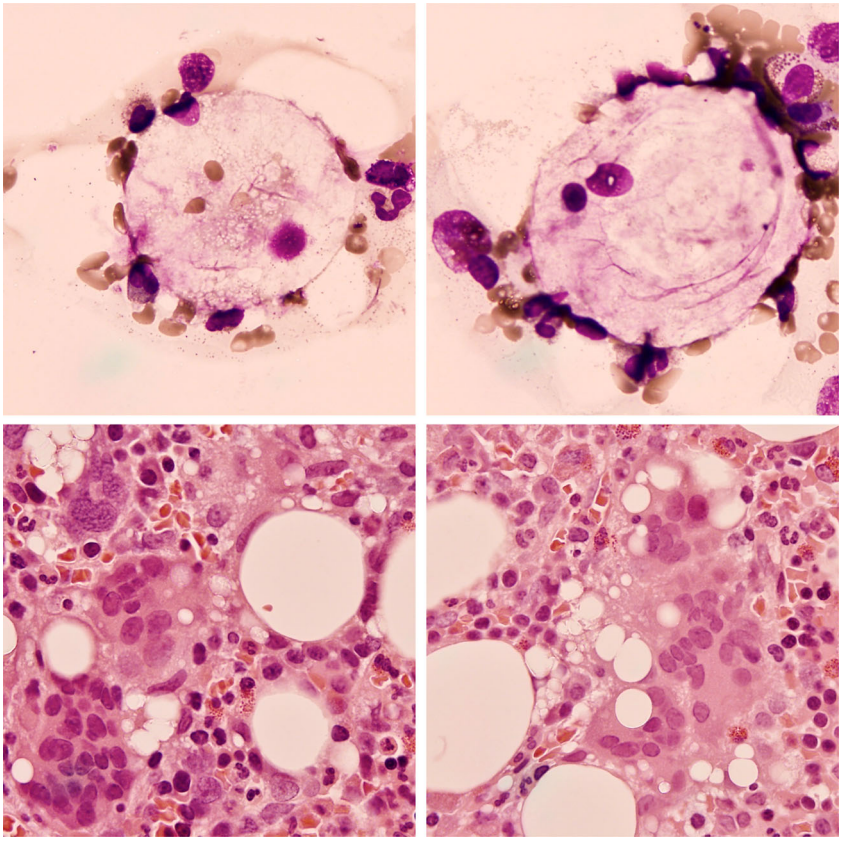
Gillian Horne[1] | Ryan Rodgers[2] | Mike Leach[1] | Barbara J. Bain[3]

[1]Haematology Department, Beatson West of Scotland Cancer Centre, Glasgow, UK

[2]Haematology Department, Glasgow Royal Infirmary, Glasgow, UK

[3]Centre for Haematology, Department of Immunology and Inflammation, St. Mary's Hospital Campus of Imperial College London School of Medicine, London, UK

Correspondence
Barbara J. Bain, Blood Sciences, Imperial College Healthcare NHS Trust, St Mary's Hospital, Praed Street, London W2 1NY, UK.
Email: b.bain@imperial.ac.uk



A 66-year-old woman presented with a 5-week history of intermittent fever, chills, and sweats. She had a normal blood count, lactate dehydrogenase was 292 U/L (upper limit of normal [ULN] 240), and C-reactive protein 55 mg/L (ULN 10 mg/L). She described ruptured silicone breast implants 5 years prior to this presentation, which were removed at that time. No clear infective cause was identified.

Computed tomography demonstrated a prominent spleen and enlarged right axillary, subpectoral, and internal mammary lymph nodes. An excisional lymph node biopsy demonstrated extensive infiltration by macrophages with vacuolated cytoplasm and multinucleate foreign body giant cells in keeping with silicone lymphadenopathy. Bone marrow biopsy was performed in view of the persistence of fever and development of a fleeting erythematous rash. The aspirate (upper images, ×100 objective) demonstrated large macrophages with amorphous pale pink cytoplasm containing small round globules. Trephine biopsy sections showed multiple granulomas adjacent to silicone droplets and congested macrophages containing droplets (lower images, ×50). Skin biopsy (not shown) demonstrated silicone granulomas of the skin.

Silicone lymphadenopathy occurs following migration of silicone particles through the lymphatic system to regional nodes and more distal extranodal sites as a consequence of implant rupture or "gel bleed". This silicone migration and tissue deposition with granulomatous reaction may cause systemic symptoms which can mimic lymphoma – fatigue, fever, and sweats. It is an important condition to be aware of and to consider in the context of bone marrow granulomatosis.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

ORCID

Barbara J. Bain https://orcid.org/0000-0003-3077-4579

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