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HAEMATOLOGY IMAGES

Ponatinib-related gelatinous transformation of the bone marrow

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A 47-year-old man presenting with high white blood cell (WBC) count (116 500/μL) and splenomegaly (18 cm) was diagnosed with chronic myeloid leukemia. He was started on dasatinib, achieving after 6 months a suboptimal molecular response. The patient received nilotinib that, after 6 months, did not improve molecular response and caused slight leuko-thrombocytopenia. The patient was then started on ponatinib that, after 6 months, led to MR2 molecular response and onset of anorexia, weight loss (6 kg) and severe pancytopenia (WBC 2200/μL, neutrophils 400/μL, Hb 7.4 g/dL, platelets 20 000/μL). A trephine biopsy showed fat atrophy and bone marrow (BM) replacement by a gelatinous material (Figure 1, panel A original magnification 100×, panel B original magnification 400×; hematoxylin-eosin

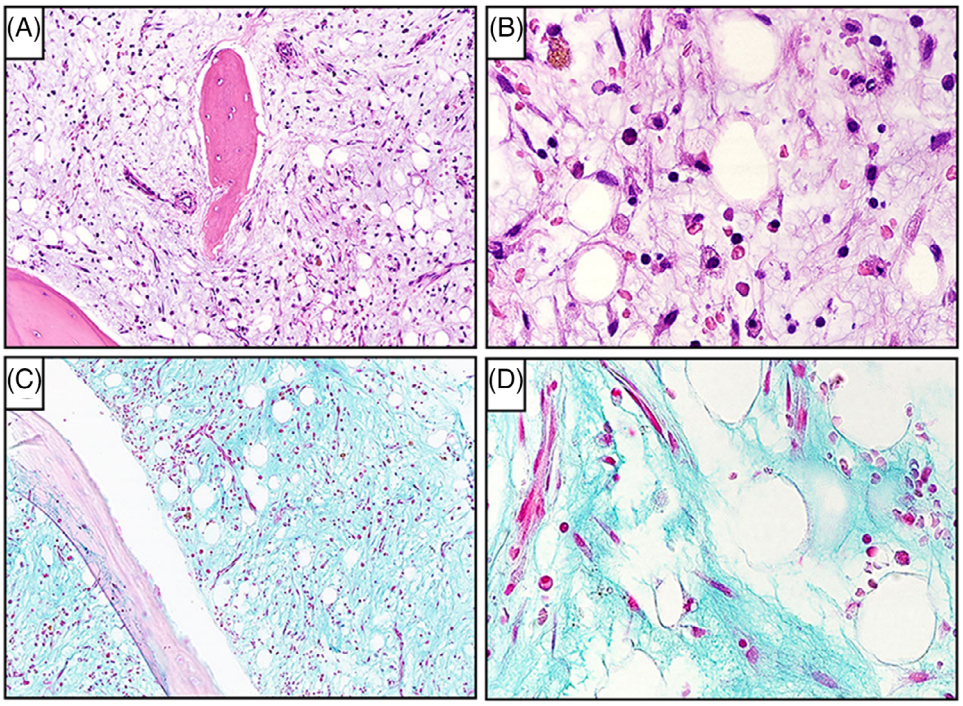

FIGURE 1 Trephine biopsy shows fat atrophy and bone marrow (BM) replacement by a gelatinous material (A, hematoxylin-eosin, 100×; B, hematoxylin-eosin 400×) positive for Alcian blue that stains acid mucopolysaccharides (C, Alcian blue stain 100×; D, Alcian blue stain 400×).

stain) positive for Alcian blue that stains acid mucopolysaccharides (Figure 1, panel C original magnification 100×, panel D original magnification 400×; Alcian blue stain). Ponatinib was stopped.

Gelatinous transformation of BM has been usually associated with malnutrition, drug toxicity or underlying malignancy. Very rare cases of BM gelatinous transformation following imatinib or dasatinib were reported [1–3]. This is the first case related to ponatinib. Because of the persistence of transfusion-dependent pancytopenia 3 months after ponatinib interruption and the presence of *BCR/ABL* residual transcripts, the patient is currently being considered for an allogeneic hematopoietic stem cell transplantation.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

N/A

ETHICS STATEMENT

A written informed consent was obtained from the patient.

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