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Transformation of follicular lymphoma to high-grade Burkitt's like lymphoma and acute lymphoblastic leukemia-L3 type

Sir,

A 38-year-old lady who presented at our institute in February 2012 with generalized lymphadenopathy was diagnosed as follicular lymphoma (FL) (grade-III, stage-IV) [Figure 1a]. Immuno–histochemically (IHC), the tumor cells showed positivity to BCL 2 [Figure 1b], MIB 60-70% [Figure 1c], CD20 [Figure 1d], CD79α, CD10 and BCL6. Bone marrow biopsy showed marrow involvement. Follow-up computed tomography after 4 cycles of CHOP (Cyclophosphamide, Hydroxydaunorubicin, Oncovin, Prednisolone) showed residual lymphadenopathy and hepato-splenomegaly. Total white blood cell count (TWBC) was 4.8 × 10^6/L, with 62% lymphoid cells, no blasts. Subsequent lymph node biopsy showed features of high grade diffuse large B cell lymphpma (DLBCL, Burkitt's like) [Figure 2a]. IHC showed positivity to CD20, CD79α, BCl2 [Figure 2b], MIB 80% [Figure 2c], CD10 [Figure 2d] and BCL6, and negative to terminal deoxynucleotidyl transferase, CD99 and Cyclin-D1. Bone marrow showed residual disease with few blasts. Assessment after 2 more cycles (August 2012) showed persistent lymphadenopathy, TWBC: 7 × 10^6/L with 10% L3 type blasts [Figure 3d], bone marrow aspiration: 80% L3 type blasts [Figure 3b], bone marrow biopsy showed sheets of blasts [Figure 3a and c]. Flow-cytometry: Positive for CD5, CD20, CD21, CD33, FMC7, Kappa. CD23 was negative. The patient showed transformation of FL to high-grade DLBCL and acute lymphoblastic leukemia of L3 type.

FL is an indolent lymphoma. Blastic transformation though rare has highly aggressive course. Our patient was advised

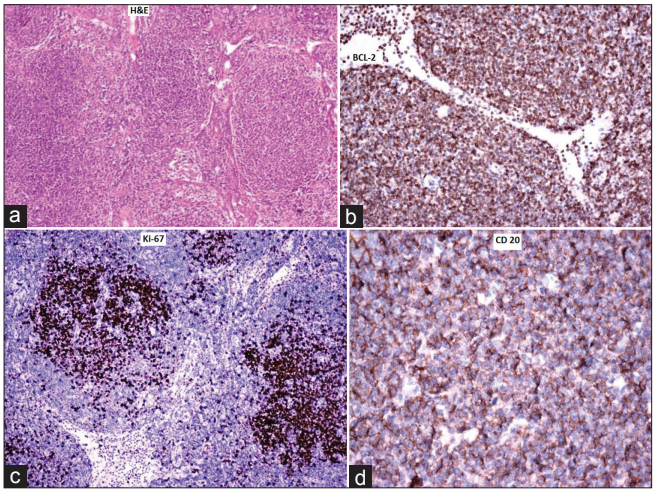

Figure 1: (a) H and E, ×10 - Follicular lymphoma showing neoplastic follicles; (b) Bcl-2, ×10 - Neoplastic follicles showing strong positivity; (c) Ki-67, ×10 - Neoplastic follicles showing strong proliferative activity; (d) CD-20 ×20 - Neoplastic cells showing positive reaction

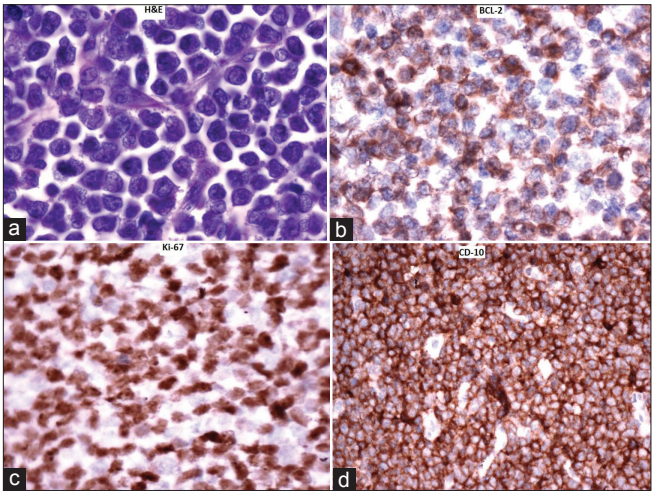

Figure 2: (a) H and E, ×100 - Diffuse high grade Burkitt's like lymphoma; (b) BCL2, ×100 - Atypical cells showing positive reaction; (c) Ki-67, ×40 - Atypical cells showing high proliferative activity; (d) CD10, ×40 - Atypical cells showing strong membrane positivity

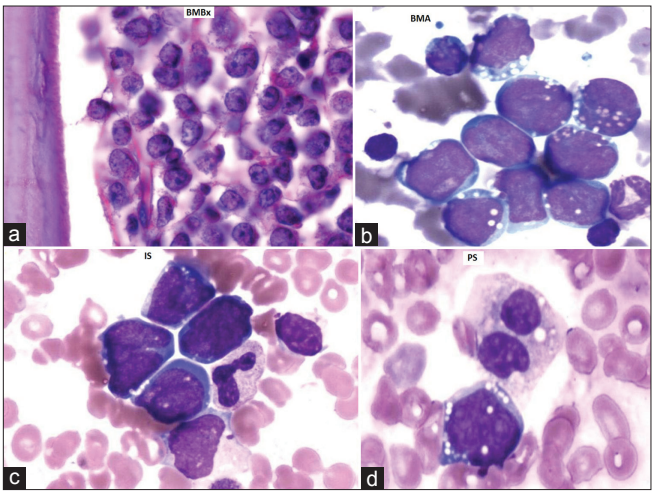

Figure 3: (a) H and E, ×100 - Bone marrow biopsy showing sheets of blasts; (b) Leishman's stain, ×100 - Bone marrow aspiration showing many blasts with L3 morphology; (c) Leishman's stain, ×100 - Bone marrow biopsy touch imprint smear showing blasts with L3 morphology; (d) Leishman's stain, ×100 - Peripheral smear showing blast with L3 morphology

supportive care as she had poor response to treatment and was not fit for intensive chemotherapy.

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