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Unusual presentation of Burkitt-like lymphoma with 11q aberration in an elderly patient

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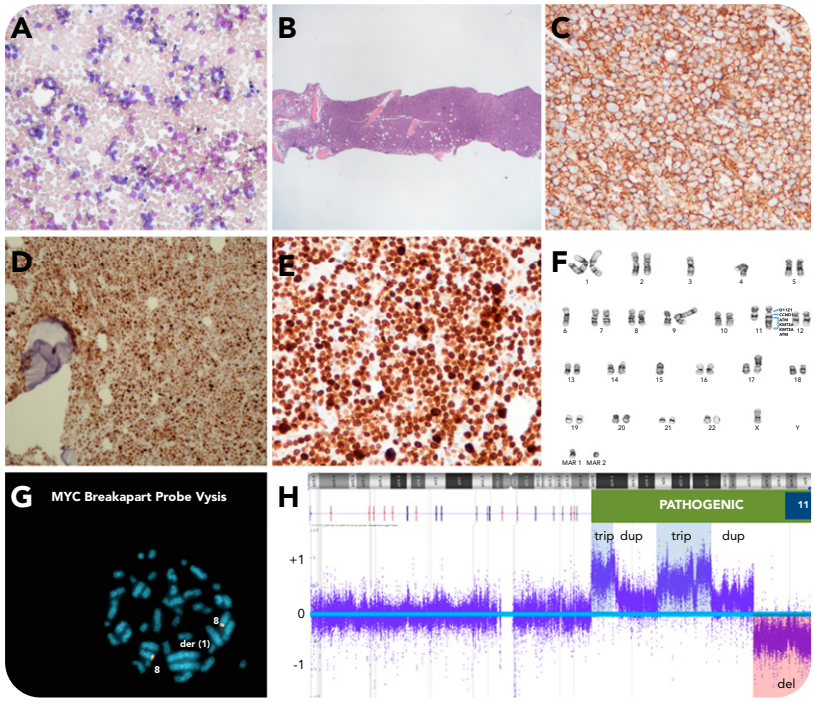

An 82-year-old man presented with massive adenopathy and B symptoms. A bone marrow aspirate revealed medium- to large-sized atypical lymphocytes with irregular nuclear contours, dispersed chromatin, variably prominent nucleoli, and scant to moderate amounts of vacuolated basophilic cytoplasm (panel A; hematoxylin and eosin [H&E] stain, original magnification ×20). Biopsy showed near 100% cellularity with confluent infiltration of medium-sized cells in a starry sky pattern (panel B; H&E stain, original magnification ×4). By immunohistochemistry, lymphocytes were $CD20^+$ B cells (panel C; immunoperoxidase stain, original magnification ×20) that were positive for CD10, BCL6, and MYC (panel D; immunoperoxidase stain, original magnification ×20); weakly positive for BCL2 and SOX11; and negative for MUM1, CD30, cyclin D1, EBER, and TdT. The Ki-67 proliferation index was 100% (panel E; immunoperoxidase stain, original magnification ×20). CD21 showed no follicular dendritic cell meshworks. CD3 stained reactive T cells.

A complex karyotype with a chromosome 11 aberration and no MYC rearrangement was present (panels F and G; 43,X,−Y,add(1)(p36.2),der(1)t(1;3)(q42;q11.2),−3,−4,−6,der(9)(3qter→3q11.2::1q21→1q42::9p13→9qter),add(11)(q23),−15,add(15)(q15),der(17)t(6;17)(q13;p11.2),+mar1,+mar2[13]/46,XY[3].ish3q27.3(BCL6x1),der(1)t(1;3)(BCL6x1),der(9)(3qter→3q11.2::1q21→1q42::9p13→9qter)(BCL6x1),8q24(MYCx2),14q32(IGHx2),18q21.3(BCL2x2)). Chromosome 11 showed a normal centromere (D11Z1) and CCND1 signal, a duplication and inversion of the ATM and KMT2A signals at q23.3, and an absence of the chromosome 11 subtelomeric signal consistent with a terminal deletion. By microarray, duplication/triplication/deletion of chromosome 11q was confirmed (panel H; 11q13.5q14.1 trip, 11q14.1q21 dup, 11q21q22.3 trip, 11q22.3q23.3 dup, 11q23.3q25 del). These findings demonstrated an aggressive Burkitt-like lymphoma with chromosome 11 aberration; a new entity in the WHO Classification of Tumors of Hematopoietic and Lymphoid Tissues: World Health Organization; 2017.

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