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An anaplastic T-cell lymphoma mimicking classical Hodgkin lymphoma

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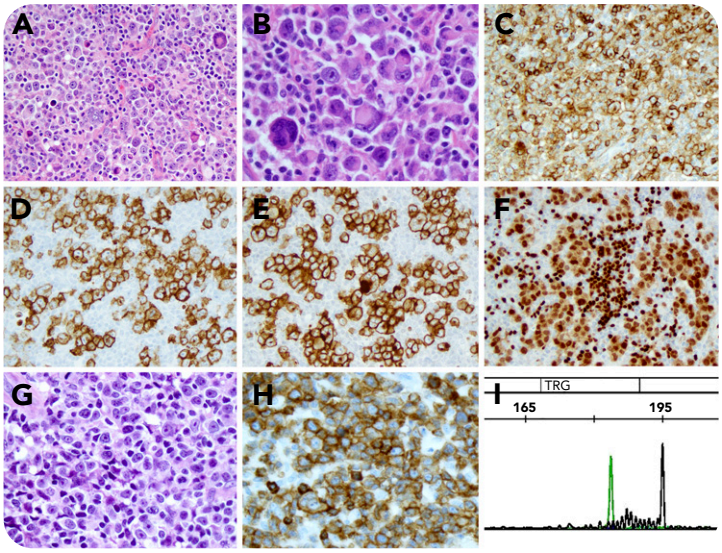

A 52-year-old man presented with an enlarged left axillary lymph node in 2009. Hematoxylin and eosin staining showed cohesive growth of atypical large lymphoid cells with multilobated nuclei and abundant cytoplasm (panels A-B; original magnification ×200 [A] and ×400 [B]), some resembling hallmark cells, but with no sinusoidal involvement. The background contained plasma cells and histiocytes, but eosinophils were absent. The atypical cells were positive for CD4, CD15, CD30, and PAX5 (panels C-F; original magnification ×200), but negative for ALK1, CD2, CD3, CD5, CD7, CD8, CD19, CD20, CD43, CD45, CD56, CD79a, Epstein-Barr virus, and epithelial membrane antigen (not shown). A diagnosis of classical Hodgkin lymphoma (cHL) was rendered and the patient was treated with doxorubicin hydrochloride (Adriamycin), bleomycin, vinblastine sulfate, and dacarbazine (ABVD) plus involved-field radiation. He remained in clinical remission until March 2017 when he developed cutaneous involvement of the right popliteal fossa (panel G; hematoxylin and eosin stain, original magnification ×400). The atypical lymphoid cells were positive for CD4, CD15, CD30, PAX5 (not shown), and CD5 (panel H; original magnification ×400), but negative for other B- and T-cell–associated antigens, as noted previously. Both the 2009 (panel I) and 2017 (not shown) specimens were monoclonal by T-cell receptor gamma polymerase chain reaction with identical rearrangement patterns; *IGH* rearrangement was negative.

This rare T-cell neoplasm was positive for CD30, CD15, and PAX5, closely mimicking cHL. Aberrant expression of PAX5 has been reported in ALK-negative anaplastic large cell lymphoma (ALCL) secondary to extra copies of the *PAX5* gene. Similarly, coexpression of CD30 and CD15 has been reported in a subset of peripheral T-cell lymphomas. Ultimately, the diagnosis of ALK-negative ALCL was favored based the morphology, immunophenotype, and molecular studies.

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