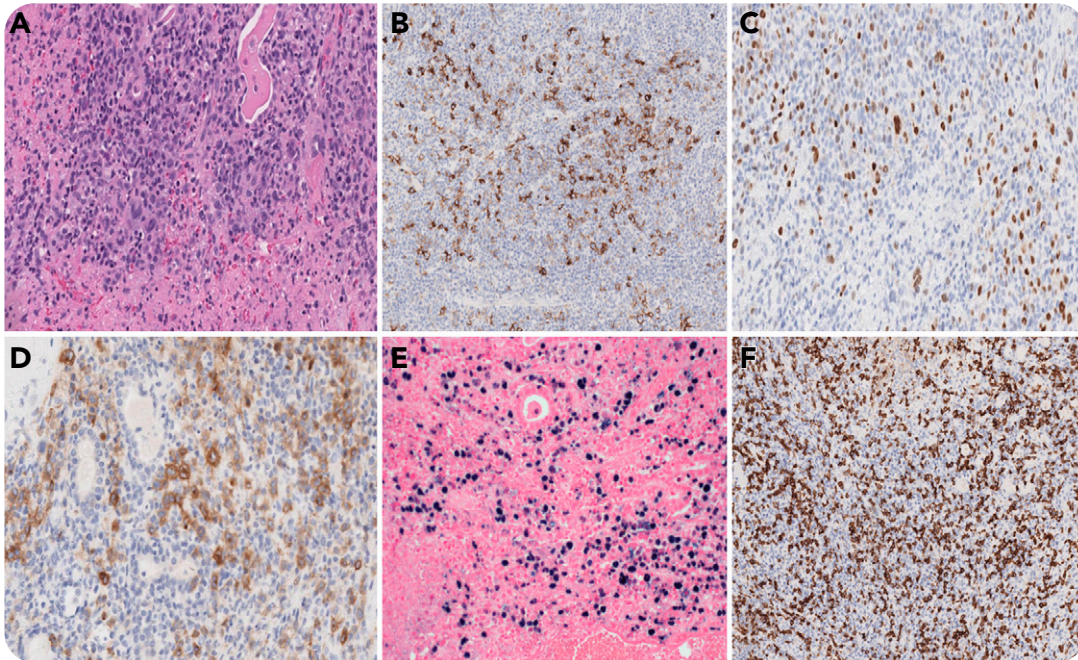


Infectious mononucleosis affecting sinonasal mucosa

Elham Vali Betts and Regina Gandour-Edwards, University of California, Davis



A 15-year-old transgender male patient with a history of asthma receiving no treatment was admitted with worsening fever and sinusitis not responding to outpatient antibiotic therapy. Functional endoscopic sinus surgery showed inflammatory sinus tissue. A biopsy demonstrated fibrinopurulent exudate with necrosis and atypical lymphoid infiltrate with scattered large atypical cells, some with prominent nucleoli, vesicular chromatin, and bi/multinucleation resembling Hodgkin/Reed-Sternberg cells (panel A; hematoxylin and eosin stain, original magnification $\times 40$). By immunohistochemistry, the infiltrate was composed of B cells expressing CD20 (panel B; CD20 stain, original magnification $\times 10$), PAX5 (panel C; PAX5 stain, original magnification $\times 40$), and CD30 (panel D; CD30 stain, original magnification $\times 40$). Epstein-Barr virus (EBV)-encoded RNA–in situ hybridization (EBER-ISH) highlighted small lymphocytes as well as Hodgkin/Reed-

Sternberg-like cells (panel E; EBER-ISH stain, original magnification $\times 20$). The background was composed of reactive T cells ($CD4 \ll CD8$; panel F, CD8 stain, original magnification $\times 10$). The lymphoid cells were negative for CD56, ALK1, AE1/AE3, synaptophysin, S100, and myogenin. Further laboratory testing showed positive heterophile antibodies. Overall, the findings were consistent with acute infectious mononucleosis.

CD30⁺ Reed-Sternberg-like cells are seen in acute EBV infection with increased CD8⁺ cells and an inverted CD4-to-CD8 ratio. These findings pose a challenge in diagnosing this entity and ruling out the possibility of a neoplastic process such as large B-cell lymphoma or Hodgkin lymphoma, which require different courses of treatment. Clinical history, serologic findings, and follow-up are important in patients with acute EBV infection.