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IgG_4-Related Sialadenitis

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IgG_4-related sialadenitis, formally Küttner tumor, is a chronic fibroinflammatory tumefactive salivary gland disorder characteristically showing dense lymphoplasmacytic infiltrate, storiform fibrosis, phlebitis, and increased IgG_4-positive plasma cells, often with elevated serum IgG_4 concentrations. This immune-mediated disorder often has systemic findings, including autoimmune pancreatitis, retroperitoneal fibrosis, cholangitis, lacrimal gland dacryoadenitis, Riedel thyroiditis, and other glands affected by a similar inflammatory fibroblastic disorder. The disorder is characterized by a prominent lymphoplasmacytic infiltrate and cytotoxic T-cell populations. In some submandibular cases, sialolithiasis may be a confounding factor.

This disorder is probably underreported, identified in patients between the fourth and seventh decades, with males affected slightly more often than females. The submandibular gland is preferentially affected, although other minor salivary gland sites may rarely be affected. Pain and swelling of the affected gland is the most common presentation, depending on the presence of concurrent systemic findings. Serum IgG_4, IgG, and IgG_4/IgG ratio (normally 3%-6%) are typically elevated, while anti-SS-A, anti-SS-B, and antineutrophilic antibodies are not present. Most patients are managed with steroids, although surgical removal is frequently performed if there is sialolithiasis associated.

Histologically, there is usually a well-circumscribed involvement of the gland, although diffuse disease can sometimes be seen. There is usually lobular architecture preservation, with a dense lymphoplasmacytic infiltrate associated with large irregular germinal centers within lymphoid follicles (Figure 1). Mature plasma cells often predominate and aggregate. There is associated acinar atrophy. These lobules are separated by storiform fibrosis composed of fibroblasts that create sclerotic septa, intermixed with chronic inflammatory cells. While phlebitis is helpful in making the diagnosis, it may not always be seen. The diagnosis can be confirmed with IgG_4 and IgG immunohistochemistry studies, which generally demonstrate >100 IgG_4-positive plasma cells per high-power field and show a proportion of IgG_4/IgG-positive plasma cells of >40% (Figure 2). By convention, histologic features are separated into major and minor criteria, with at least 2 major criteria required to reach a confident diagnosis, although obliterative phlebitis is seldom seen in salivary gland disease. Terms including *highly suggestive*, *probable*, and *insufficient histologic evidence* of IgG_4-related disease are employed.

The disorder should be separated from chronic sialadenitis (which lacks IgG_4 plasma cells), sialolithiasis, sarcoidosis, Sjögren syndrome, lymphoepithelial sialadenitis, and sialadenosis.

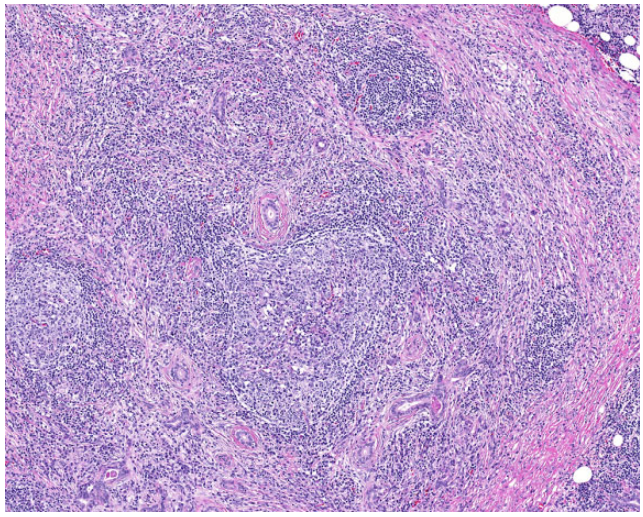

Figure 1. The salivary gland parenchyma is separated into lobules with a storiform fibroblastic stroma associated with a dense lymphoplasmacytic infiltrate, including germinal center formation.

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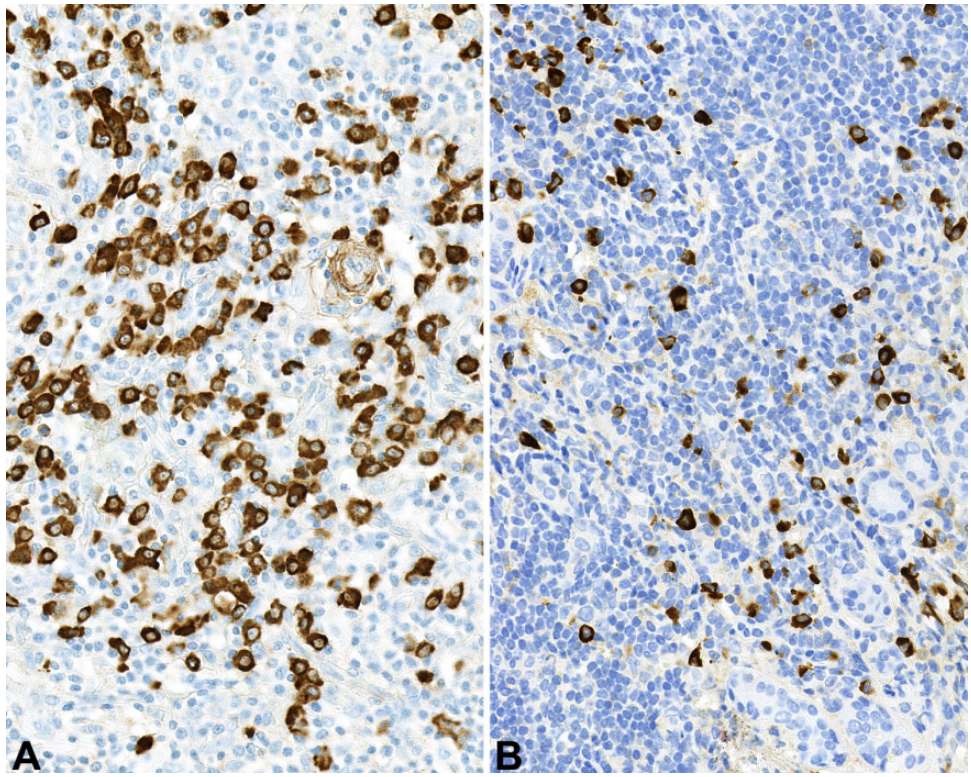

Figure 2. A, The IgG_4 immunohistochemistry study highlights >100 positive plasma cells in a high-power field in comparison to (B) where the IgG immunoreactivity is much less, resulting in a IgG_4/IgG ratio of >40%.

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Suggested Reading

1. Deshpande V, Zen Y, Chan JK, et al. Consensus statement on the pathology of IgG_4-related disease. *Mod Pathol*. 2012;25(9):1181-1192.
2. Puxeddu I, Capecchi R, Carta F, Tavoni AG, Migliorini P, Puxeddu R. Salivary gland pathology in IgG_4-related disease: a comprehensive review. *J Immunol Res*. 2018;2018:6936727.
3. Culver EL, Hunt A, Crewe E, Shah KA, Martinez-Devesa P. Immunoglobulin G_4 related chronic sclerosing sialadenitis. *J Laryngol Otol*. 2015;129(3):226-231.