

The diagnostic utility of labial salivary gland biopsy in IgG4-related disease

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Objective:

For the definitive diagnosis of IgG4-related disease (IgG4-RD), biopsies of local lesions are recommended so as to exclude other diseases, including lymphoma and cancer. However, performing biopsies of underlying organs is technically difficult. In this study, we examined the diagnostic utility of labial salivary gland (LSG) biopsy as a less invasive procedure.

Methods:

Sixty-nine patients with suspected IgG4-RD by clinical findings or high serum IgG4 underwent LSG biopsy. We examined the relationship between the number of IgG4-positive plasma cells in LSG and clinical findings.

Results:

The final diagnosis was 45 patients with IgG4-RD, 13 with Sjögren's syndrome (SS), 5 with suspected SS, 3 with malignant lymphoma, 1 with systemic lupus erythematosus, 1 with thyroid cancer, and 1 with Warthin's tumor. The sensitivity, specificity, and accuracy of LSG biopsy were 55.6%, 100.0%, and 71.0%, respectively. Forty-five IgG4-RD patients were divided into two groups: 1) 25 with lesions of salivary glands (IgG4-RD S(+)) and 2) 20 without these lesions (IgG4-RD S(-)). Seventeen of 25 (68.0%) IgG4-RD S(+) and 8 of 20 (40.0%) IgG4-RD S(-) patients were positive for LSG biopsy. In the IgG4-RD S(-) patients, the mean number of affected organs and serum IgG4 in the positive cases for LSG biopsy were significantly higher than in the negative cases.

Conclusions:

A solo LSG biopsy is insufficient for the diagnosis of IgG4-RD because of its low sensitivity. However, LSG biopsy combined with clinical findings, including serum IgG4 and number of affected organs, may contribute towards a diagnosis of IgG4-RD patients with affected underlying organs.