

The gastrointestinal manifestation of IgG4-related disease: a pathological study with 8 cases

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Objective:

IgG4-related disease (IgG4-RD) with gastrointestinal involvement (IgG4-related gastrointestinal disease; IgG4-GID) is of uncertain histological features, and its validity as a separate diagnostic entity is yet to be clarified. The aim of this study was to clarify the pathological features of IgG4-GID through a multi-center survey.

Methods:

We re-evaluated the histological slides from cases of possible IgG4-GID with a resection or excisional biopsy, which we collected from members of the Research Committee of IgG4-RD sponsored by a Health and Labour Sciences Research Grant (Intractable diseases) from the Japanese Ministry of Health, Labour and Welfare; the Committee for Autoimmune Pancreatitis of the Japan Pancreas Society; and the authors of the previous reports.

Results:

Eight cases (7 in the stomach, one in the esophagus) with diffuse lymphoplasmacytic infiltration but without numerous neutrophils, granulations and epithelioid granulomas were selected for further evaluation. The median age of the 8 patients was 71.5 years (range: 55-80), and 6 were male. The 8 cases were histologically divided into 2 groups: striated inflammatory lesion in the muscularis propria (SIL-mp) and inflammatory pseudotumor (IPT). In all, the IgG4 count (87-345/high-power field) and IgG4/IgG-positive ratio were high (44-115%). In the SIL-mp group (5 cases; 4 in the stomach, one in the esophagus), we observed a diffuse lymphoplasmacytic infiltration involving the myenteric nerve plexus within the thickened muscularis propria. Ulceration and cancer co-existed in 3 and 2 cases, respectively. All the patients in the SIL-mp group had other organ involvements (OOIs), and serum IgG4 was markedly elevated in 3 from 4 patients who underwent analysis. Three cases (all in the stomach) with IPT were heterogeneous. From these, one case with storiform fibrosis, obliterative phlebitis, OOIs and marked serum IgG4 elevation seemed typical for IgG4-RD. Two other IPTs with reactive nodular fibrous pseudotumor or nodular lymphoid hyperplasia could not be determined to be IgG4-GID because of the histological findings and lack of OOIs. An additional unique histological pattern (3 cases in the stomach) characterized by plasma cells aggregating at the mucosal bottom (bottom-heavy plasmacytosis in the mucosa; BHP-m) was simultaneously observed with other histological types with OOIs.

Conclusions:

SIL-mp and BHP-m seemed to represent IgG4-GID. The diagnosis of IgG4-related IPT seems likely only in cases with typical storiform fibrosis and/or obliterative phlebitis in the appropriate clinical settings because there may be other entities that show a tumefactive inflammation with numerous IgG4-positive cells in the gastrointestinal tract.