Atrophic Autoimmune Gastritis: Manifestations and Clinicopathologic Associations in a Large United States Cohort

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Background

Atrophic autoimmune gastritis (AIG) is uncommon and most series include few patients. An accurate diagnosis rests on adequate gastric biopsy sampling (rarely done); thus, controls have often been subjects in whom AIG was excluded based on insufficient sampling. H. pylori infection was unrecognized until 1985 - 1990, and most studies on AIG have been carried out before that time. Therefore, they may include large numbers of patients with H. pylori gastritis.

Aims

To analyze a large cohort of patients with satisfactory biopsy sampling and compare the clinical characteristics and relevant pathologic associations in subjects with and without AIG.

Study Design and Methods

We used a large nationwide database of patients with gastric biopsies to extract all patients who had separately labeled gastric biopsies from gastric corpus and antrum and collected appropriate demographic, clinical, endoscopic, and histopathologic data. We then extracted all patients with atrophy or metaplasia (irrespective of the site) in the diagnosis. We then reviewed individually each report to determine whether criteria for AIG, listed in the panel below, were met.

Autoimmune Atrophic Gastritis Diagnostic Criteria

Antrum:
- Normal or reactive gastritis
- No IM or atrophy
- No significant chronic or any degree of active inflammation

Validation
- Atrophy of the oxyntic mucosa, with or without IM
- Chronic inflammation
- Minimal or no active inflammation
- ECL-cell hyperplasia (linear or micronodular)
- Neuropendocrine tumor

Absence of H. pylori infection

Panel 1 – Histopathologic criteria for the diagnosis of atrophic autoimmune gastritis.

Although it is possible that AIG H. pylori infection and AIG coexist in the same patient, the presence of H. pylori infection was a criterion for exclusion because of the essential impossibility to separate histologically the respective contribution of each condition to the overall histopathologic appearance of the gastric mucosa.

Results

Of 55,039 unique patients who met the biopsy set inclusion criteria, 1,622 (3%) had a diagnosis of AIG. AIG patients were older than controls, (median age 68 versus 58 years; p<.001) and more likely to be female (OR 1.70, 95%CI 1.52–1.91).

Anemia was the commonest indication for EGD in AIG patients (26.8%), in contrast to 7.5% of controls (OR 4.51 95%CI 4.02–5.06). GERD was less common in AIG patients (29% versus 48%; OR 0.45 95%CI 0.40–0.50).

Gastric neuroendocrine tumors, rare in controls (0.4%), were detected in 4.3% of AIG patients (OR 11.94 95% CI 9.06–15.74).

Study Highlights

- AIG was diagnosed in 3% of patients who had adequate gastric biopsies.
- Anemia was reported in 1 of 4 patients.
- A clinic-endoscopic impression of atrophy was communicated only in 1 of 10 patients. No other manifestations were sufficiently distinctive to elicit a clinical suspicion of AIG.
- No associations with gastrointestinal lymphocytic conditions (including celiac disease and microscopic colitis) were detected.
- AIG remains a largely unsuspected condition, most often diagnosed histopathologically in patients with a wide variety of non-specific signs and symptoms.
- We suggest that gastroenterologists who receive a histopathologic diagnosis of suspected AIG perform antiparital cell and antinuclear factor antibody studies to confirm the diagnosis.

References