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| **Title:** |
| **Familial thyrogastric autoimmune syndrome: a study of 22 kindreds.** |
| **Abstract: (Your abstract must use Normal style and must fit into the box. Do not enter author details)** |

**Introduction:** In a prospective study, gastric autoimmunity (GAI) was present in 13% of 240 sporadic autoimmune thyroiditis (AIT) cases (Valdes-Socin & al. RmLg 2013). This clinical association is known as the thyrogastric autoimmune syndrome or TAS. Familial TAS has been rarely described.

**Methods:** We studied the familial occurrence of GAI among 600 AIT consecutive patients. Familial cases included two or more kindred associating GAI and AIT. Gastric and thyroid screening studies included PCA, intrinsic factor and TPO antibodies, *Helicobacter pylori* serology, gastrin, B12, and ferritin plasma measurements. Gastric biopsies were done in only 13/24 patients. Biological data of familial cases were compared to an age and sex matched control group (thyroid autoimmunity only).

**Results:** We identified 8 families (Hashimoto=7/Grave’s disease=1) and 22 (19F/3M) kindred. Pedigrees included brothers/sisters (n=6), mother/children (n=1), and monozygotic twins (n=1). Mean age at diagnosis was 39+12 years, ferritin 25±63 ng/ml (NV>10), B12: 338±176 (200-700), gastrin: 466±464 ng/ml (10-100).Three patients had a B12 deficiency whereas six other patients had iron deficiency only. Familial cases had significant lower ferritin and higher gastrin levels than the control group (p<0,01). Antral and corpus gastritis was confirmed in 13 patients. *Helicobacter Pylori* was found in 6/13 gastroscopies. Two patients had gastric histological features of Biermer disease with gastrin>1000 ng/ml. B12 and iron malabsorption improved in *HP+* treated patients.

**Conclusion:** Familial TAS is an heterogeneous syndrome probably reflecting complex environmental (*HP*) and genetic interactions. Efforts should be made to eradicate *HP+* infection because gastric autoimmunity and micronutrients malabsorption can be reversed.