

## Thyroid Disorders and Inflammatory Bowel Diseases: Retrospective Evaluation of 909 Patients from an Italian Referral Center

### To the Editor:

Inflammatory bowel diseases (IBDs) are pathological conditions characterized by chronic inflammation that is primarily the consequence of dysregulation of the immune response, occurring in patients with appropriate genetic predispositions.<sup>1,2</sup> Previous investigations have clearly suggested the association between thyroid diseases and ulcerative colitis (UC): epidemiological studies have demonstrated an increased prevalence of hyperthyroidism (1.34%),<sup>3</sup> while the incidence of thyrotoxicosis was between 0.82%<sup>4</sup> and 3.7%.<sup>5,6</sup> A Canadian population study based on the Manitoba IBD database including 8072 cases of IBD from 1984 to 2003 found a greater percentage of both Crohn's disease (CD) and UC patients having a number of autoimmune or immune-mediated disorders (including arthritis, asthma, bronchitis, psoriasis, and pericarditis) than controls.<sup>7</sup> However, in this study an increased risk for thyroid disease overall was not found. The prevalence of thyroiditis was 0.23% in UC patients and 0.19% in CD (versus 0.15%–0.20% in controls). The aim of our study was to retrospectively assess in our cohort of Italian IBD patients, the co-occurrence of IBD diagnosis and diagnosis of thyroid disorders other than cancer. A population of 909 IBD patients (male 503, 55.33%;

female 406, 44.67%) referred to our Gastrointestinal Unit from 1985 to 2008 was considered for the statistical analysis. A total of 60/909 IBD (6.6%) patients with co-occurrence of IBD diagnosis and diagnosis of thyroid disorders was found. Among these patients, 42/60 (70%) had a diagnosis of goiter (with a prevalence of goiter in our IBD population of 42/909 patients, 4.62%), whereas 18/60 (30%) had a diagnosis of Hashimoto thyroiditis (with a prevalence of thyroiditis in our IBD population of 18/909 patients, 1.98%) (Table 1). If we consider CD and UC patients separately, we found among the UC population 28 cases of thyroid disorders (28/445 UC patients, 6.29%; male 5/28, 17.86%; female 23/28, 82.14%), with 20 cases of goiter (20/445, 4.49%; male 3, 15%; female 17, 85%), and 8 cases of Hashimoto thyroiditis (8/445, 1.8%; male 2, 25%; female 6; 75%). Among CD patients we found 32 cases of thyroid disorders (32/464, 6.89%; male 14/32, 43.75%; female 18/32, 56.25%), with 22 cases of goiter (22/464, 4.74%; male 7/22, 31.82%; female 15/22, 68.18%), and 10 cases of Hashimoto thyroiditis (10/464, 2.15%; male 7/10, 70%; female

3/10, 30%). Three UC female patients with the co-occurrence of IBD and thyroid disorders also had a diagnosis of another immune-mediated disease (Table 2). If we compare data from our study with epidemiological data from European countries<sup>8,9</sup> the prevalence of goiter was quite similar (4.62 in our population versus  $\approx 5\%$  in Europe), while the prevalence of Hashimoto disease in our IBD patients was twice that in the European population (1.98% versus 0.6%–0.8%). The main limit of our study lies in the retrospective nature of the study itself. Large population-based studies are needed to try to clarify the underlying etiology of the coexistence of autoimmune thyroid diseases and IBD.

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**TABLE 1.** Prevalence of Thyroid Disorders Among Our Population of IBD Patients

	IBD (n = 909)	CD (n = 464)	UC (n = 445)
Thyroid disease n (%)	60 (6.6%)	32 (6.89%)	28 (6.29%)
Hashimoto n (%)	18 (1.98%)	10 (2.15%)	8 (1.8%)
Goitre n (%)	42 (4.62%)	22 (4.74%)	20 (4.49%)

**TABLE 2.** Three Female UC Patients with Co-occurrence of IBD and Thyroid Disorders Also Had a Diagnosis of Another Immune-Mediated Disease

Type of IBD	Sex	Thyroid Disorder	Other Immune-Mediated Disorders
UC	F	Hashimoto thyroiditis	Psoriatic arthritis
UC	F	Goiter	Myosites
UC	F	Goiter	Celiac sprue

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