

## **An Italian prospective multicenter survey on patients suspected of having non-celiac gluten sensitivity.**

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#### **Abstract**

#### **BACKGROUND:**

Non-celiac gluten sensitivity (NCGS) is still an undefined syndrome with several unsettled issues despite the increasing awareness of its existence. We carried out a prospective survey on NCGS in Italian centers for the diagnosis of gluten-related disorders, with the aim of defining the clinical picture of this new syndrome and to establish roughly its prevalence compared with celiac disease.

#### ***METHODS:***

From November 2012 to October 2013, 38 Italian centers (27 adult gastroenterology, 5 internal medicine, 4 pediatrics, and 2 allergy) participated in this prospective survey. A questionnaire was used in order to allow uniform and accurate collection of clinical, biochemical, and instrumental data.

#### ***RESULTS:***

In total, 486 patients with suspected NCGS were identified in this 1-year period. The female/male ratio was 5.4 to 1, and the mean age was 38 years (range 3-81). The clinical picture was characterized by combined gastrointestinal (abdominal pain, bloating, diarrhea and/or constipation, nausea, epigastric pain, gastroesophageal reflux, aphthous stomatitis) and systemic manifestations (tiredness, headache, fibromyalgia-like joint/muscle pain, leg or arm numbness, 'foggy mind,' dermatitis or skin rash, depression, anxiety, and anemia). In the large majority of patients, the time lapse between gluten ingestion and the appearance of symptoms varied from a few hours to 1 day. The most frequent associated disorders were irritable bowel syndrome (47%), food intolerance (35%) and IgE-mediated allergy (22%). An associated autoimmune disease was detected in 14% of cases. Regarding family history, 18% of our patients had a relative with celiac disease, but no correlation was found between NCGS and positivity for HLA-DQ2/-DQ8. IgG anti-gliadin antibodies were detected in 25% of the patients tested. Only a proportion of patients underwent duodenal biopsy; for those that did, the biopsies showed normal intestinal mucosa (69%) or mild increase in intraepithelial lymphocytes (31%). The ratio between suspected NCGS and new CD diagnoses, assessed in 28 of the participating centers, was 1.15 to 1.

#### ***CONCLUSIONS:***

This prospective survey shows that NCGS has a strong correlation with female gender and adult age. Based on our results, the prevalence of NCGS seems to be only slightly higher than that of celiac disease