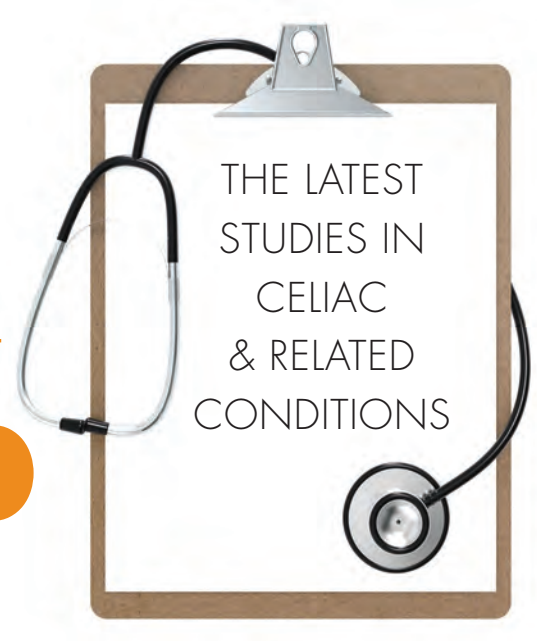
Research Roundup



How long after starting a strict gluten-free diet can we determine intestinal lesions due to celiac disease?

The aim of the study was to evaluate a novel criterion to compare duodenal (first section of the small intestine) histology in CD patients after six months and two years on a gluten-free diet.

The study was designed as a cross-sectional study of 200 patients with biopsy-confirmed celiac disease who were on a gluten-free diet for six months (group A, n = 100) and 24 months (group B, n = 100).

Nineteen patients were excluded due to inadequate adherence to the gluten-free diet and another 23 patients were excluded, as they were unwilling to undergo a follow-up endoscopy and did not comply with the necessary criteria. Endoscopy with a duodenal biopsy, serological assays, and clinical evaluation were performed and compared with baseline data in the remaining 58 patients (20 patients in group A and 38 patients in group B).

The results:

- A complete histological recovery was found in 47.4 percent of patients in group B compared to 30 percent in group A ($p = 0.026$).
- A partial histological recovery was reported in seven (35 percent) and 11 (28.9 percent) patients in groups A and B, respectively.
- Any changes in mucosal histology after starting a gluten-free diet was observed in 35 percent of patients in group A and 23.7 percent in group B.
- Serological assessment and endoscopic appearance normalized in 78.9 percent versus 75 percent in group B and 68.4 percent versus 65 percent in group A, respectively. However, this improvement did not reach statistical significance ($p > 0.05$).

In conclusion, the results of this study show that histological recovery in patients with biopsy-proven celiac disease is slow and does not correlate with symptomatic improvement. Histological improvementis achieved by staying on a gluten-free diet long-term; especially in older patients.

Reference:
The value of a biopsy in celiac disease follow up: assessment of the small bowel after 6 and 24 months treatment with a gluten-free diet. *Revista Española de Enfermedades Digestivas.* 2019 Dec 27;112. Sadeghi, A., Rad, N., et al.

Celiac disease and lymphocytic gastritis

Lymphocytic gastritis (LG) most commonly occurs in association with gluten-sensitive enteropathy, H. pylori gastritis, non-steroidal anti-inflammatory drugs (NSAIDs), and microscopic colitis.

A newly published study addresses the issue whether gluten-associated lymphocytic gastritis is different from that observed in patients with infection-associated, mainly H. pylori, and drug-induced gastritis from NSAIDs.

In conclusion, the results of this study show that histological recovery in patients with biopsy-proven celiac disease is slow and does not correlate with symptomatic improvement. Histological improvementis achieved by staying on a gluten-free diet long-term; especially in older patients.

LG is a histopathologic pattern of gastric injury characterized by intraepithelial lymphocytosis of the surface foveolar epithelium and chronic inflammation in the lamina propria. *Translation: there is an increase of lymphocytes (a type of white blood cell) within the cells covering the outer surface of the stomach, and chronic inflammation within the lamina propria.*

Cases of LG were collected from a single clinical institution in the period between August 2011 and September 2017. Twenty-seven cases of LG were identified in the six-year period. Gluten-sensitive enteropathy was identified as the main reported cause of LG followed by NSAID injury. Cases of LG associated with gluten-sensitive enteropathy are predominant in the antral portion of the stomach, those associated with H. pylori are predominant in the body portion of the stomach, and those occurring in NSAID injury predominantly show pangastritis (entire stomach lining).

Glandular micro abscesses are observed in all cases of LG associated with H. pylori, but not in the cases of gluten-sensitive enteropathy or NSAID injury.

It was concluded that determining the topography and morphology of lymphocytic gastritis may point to the cause of injury, allowing for proper treatment of the underlying disease.

Reference:
Topography, morphology, and etiology of lymphocytic gastritis: a single institution experience. *Virchows Archive.* 2020 Jan 2. Yip, RHL., Lee, LH., et al.

Psychiatric manifestations of celiac disease

Psychiatric disorders are amongst the most common extra-intestinal manifestations of celiac disease. However, the relationship between celiac and various psychiatric disorders is not well recognized.

An online literature search using PubMed was conducted, the prevalence data for both celiac and psychiatric disorders was extracted from 37 eligible articles.

Amongst the celiac population compared to healthy controls, a significant increase in risk was detected for:

- Autistic spectrum disorder
- Attention deficit hyperactivity disorder
- Depression
- Anxiety
- Eating disorders

No significant differences were found for bipolar disorder or schizophrenia.

It was concluded that celiac disease is associated with an increased risk of depression, anxiety, eating disorders as well as autistic spectrum disorder and attention deficit hyperactivity disorder. More research is required to investigate specific biological explanations as well as any effect of gluten-free diet.

Reference:
Psychiatric Manifestations of Coeliac Disease, a Systematic Review and Meta-Analysis. *Nutrients.* 2020 Jan 4;12(1). Clappison, E., Hadjivassiliou, M., Zis, P.

Glandular micro abscesses are observed in all cases of LG associated with H. pylori, but not in the cases of gluten-sensitive enteropathy or NSAID injury.

It was concluded that determining the topography and morphology of lymphocytic gastritis may point to the cause of injury, allowing for proper treatment of the underlying disease.

Celiac disease can be associated with various eye diseases

A thorough review of the literature was performed using PubMed to identify articles about serrated polyposis syndrome. The search was performed using the search string: ("celiac disease" OR "coeliac disease") AND ("ocular manifestations" OR "eye" OR "orbitopathy" OR "uveitis" OR "neuro-ophthalmic manifestations").

Several ocular symptoms and disorders have been associated with celiac and are a result of defective intestinal absorption and immunological mechanisms.

These include:

- Nyctalopia (the inability to see in dim light or at night)
- Dry eye
- Cataract
- Thyroid-associated orbitopathy
- Uveitis
- Central retinal vein occlusion
- Neuro-ophthalmic manifestations

In addition, celiac-related ocular disease may represent the first manifestation of celiac disease.

Reference:
Ocular manifestations in celiac disease: an overview. *International Ophthalmology.* 2020 Jan 8. Fousekis, FS., Katsanos, A., et al.

Celiac disease and recurrent aphthous stomatitis (canker sores) in children

A recently published study analyzes the connection between celiac disease and hematologic abnormalities in children with recurrent aphthous stomatitis (RAS).

Medical records of patients diagnosed with RAS were reviewed for the presence of hematologic abnormalities (hemoglobin level, mean corpuscular volume, ferritin, vitamin B12, and folic acid concentration) and celiac. The study group included 108 children with RAS and 57 healthy children who were evaluated for hematologic abnormalities upon routine evaluation.

The frequency of a family history of RAS was significantly higher in the RAS group compared to the control group (34.2 percent versus 7percent, respectively; $p < 0.001$). Hematologic abnormalities were detected in 32.4 percent of patients in the RAS group and 10.5 percent of the control group ($p = 0.02$). The prevalence of iron deficiency anemia was significantly higher in the RAS group ($p = 0.037$). Three (2.7 percent) of patients with RAS were diagnosed with celiac, which is a significantly higher frequency than that observed in healthy children ($p < 0.01$; OR 6.03, 95% CI). These children had mild malnutrition, iron deficiency, and iron deficiency anemia.

The frequency of a family history of RAS was significantly higher in the RAS group compared to the control group (34.2 percent versus 7percent, respectively; $p < 0.001$).

In conclusion, children with RAS should be evaluated for nutritional status and hematological indices, and in the case of hematological abnormalities and malnutrition, screening for celiac should be considered.

Reference:
Celiac disease and hematological abnormalities in children with recurrent aphthous stomatitis. *Pediatrics International.* 2020 Jan 19. Yılmaz, S., Tuna Kırsaçlıoğlu, C., Şaylı, TR. SGF

As always, consult a medical professional before beginning any new protocol.

ABOUT THE AUTHOR:
***Dr. Alexander Shikhman**, founder of the Institute for Specialized Medicine, is board certified in internal medicine and rheumatology. Dr. Shikhman also launched Gluten-Free Remedies™, a line of all natural supplements which help treat the complications that can arise from celiac disease. Find Dr. Shikhman at **ifsmed.com** and **glutenfreeremedies.com**.*