Celiac Disease: Recognizing and Managing a Multisystem Disorder

ARCADIA UNIVERSITY
FOUNDED 1853

Continuing Medical Education Poster

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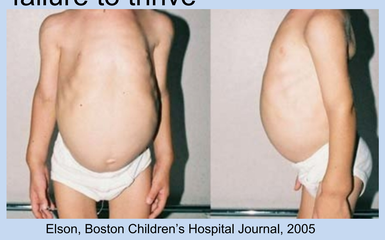
Objectives

Over the last 40 years, the face of celiac disease (CD) has shifted from exclusively intestinal and often malnourished, to include symptoms spanning a range of systems. CD is treatable, but in order to properly screen and diagnose, clinical vigilance is necessary.

- Identify historical factors and clinical findings that indicate screening
- Choose an appropriate diagnostic testing pathway
- Describe clinical management strategies for extraintestinal symptoms

Introduction

- Classic presentation: children with diarrhea, abdominal distension, malabsorption, and failure to thrive



Elson, Boston Children's Hospital Journal, 2005

- Emergence of serological testing in 1980s – 90s increased screening and diagnosis
- Now, nonclassical presentations 5-6 x more common
- Extraintestinal presentations = longer time to diagnosis
- 2.3 months v. 3.5 years
- 90% US cases undiagnosed
- Pathophysiology: Autoimmune enteropathy - Ingested gluten disassembles tight junctions, binds to HLA encoded cell surface proteins ➡ T and B lymphocyte activation and producing anti-gliadin and tTG Abs ➡attack enterocytes, impairing absorption
- Predisposition: Down syndrome, Turner syndrome, Williams syndrome, type 1 diabetes, autoimmune thyroiditis, selective IgA deficiency, 1° relative with CD
- HLA-DQ2 or -DQ8 in ~ 95%
- W>M
- Caucasian > AA, Hispanic

Intestinal Symptoms

- Mild presentation most common: constipation, diarrhea, dyspepsia and/or nausea.
- PE: Tympanic abdomen, evidence of weight loss
- DDx: IBS, IBD, infectious, SIBO, medication reaction (Sartans)
- Suspected IBS ➡screened for CD
- Overweight/obesity does not r/o CD

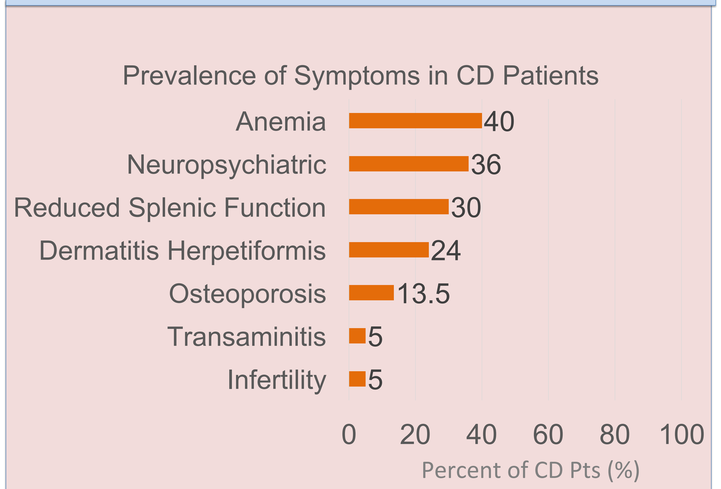
Hematologic

Anemia: Microcytic, due to malabsorption of iron

- Iron supplementation: May need alternative forms
- Refractory IDA ➡screen for CD

Functional hyposplenism: Due to antibody deposition

- Asymptomatic, anemia, thrombocytosis, fatigue, bleeding, frequent infections
- Dx: peripheral smear ➡Howell-Jolly bodies contrast microscopy ➡pitted RBCs
- Management: pneumococcal vaccination, annual flu
  - Uncomplicated CD: 1 dose of PCV20 or PCV15 recommended, 1 dose of PPSV23 considered at 1 yr
  - CD + hyposlenism: 1 dose PCV20 or PCV15 and 1 dose of PPSV23



Osteoporosis

- Sx: fractures, kyphosis
- Idiopathic low BMD ➡screen for CD
- Assess on dx and annually: Ca, vit. D, PTH, ALP
- DEXA on dx in elderly/postmenopausal or fracture hx, severe malabsorption, longstanding sx
- Tx: GFD, Ca and vit. D +/- bisphosphonates

OB/GYN

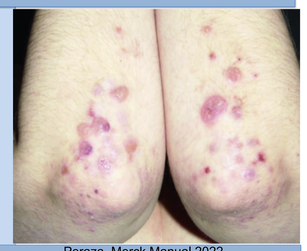
- A/w delayed menarche, early menopause, infertility, intrauterine growth restriction and miscarriage

Transaminitis

- Asymptomatic or fatigue/ malaise, cirrhosis if untreated
- Mild – moderate levels, AST: ALT < 1; Tx: GFD, monitor
- Autoimmune hepatitis ➡screen for CD

Dermatitis Herpetiformis

- Symmetrical, polymorphic lesions; erythema, urticarial plaques, and papules
- Extensor surfaces, shoulders, buttocks, sacral region, neck, face, scalp
- Untreated ➡bullous pemphigoid
- Often sole symptom, DDx: eczema
- Tx: GFD, dapsone, steroids, sulfones



Peraza, Merck Manual 2022

Neuropsychiatric

Peripheral neuropathy: Numbness, paresthesias, pain; distal ➡ proximal; DDx: DM neuropathy

Ataxia: Poor control of extremities, poor coordination, gait instability, speech and vision dysfunction; Tx: IVIG if refractory to GFD

Epilepsy: Complex partial sz most common, occipital or temporal focus; Tx= GFD, folate, antiepileptics

Psych: A/w anxiety, depression, panic disorder, schizophrenia

Diagnostic Tools

Serology

- TTG-IgA + total IgA
- If IgA deficient, need IgG (TTG/DGP IgG)
- If already on GFD: genetic testing then gluten challenge

➡

Biopsy

- Intraepithelial lymphocytes, crypts, villi
- Children and adults with contraindication can avoid biopsy with strong serological evidence

CME Questions

1. What is the most common cutaneous manifestation of CD?
a. Eczema b. Dermatitis herpetiformis c. Psoriasis d. Erythema nodosum
2. CD impacts the vaccination schedule of which vaccine(s)?
a. Rotavirus b. Flu and COVID c. Meningococcal and Pneumococcal d. Shingles
3. Which presentation should prompt CD screening?
a. Anemia unresponsive to oral supplementation b. Osteopenia in a woman over 65 years old c. Elevated hemoglobin and abdominal pain d. Peripheral neuropathy in the setting of diabetes

Answers: B, C, A

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