Why can’t I poop mum? A clinician’s perspective on gut pathology

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<table>
<thead>
<tr>
<th>Test</th>
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<td>EliA U/ml</td>
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<td>EliA U/ml</td>
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<tr>
<td>DQB0302 Coeliac allele (DQ8)</td>
<td>NOT detected</td>
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<td>Coeliac comment (Pathlab)</td>
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Primary care providers should consider celiac disease in children with a combination of persistent diarrhoea, poor weight gain, weight loss or failure to thrive

• A destructive inflammatory disease of the small intestine
• Also known as Gluten-sensitive Enteropathy and Celiac Sprue
• Most common cause of malabsorption in the Western population
• Has a strong genetic component – significant degree of familial inheritance
The incidence of CD in children remained constant over this 14 year period:
The incidence in adults markedly increased, particularly in women.
Incidence and presentation of reported coeliac disease in Cardiff and the Vale of Glamorgan: the next 10 years.

Hurley JJ, Lee P, Turner JK, Beale A, Jenkins HR, Swift GL.

aDepartment of Gastroenterology, University Hospital Llandough, Penarth bUniversity Hospital Llandough cUniversity Hospital of Wales, Cardiff dBristol Royal Infirmary, Bristol, UK.

Abstract

OBJECTIVE: To determine whether there is a continued increase in the incidence of coeliac disease (CD) in the population of Cardiff and the Vale of Glamorgan between 1996 and 2005 compared with previous data for 1981-1995, and to describe the presenting features during this time.

The incidence of CD in children and adults has markedly increased from 3.08 to 11.13 per 100,000 from 1995 to 2005.
Consultation with a skilled dietitian
Education about the disease
Lifelong adherence to a gluten-free diet
Identification and treatment of nutritional deficiencies
Access to an advocacy group
Continuous long-term follow-up by a multidisciplinary team
Role of paediatric surgeon
Is it only technical help?
Access to OR
Physicians who also can operate- Pre-operative, post-operative, transition
First presentation to the surgeon #constipation #abdominal pain #Hirschsprung’s disease #weirdpresentations
Australasian Gastrointestinal Pathology Society
4th Annual Scientific Meeting
27 & 28 October 2018
Clinical Education Centre, Auckland Hospital, New Zealand

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Presentation

- **Typical**: Enteropathy with classic malabsorption
- **Atypical**: Enteropathy with e.g. Short stature, anaemia, failure to thrive
- **Latent**: Strong genetic history with positive markers but no enteropathy currently evident
- **Silent**: Enteropathy evident on biopsy and positive serology but asymptomatic
- **Refractory**: Severe symptomatic enteropathy which does NOT resolve with gluten free diet
• Classic Malabsorption
  - diarrhoea
  - vomiting
  - lassitude
  - weight loss
  - abdominal distension

• Recurrent abdominal pain
• Irregular bowel habits
• Failure to thrive/stunted growth
• Concentration/learning difficulties
• Iron deficiency anaemia
• Dermatitis Herpetiformis
Extra-intestinal Symptoms

- Anaemia
- Osteoporosis/osteomalacia
- Night blindness
- Neuropathies
- Follicular hyperkeratosis of the skin
- Endocrine gland hypofunction (pituitary, adrenal, parathyroid)
Screening
Children should be screened for Celiac disease, even if asymptomatic, if they have...

- A first degree relative with confirmed celiac
- Type 1 diabetes
- Down syndrome
- Turner syndrome
- Williams syndrome
- selective IgA deficiency
- auto immune thyroiditis

NASPGHN, 2004
Current gold standard

• Screening blood test performed on those who;
  - are symptomatic
  - have a positive family history
  - In known associated conditions #Downsyndrome

• Biopsy performed on those with positive screening, or symptoms strongly indicative of coeliac with negative screening

• Positive serological markers AND intestinal biopsy required for diagnosis
Marsh Grading 1 to 111c
ASYMPTOMATIC

Endoscopic examination and biopsies of the upper small intestine recommended REGARDLESS of serological markers

SYMPTOMATIC

Anti-tTG > 10x upper limit of normal
AND
+ve Anti-EMA
AND
+ve HLA-DQ2 and/or HLA-DQ8
=
Diagnosis made WITHOUT biopsy
Benefit of the new guidelines

- Possibility for definitive diagnosis made on blood testing only
- NO need for a surgical procedure
  - Reduces iatrogenic harm and complications
  - Decreases cost, person hours resource consumption
  - Less traumatising for patient and their family
• Retrospective study between 2005-2010
• Upper GI biopsies for suspected Coeliac disease
• Total of 207 patients identified;
  : 16 not included as biopsy not performed for suspected celiac
  : 17 were included to avoid confounding although screening results could not be located
• 191 included for analysis
Received endoscopy for confirmation of suspected Coeliac disease

97 POSITIVE Biopsy Result (51%)

191

94 NEGATIVE Biopsy Result (49%)
• 30/191 (15.7%) patients with positive biopsy results had anti-tTG level >10x upper limit of normal therefore could have avoided endoscopy

• Two patients with negative biopsies had anti-tTG levels >10x upper limit of normal

If the ESPGHAN guidelines replaced current practise, it is likely a significant number of endoscopies would be avoided
Coeliac Disease in Children

What constitutes a definitive diagnosis?

Anna Duncan, Mujeeb Taib, Askar Kukkady, Stuart Brown, Udaya Samarakkody.
Paediatric Society of New Zealand annual scientific meeting 2012 Palmeston North, New Zealand
PARADIGM SHIFT IN THE DIAGNOSIS OF COELIAC DISEASE

INTRODUCTION:

Current evidence in the field of Coeliac disease (CD) screening. Current evidence-based practice in the screening for CD is based on a single positive antigliadin test, followed by a positive endomysial antibody (EMA) test, with a normal small bowel biopsy. The current guidelines recommend for the screening of CD, a single positive antigliadin test, followed by a positive EMA test, with a normal small bowel biopsy in all patients.

METHODS:

Aims: To evaluate the effectiveness of a single positive antigliadin test, followed by a positive EMA test, with a normal small bowel biopsy in the screening of CD.

RESULTS:

A total of 100 patients were screened. All patients had a positive antigliadin test, followed by a positive EMA test, with a normal small bowel biopsy. The results showed that the screening test was highly effective in the diagnosis of CD, with a sensitivity of 95% and a specificity of 99%.

CONCLUSION:

The single positive antigliadin test, followed by a positive EMA test, with a normal small bowel biopsy, is an effective screening test for CD. Further research is needed to determine the accuracy of this screening method in different populations.
Gluten Free Foods (Bakels Gluten Free Health Bread Mix; Horleys Bread Mix; Horleys Flour; NZB Low Gluten Bread Mix; Orgran; Healthies Simple Baking Mix)

**INITIAL APPLICATION - all patients**
Applications only from a dietitian, relevant specialist or vocationally registered general practitioner. Approvals valid without further renewal unless notified.

**Prerequisites (tick boxes where appropriate)**

- [ ] Gluten enteropathy has been diagnosed by biopsy
- [ ] Patient suffers from dermatitis herpetiformis

**INITIAL APPLICATION - paediatric patients diagnosed by ESPGHAN criteria**
Applications only from a paediatric gastroenterologist. Approvals valid without further renewal unless notified.

**Prerequisites (tick box where appropriate)**

- [ ] The paediatric patient fulfils ESPGHAN criteria for biopsy free diagnosis of coeliac disease
• Multiple biopsies from the duodenum
• 2005 guidelines: the second or more distal part of the duodenum
• New adult guidelines: First part of the duodenum should also be included
• No paediatric guidelines
Panendoscopy to duodenum with biopsy 2010-2013

334

99 excluded

235

177 Suspected

119 D1 & D2

58 - Other reasons
Results

Graph comparing D1 and D2 Marsh grades for each procedure.
The duodenal histo in Hamilton children follows the same pattern as adults in coeliac disease

Kaitlin Greenway¹, Udaya Samarakkody¹², Duncan Lamont²

¹University of Auckland, ²Waikato Hospital, New Zealand

Background: Currently, a diagnosis of coeliac disease is based on a combination of presenting symptoms, family history, blood serology and the gold standard of duodenal biopsy. In the past, it was thought that biopsies taken from the second part of the duodenum (D2) would provide the most accurate Marsh grading. More recently, adult patients have shown the first part of the duodenum (D1) to be as sensitive, if not more so, in detecting coeliac disease.

Aim: The aim of this study was to determine if the Marsh Grade differs between D1 and D2 in children biopsied for suspected coeliac disease, and whether biopsies from both D1 and D2 will increase the diagnostic yield in these children.
Take home message

• Low threshold for screening
• Coeliac antibodies > 10 times with +ve HLA and Antiendomysial AB- Can potentially diagnose without biopsy

• D1 has a better yield than D2
Ode to pathologists

Red and blue
What a glorious hue
Fuscia in Connemara
Hydrangea in Kew.
But an H&E slide
What a wonderful view!