Australasian Gastrointestinal Pathology Society
4th Annual Scientific Meeting
27 & 28 October 2018
Clinical Education Centre, Auckland Hospital, New Zealand
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Why can’t I poop mum? A clinician’s perspective on gut pathology

Udaya Samarakkody
Paediatric surgeon and Paediatric Urologist
Waikato Hospital, Hamilton
University of Auckland, NZ

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Exam type (Please tick)

X-RAY ✓	PORTABLE	US	CT	INTERVENTIONAL	FLUORO	NUC	MED	MAMMO	BONE DENS (BOP only)	MRI (Waikato)

Allergies or previous reactions (Please State)

Examination required: ~~Uts Scan g tidy~~

Result of accident? YES / NO

ACC No:

Date of injury:

Pregnant YES NO

LMP: EDD:

Isolation YES / NO

MRSA, VRE, other:

Disabilities (Please tick)

Interpreter needed YES NO

Language:

Patient weight if < 30Kg or >140Kg

Weight KG:

Transport method (Inpatient)

BED CHAIR WALK C2 IV

Transport nurse required? YES / NO

Bed space:

Interventional cases / CT cases

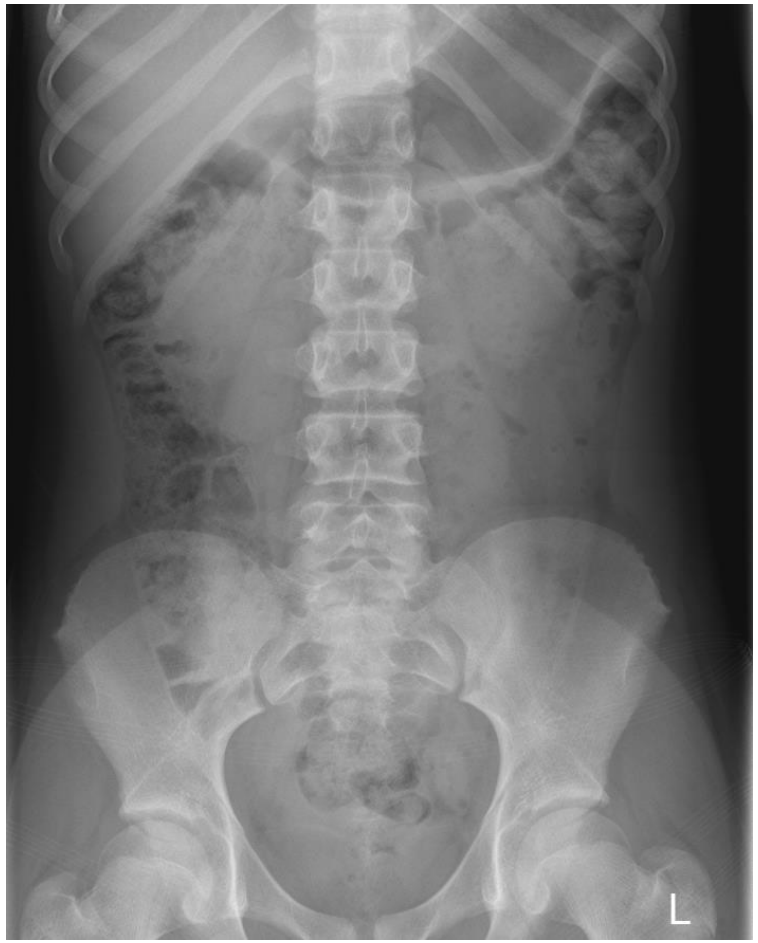
Relevant clinical history: Abdominal x ray supine

Severe urinary accident~~s~~ day & night - as long as [redacted] can remember

Doughy abdomen - Suggestive of faecal loading.

What is the clinical question?

To assess abdominal gas pattern + faecal loading.



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Columns: [6]

Test		1 5710854 *Acknowledged* 03 Apr 18 16:25	2 18A505210500 *Acknowledged* 03 Apr 18 16:25	Ref.Range	Units	Location
Gliadin IgG (Pathlab)		82 H		0-7	EliA U/ml	
TTG IgA (Pathlab)		>128 H		0-7	EliA U/ml	
DQB02 Coeliac allele (DQ2)	DETECTED					Waikato
DQB0302 Coeliac allele (DQ8)	NOT detected					Waikato
Coeliac comment (Pathlab)		see comment				

Primary care providers should consider celiac disease in children with a combination of persistent diarrhoea, poor weight gain, weight loss or failure to thrive

North American Society of Pediatric Gastroenterology, Hepatology, and Nutrition (2004)

- 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

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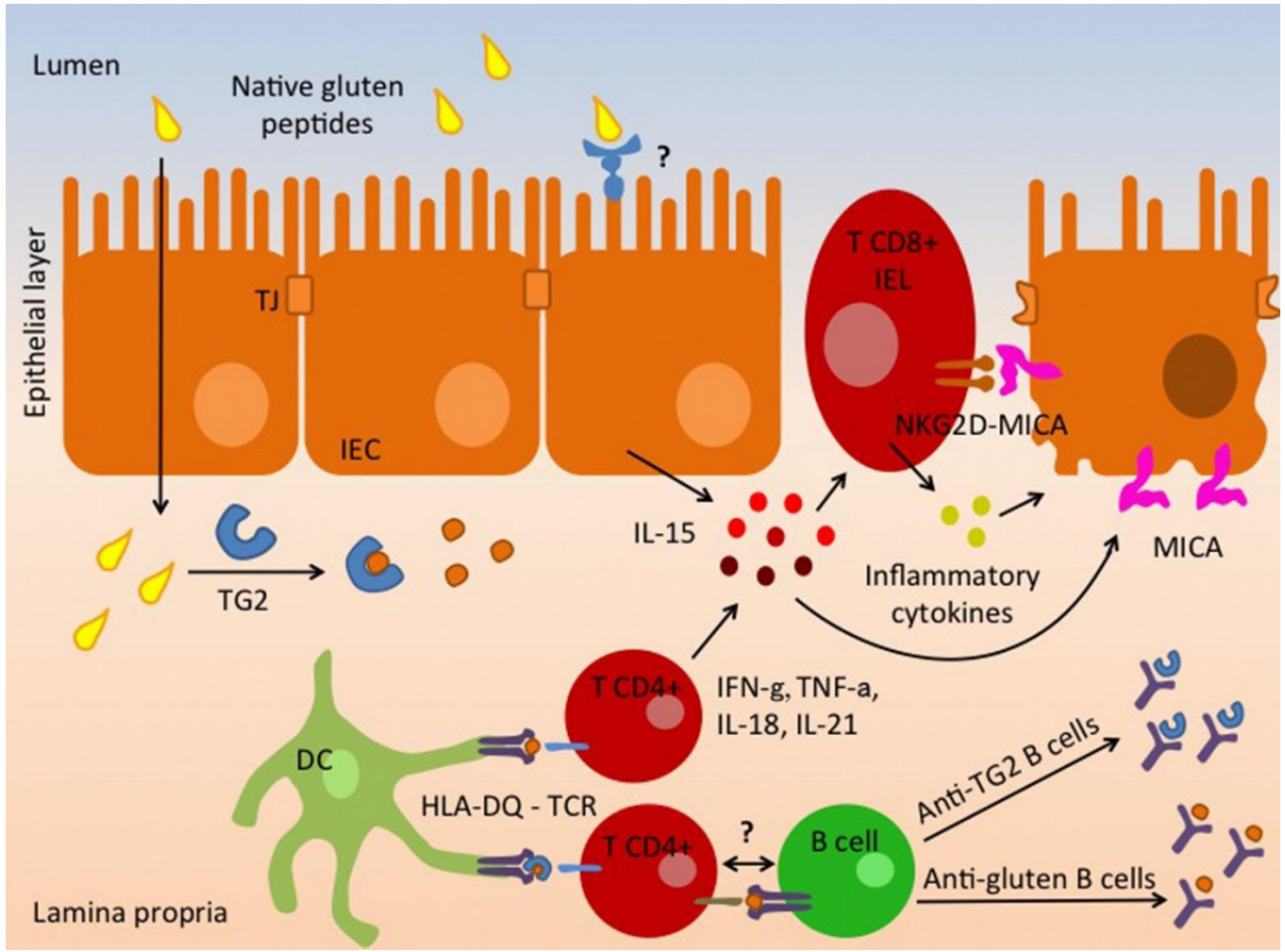

Eur J Gastroenterol Hepatol. 2000 Mar;12(3):345-9.

Incidence and presentation of coeliac disease in South Glamorgan.

Hawkes ND, Swift GL, Smith PM, Jenkins HR.

Department of Gastroenterology, Llandough Hospital, Penarth, South Glamorgan, UK.

Abstract

OBJECTIVE: To determine the incidence and presenting features of coeliac disease and dermatitis herpetiformis in the population of South Glamorgan between 1981 and 1995.

The incidence of CD in children remained constant over this 14 year period:
The incidence in adults markedly increased, particularly in women

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Eur J Gastroenterol Hepatol. 2012 Feb 17. [Epub ahead of print]

Incidence and presentation of reported coeliac disease in Cardiff and the Vale of Glamorgan: the next 10 years.

Hurley JJ, Lee B, 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

National Institute of Health Consensus Development Conference Statement: Celiac Disease 2004

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

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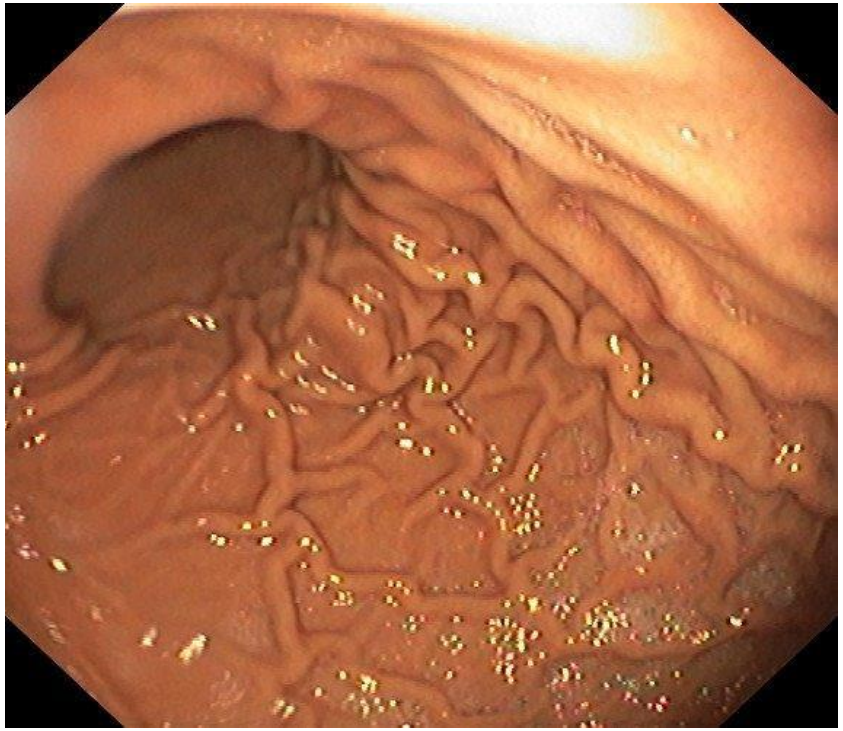

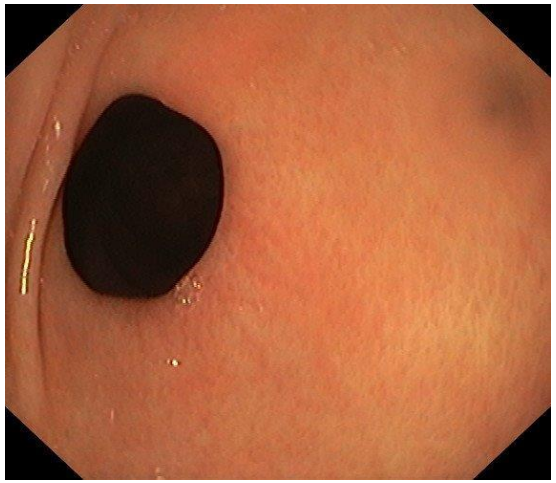

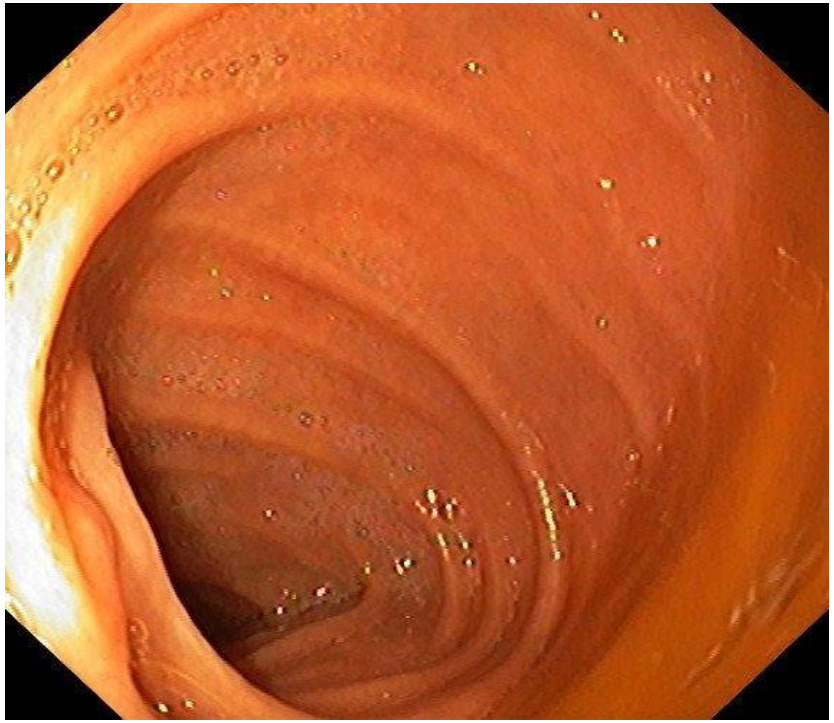

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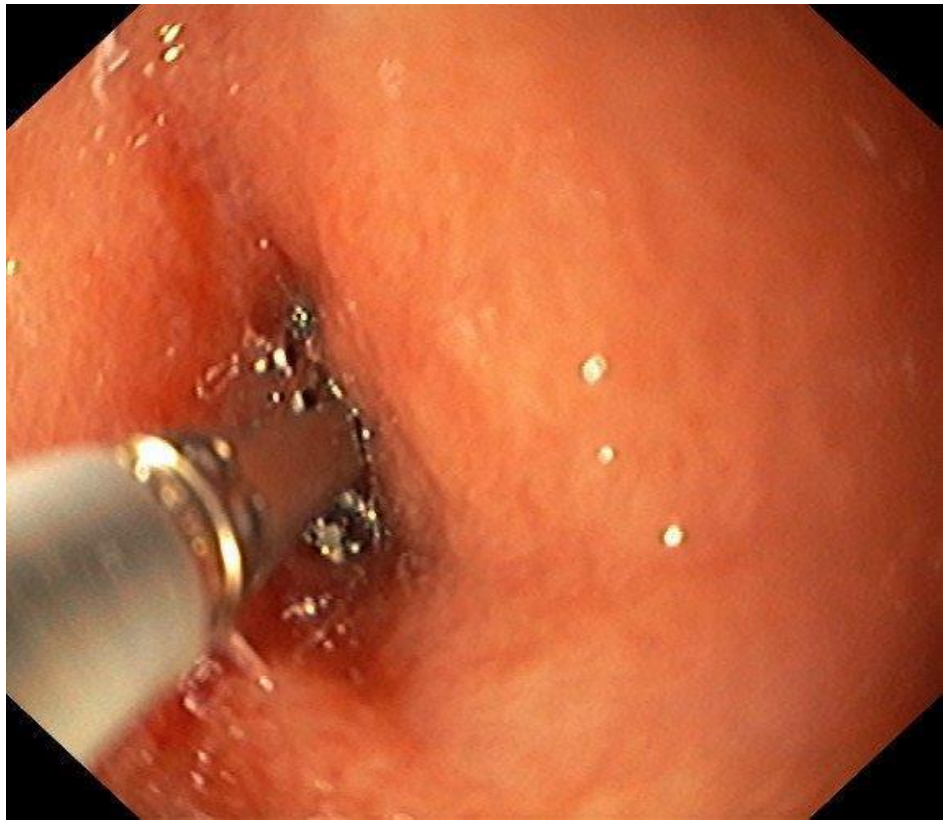

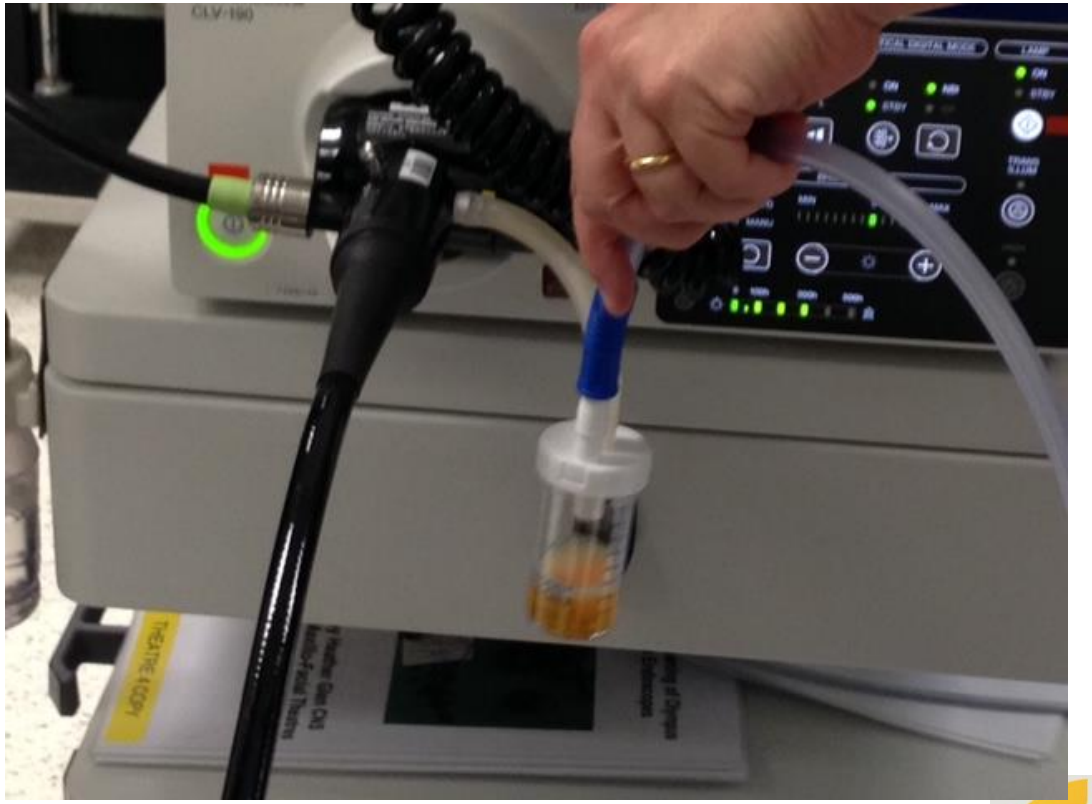

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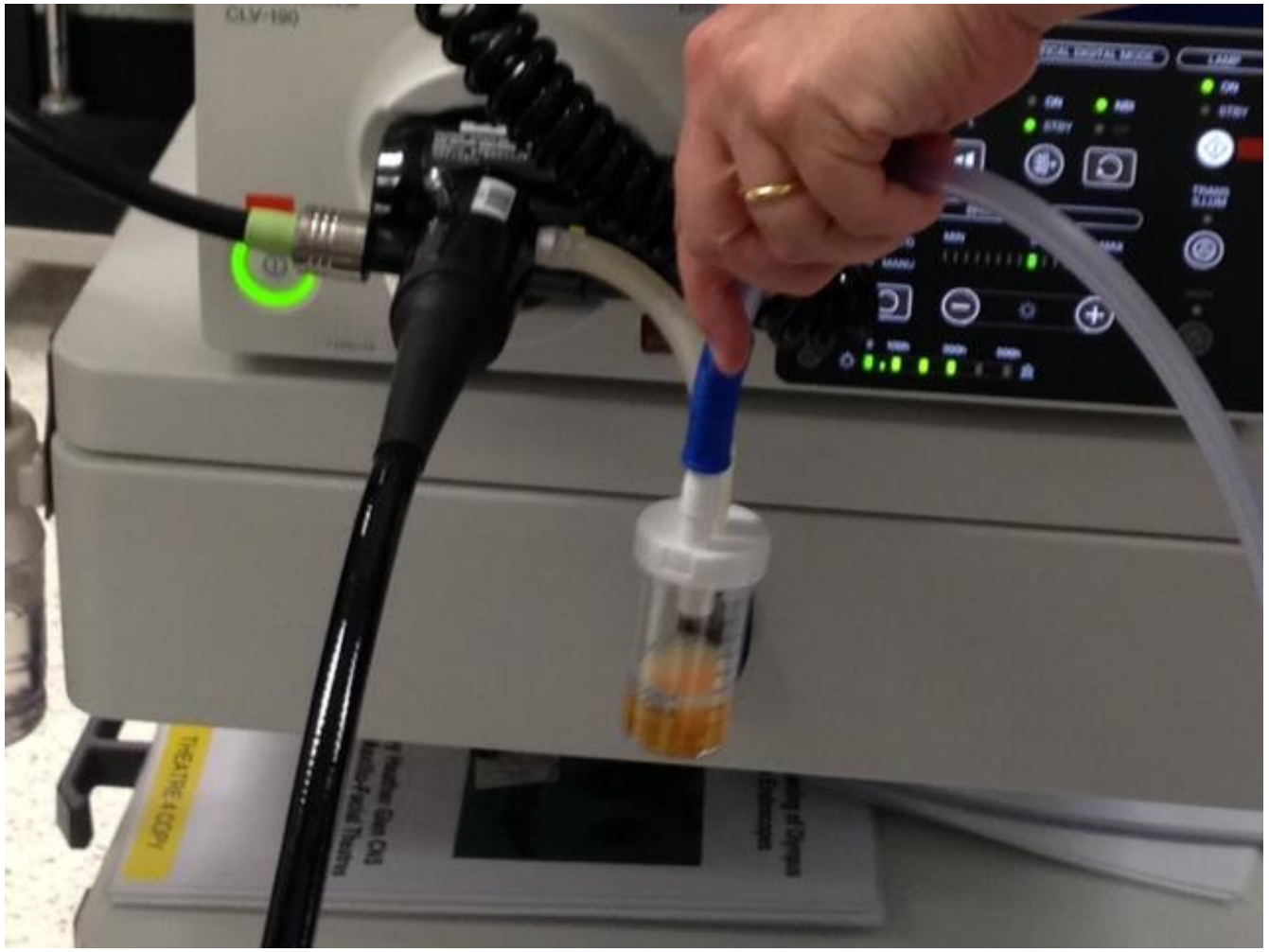

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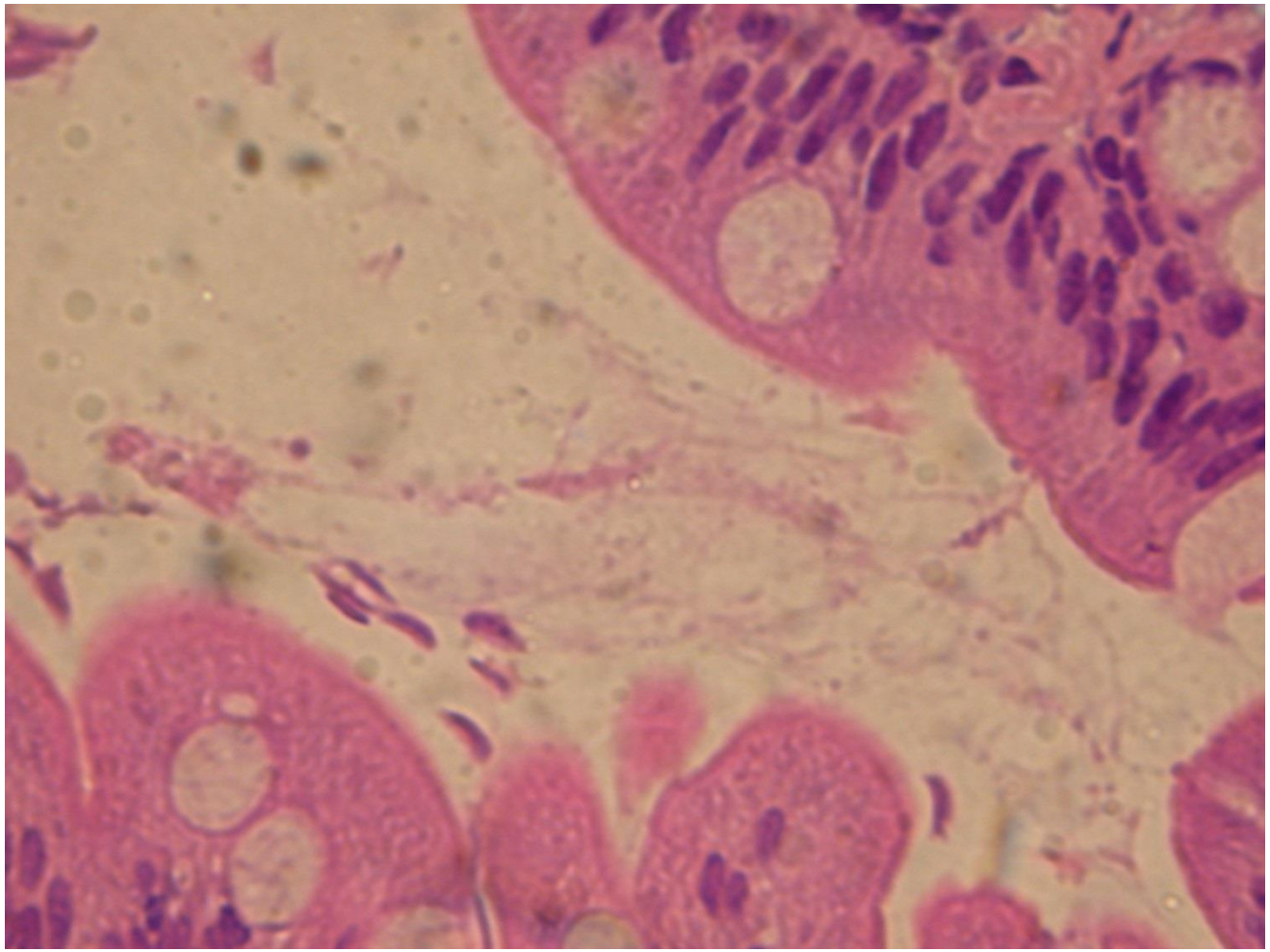

Presentation

- 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

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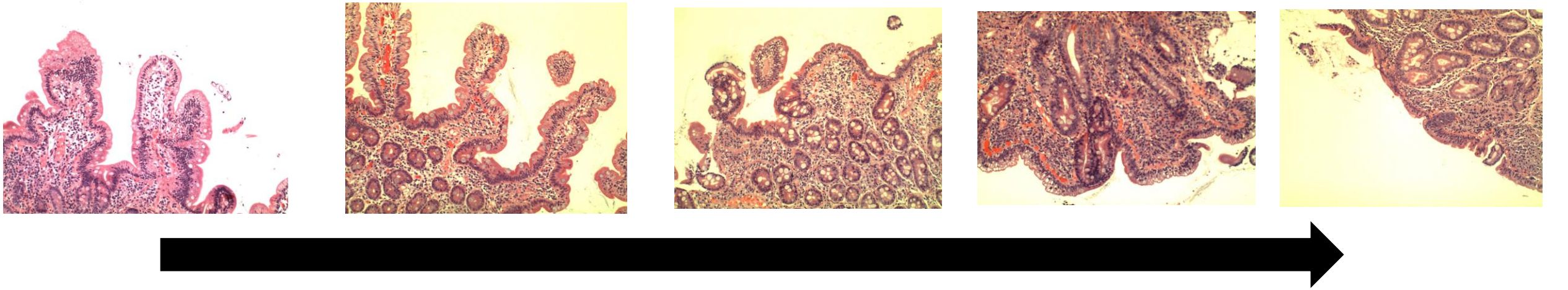
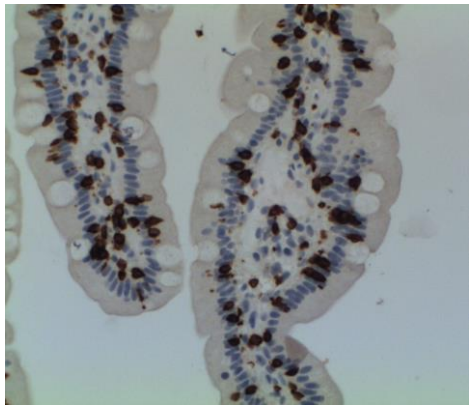


Marsh Grading 1 to 111c



SYMPTOMATIC

Anti-tTG > 10x upper limit of normal

AND

+ve Anti-EMA

AND

+ve HLA-DQ2 and/or HLA-DQ8

=

Diagnosis made WITHOUT biopsy

ASYMPTOMATIC

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

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

Biopsy Results

Received endoscopy for confirmation of suspected Coeliac disease

191

97

POSITIVE Biopsy Result

(51%)

94

NEGATIVE Biopsy Result

(49%)

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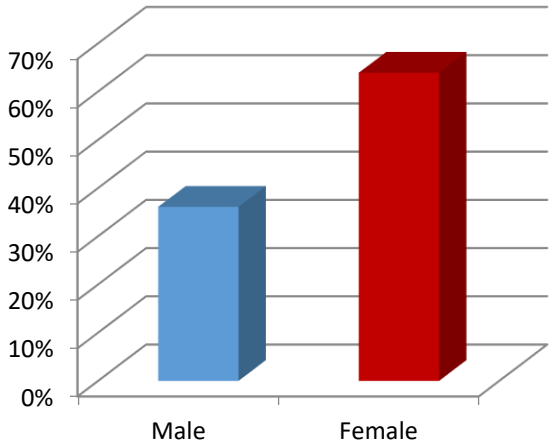

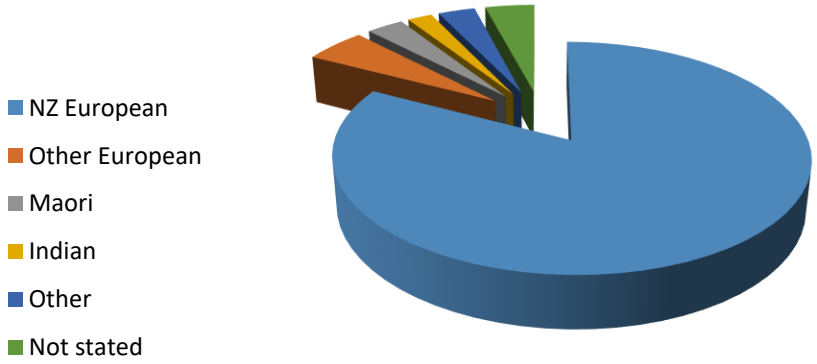

- 30/191 (15.7%) patients with positive biopsy results had anti-tTG level >10x upper limit of normal therefore could have avoided endoscopy
- Two patients with negative biopsies had anti-tTG levels >10x upper limit of normal

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

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The Paediatric Society of New Zealand

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

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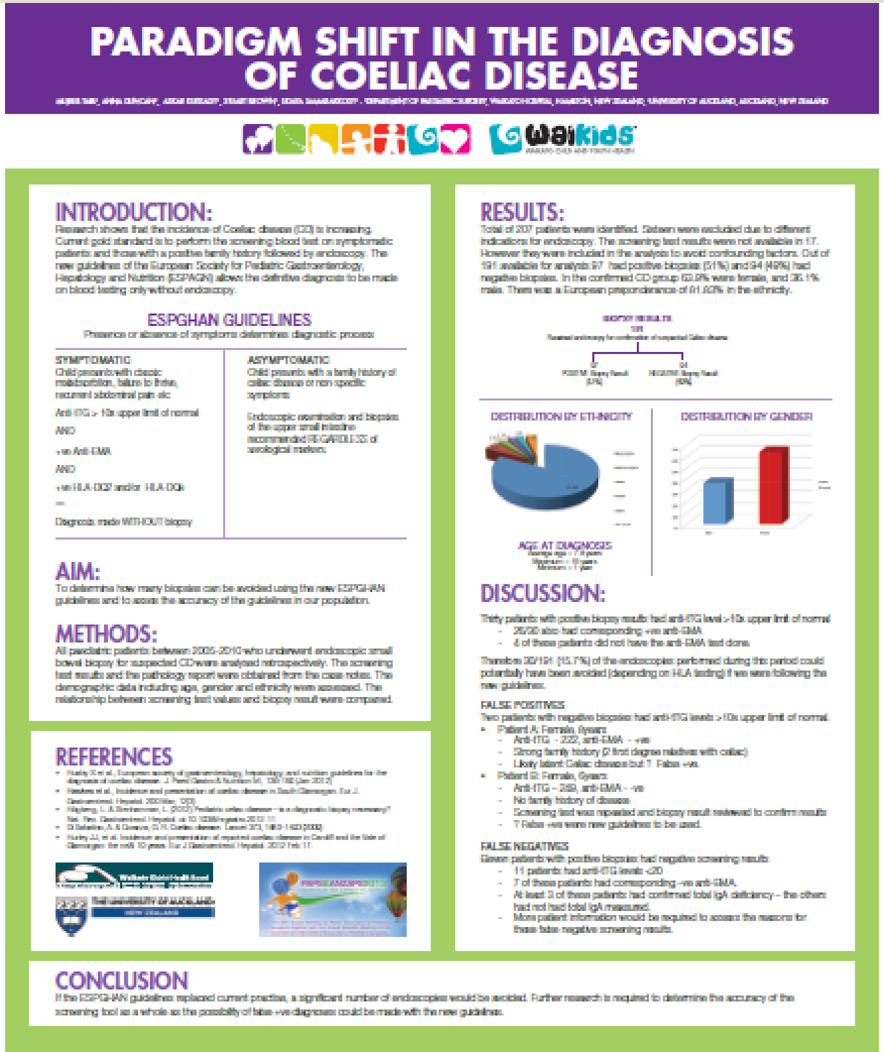

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Gluten Free Foods (Bakels Gluten Free Health Bread Mix; Horleys Bread Mix; Horleys Flour; NZB Low Gluten Bread Mix; Orgran; Healtheries Simple Baking Mix)

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)

- [x] Gluten enteropathy has been diagnosed by biopsy

or

- [ ] Patient suffers from dermatitis herpetiformis

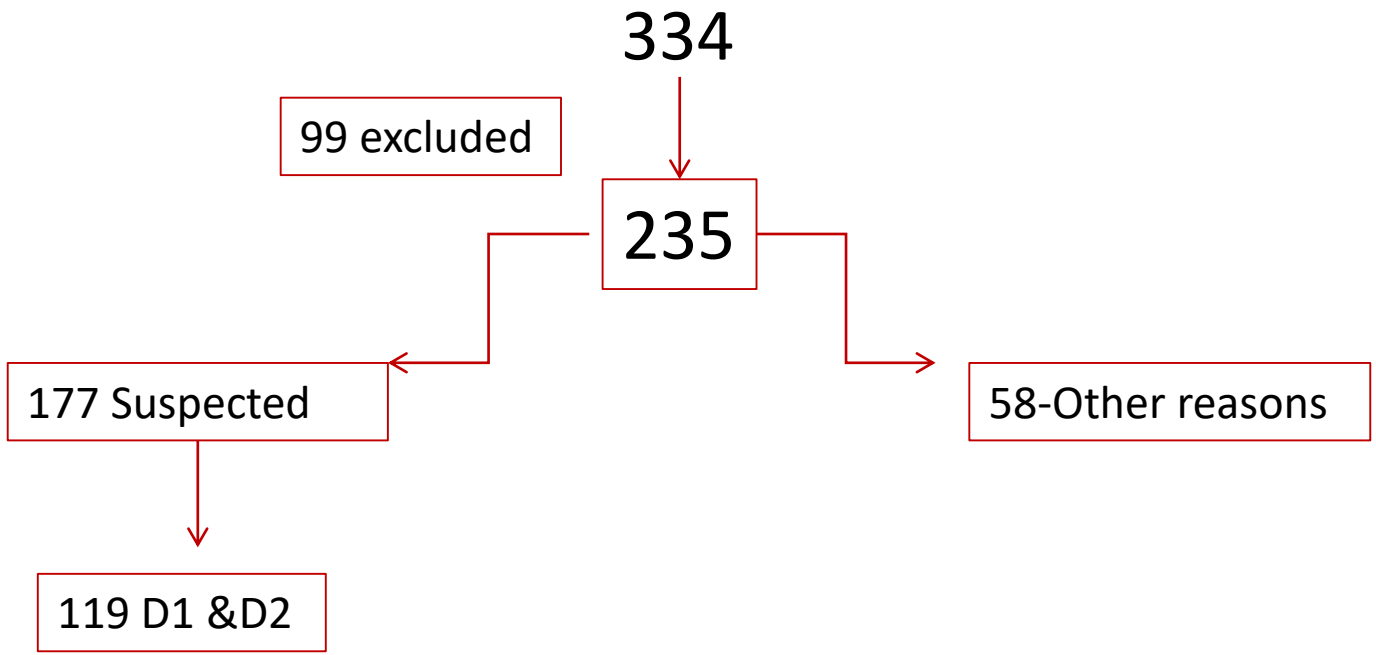
INITIAL APPLICATION - paediatric patients diagnosed by ESPGHAN criteria
Applications only from a paediatric gastroenterologist. Approvals valid without further renewal unless notified.

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



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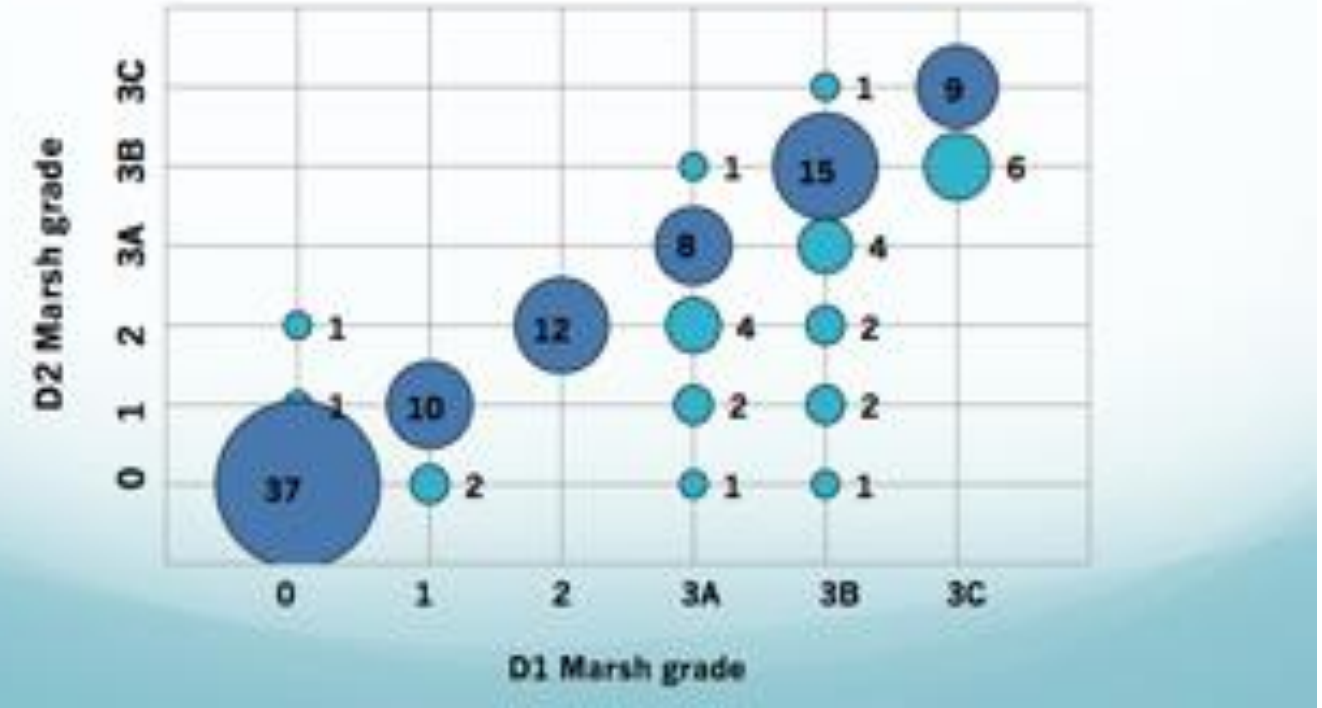
Results

Graph comparing D1 and D2 Marsh grades for each procedure



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NEW ZEALAND SOCIETY OF PATHOLOGISTS ANNUAL SCIENTIFIC MEETING - *HISTO IN HAMILTON*

17-19 October 2014, Hamilton, New Zealand

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The duodenal histo in Hamilton children follows the same pattern as adults in coeliac disease

Kaitlin Greenway[1], Udaya Samarakkody[1,2], Duncan Lamont[2]

[1]University of Auckland, [2]Waikato 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

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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!