Coeliac Disease in 2016: A shared care between GPs and gastroenterologists

Dr Roslyn Vongsuvanh

Ms JM

- 23 year old female
- Born in Australia. Parents from Lebanon.
- Engineering student
- Presents with lethargy
- No GI symptoms
- BG
  - Iron deficient - has intermittent menorrhagia
  - Mother has bloating and IBS but no other significant FHx
  - Avoiding gluten last 6 months because wants to be “healthy”

2. MIRANDA KERR

Avoids gluten as much as possible and also put together this GF **Apple and Banana muffin recipe**

5. VICTORIA BECKHAM

Posh is sens

6. PETE EVANS

ein well and stays super slim b

Vocal Paleo enthusiast, Pete Evans, does not eat any gluten except when making his appearances on popular reality show *My Kitchen Rules*. Pete attributes his altered diet with improving his health and wellbeing, along with weight-loss.

victo

chefpeteevans • 19 months ago

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SUMO DIGEST

Does Ms JM need testing for coeliac disease?

- A) No
  - No GI symptoms. Middle Eastern heritage- likelihood of coeliac disease low
- B) Yes
  - Iron deficiency
  - fatigue

Underdiagnosis of CD

- Coeliac Australia media statement March 2015
  - A national survey of 2,560 people with coeliac disease found 75% had seen their GP at least 3 times with their symptoms before being tested for the condition
  - 48% of respondents stated that the number of GP visits prior to testing was “too many to remember”
  - 1 in 70 Australians have coeliac disease but 4 out of 5 people with coeliac disease remain undiagnosed

Epidemiology

- does not only affect people of Celtic or Northern European descent
- presence of coeliac disease has been confirmed on every continent
- affects at least one per cent of the population mostly Caucasians, Middle Eastern and West Asians

Familial risk

- If Ms JM's mother had coeliac disease, what is her risk of coeliac disease?

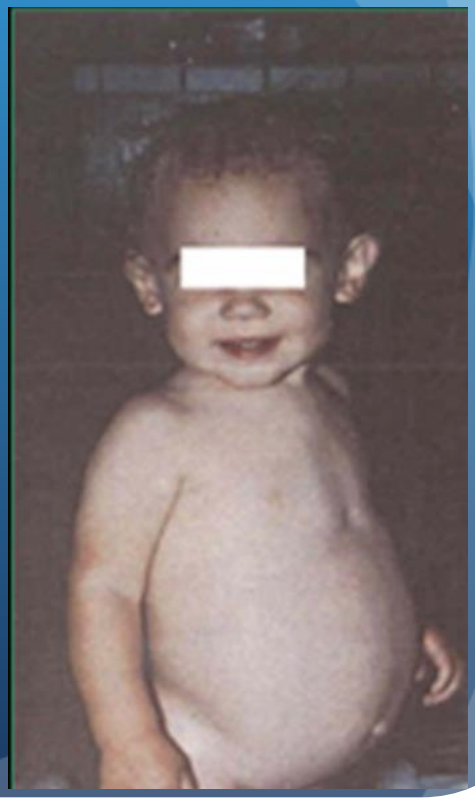
A. 1-5%

A. 10-15%

A. 25-30%

But Ms JM has no symptoms…

- Classic symptoms
  - diarrhea or steatorrhoea, flatulence, abdominal distension and weight loss
  - more common in infants and young children



Presentation of CD in adults

- Atypical symptoms
  - The majority of adults
  - Mild non-specific gastrointestinal complaints: erratic bowel habits, constipation, chronic abdominal pain and bloating.
  - In a meta-analysis with 3383 subjects with coeliac disease, the prevalence of irritable bowel syndrome-type symptoms was 38 percent
- Subclinical disease
  - non-specific symptoms such as fatigue
  - nutrient deficiencies (most commonly of iron)
  - asymptomatic.
  - Index of suspicion for coeliac disease required by the clinician is high
-

NICE Guidelines 2015

Offer testing to patients with any of the following:	Consider testing in patients with any of the following:
▪ persistent unexplained abdominal or gastrointestinal symptoms ▪ faltering growth ▪ prolonged fatigue ▪ unexpected weight loss ▪ severe or persistent mouth ulcers ▪ unexplained iron, vitamin B12 or folate deficiency ▪ type 1 diabetes, at diagnosis ▪ autoimmune thyroid disease, at diagnosis ▪ irritable bowel syndrome (in adults) ▪ first-degree relatives of people with coeliac disease	▪ metabolic bone disorder (reduced bone mineral density or osteomalacia) ▪ unexplained neurological symptoms (particularly peripheral neuropathy or ataxia) ▪ unexplained subfertility or recurrent miscarriage ▪ persistently raised liver enzymes with unknown cause ▪ dental enamel defects ▪ Down's syndrome ▪ Turner syndrome

Can I send Ms JM off for testing now?

- Check if your patient has been avoiding gluten in their diet
- If yes, the patient must undergo a gluten challenge to avoid a false negative result
- A gluten challenge consists of: eating at least 2 slices of wheat-containing bread per day for at least 4 weeks

What tests should I order for coeliac disease?

- “Coeliac serology”
  - Anti-TTG (IgA and IgG)
  - Anti-gliadin (IgA and IgG)
  - Exclusion of IgA deficiency- ie reported if levels <0.07g/L

What do these tests mean?

- TTG:
  - high specificity and high sensitivity (esp IgA); thus first line
- Gliadin:
  - less specific; better than TTG in assessment of dietary compliance and post-treatment mucosal recovery
- What about Endomysial antibodies?
  - highly specific (nearly 100%) but less sensitive than TTG antibodies
  - Use IgA endomysial antibodies (EMA) if IgA tTG is weakly positive
  - should be used only as a confirmatory test in the case of borderline positive or possibly false positive results of tests for anti-tissue transglutaminase antibodies
  - Tests for IgA antiendomysial antibodies are also expensive and operator-dependent

Ms JM's coeliac serology

- Deamidated gliadin IgA- 25 u/ml (<15)
- Deamidated gliadin IgG- 20 U/ml (<15)
- Tissue transglutaminase IgA- 20 (<15)
- Tissue transglutaminase IgG- 20 (<15)

What would you do now?

A. Commence a gluten free diet?

A. Refer to a dietitian and commence on a gluten free diet?

A. Perform HLA DQ testing?

A. Refer to see a gastroenterologist?

Positive CD serology

- Serology alone is insufficient to make a diagnosis of coeliac disease
- Refer to a gastroenterologist for gastroscopy and confirmatory small bowel biopsies
- False positives can occur with:
  - Other conditions that can give an elevated tTG include type 1 diabetes, inflammatory bowel disease, liver disease and other autoimmune diseases

Negative CD serology

- Potential false negative coeliac serology:
  - IgA deficiency- affects 2-3% of patients who have coeliac disease
  - Gluten free diet- serology can be negative after being on gluten free diet for more than 3 months
  - 2-3% of patients with coeliac disease have negative serology, have low antibody levels or have levels that fluctuate between positive and negative: if coeliac serology negative but clinical suspicion high → refer to a gastroenterologist

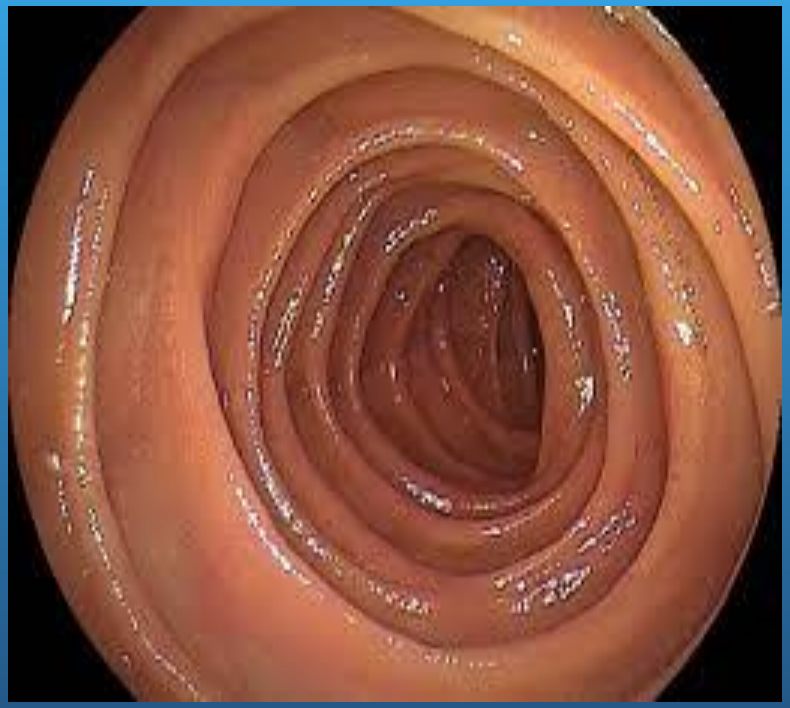
Role of genetic testing

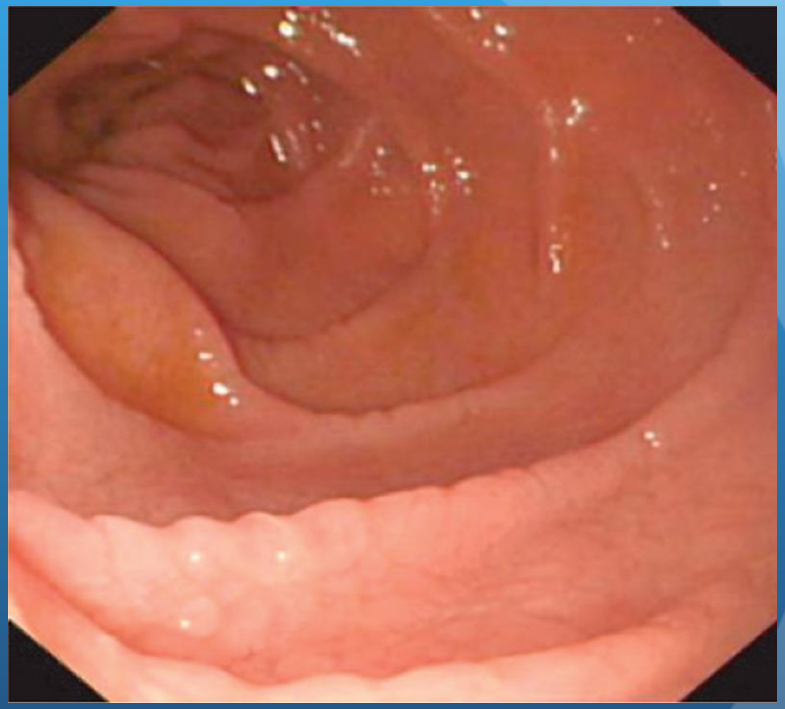
- HLA-DQ2 and or 8 are found ***in almost all*** patients with coeliac disease
- However, it is also found in almost 50% of the general population but only 3% of these patients will develop coeliac disease
- The main utility of HLA-DQ2/8 testing is to rule out coeliac disease: ie given that 99% of patients with coeliac disease carry one of these markers, a negative test effectively rules out coeliac disease.
- A positive test is less useful and cannot be used for diagnosis

When to refer to a gastroenterologist?

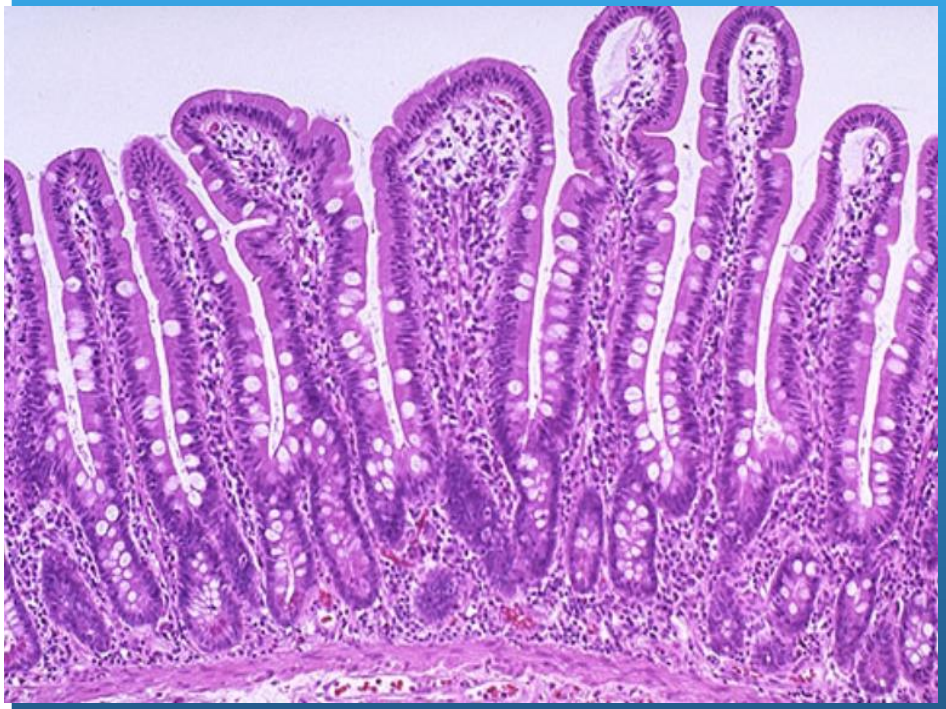
- Refer to a gastroenterologist in the following situations:
- a patient with positive coeliac serology for confirmatory small bowel biopsies
- a patient with negative coeliac serology but high index of suspicion of coeliac disease

Endoscopic findings





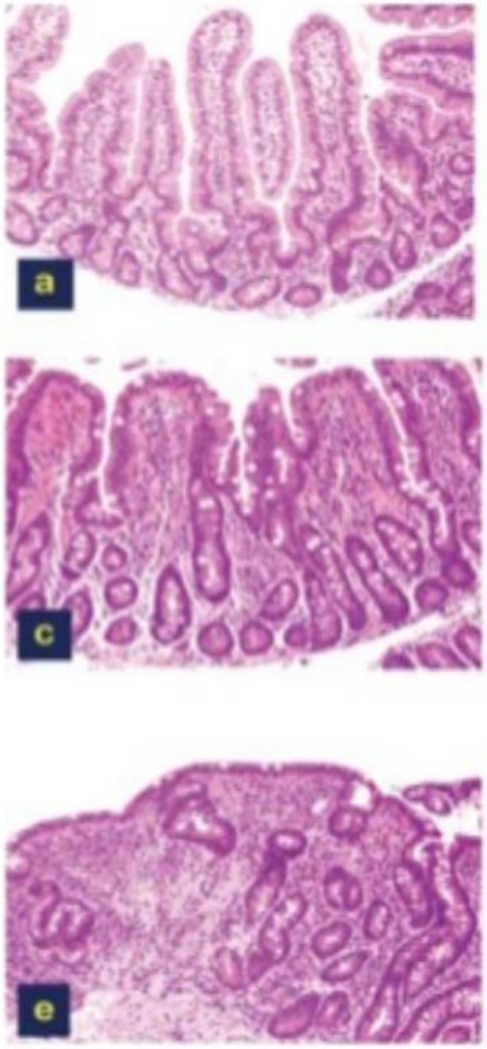
Histology findings



a-b normal villi and pathological increase of intraepithelial lymphocytes (IELs)

c-d mild/moderate atrophy of villi and pathological increase of IELs

e-f total villous atrophy and pathological increase of IELs



Management of CD

- A strict GFD lifelong is currently the only therapy
- All people with coeliac disease require a strict GFD, regardless of the severity of their symptoms.
- Initial referral to a dietitian with special interest in coeliac disease is highly recommended
- A GFD reduces symptoms, improves morbidity, improves nutritional parameters and reduces the risk of long-term complications of coeliac disease including osteoporosis and lymphoma.
- Clinical symptoms usually abate within the first few weeks of commencing a strict GFD

FOOD TYPE	FOODS TO AVOID	FOODS TO INCLUDE
Flour	Wheat flour, rye flour, barley flour, wheaten cornflour, triticale flour and oat flour. Wheat varieties including spelt, dinkle and kumut.	Rice flour, pure maize cornflour, cornmeal/polenta, soya flour, potato flour, arrowroot, buckwheat, sorghum, millet, sago, tapioca, lentil flour, baby rice cereal, amaranth, lupin.
Bread & Baked Goods	All bread including wheat, rye, spelt and sourdough bread, biscuits, pastries, buns, muffins, pikelets, crumpets, croissants, breadcrumbs (unless labelled gluten-free).	Rice cakes, corn cakes, some rice crackers (check), gluten-free bread, biscuits, pastries, rolls, breadcrumbs, cakes, and desserts made from allowed flours, gluten-free bread, biscuit, cake mixes.
Cereals	Breakfast cereals containing wheat, oats, semolina, barley, rye, malt extract, wheatbran, oatbran.	Rice, corn and soy breakfast cereals (check), gluten-free muesli, home-made muesli using allowed ingredients.
Pasta & Grains	Wheaten noodles, pasta, spaghetti, vermicelli & instant pasta meals. Triticale, couscous, bulgur, semolina.	Rice, corn, cornmeal, tapioca, buckwheat and gluten-free pastas, rice noodles, rice vermicelli, rice, buckwheat, polenta, quinoa, millet.
Fruit	Commercial thickened fruit pie filling.	Fresh, frozen, canned or dried fruit, fruit juices.
Vegetables	Canned or frozen vegetables in sauce, commercially prepared vegetable and potato salad (unless dressing checked).	Fresh, frozen, dehydrated, or canned vegetables without sauces, vegetable juices.
Meat, Fish & Poultry	Foods prepared or thickened with flour, batter or crumbs, sausages, most processed meats and fish,corned beef, meat pies, frozen dinners.	Fresh, smoked, cured, frozen without sauces, crumbs or batters. Canned meat or fish without sauce or cereal. Ham off the bone (check), bacon, gluten-free sausages.
Dairy Products	Cheese mixtures, pastes and spreads (unless checked), malted milks, ice cream with cone or crumbs, soy drinks containing malt (check).	Block, processed, cream, cottage or ricotta cheese, fresh, UHT, evaporated, powdered or condensed milk, yoghurt (check), buttermilk, fresh or canned cream, plain or flavoured ice cream (check).

Monitoring CD

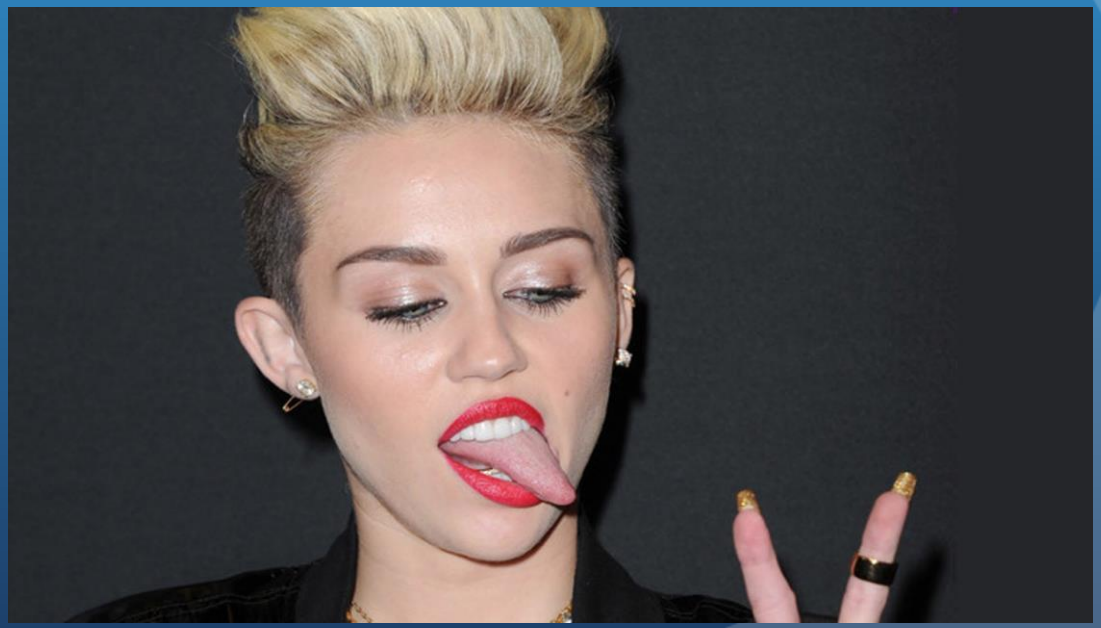
- 6 months in first year then annually, monitor:
  - coeliac serology
  - FBC
  - Folic acid, iron, B12, zinc
  - Thyroid function
  - Calcium, phosphate, vitamin D
  - Liver function tests
- Other
  - DEXA 12 months after dx
  - Repeat gastroscopy 12 months after diagnosis

Summary

- general practitioners play a critical role in improving the detection rates of coeliac disease and for ongoing monitoring of patients with coeliac disease
- coeliac disease needs to be considered in all age groups and in all ethnicities
- coeliac serology is a useful screening tool for coeliac disease but a definitive diagnosis requires small bowel biopsies
- HLA-DQ2/8 testing has a high negative predictive value and is useful to exclude coeliac disease
- The only mainstay of management is a strict gluten-free diet lifelong

Parting words of wisdom…

- *'Everyone should try no gluten for a week. The change in your skin, physical and mental health is amazing.'*



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Thank you!