

Approach to Chronic Diarrhoea

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Outline

- 1. Definition**
- 2. Acute vs Chronic**
- 3. Pathophysiology of Diarrhoea**
- 4. Differential Diagnosis**
- 5. Approach to work up**
- 6. 2 cases**

Definition – Dr & Pt same page?

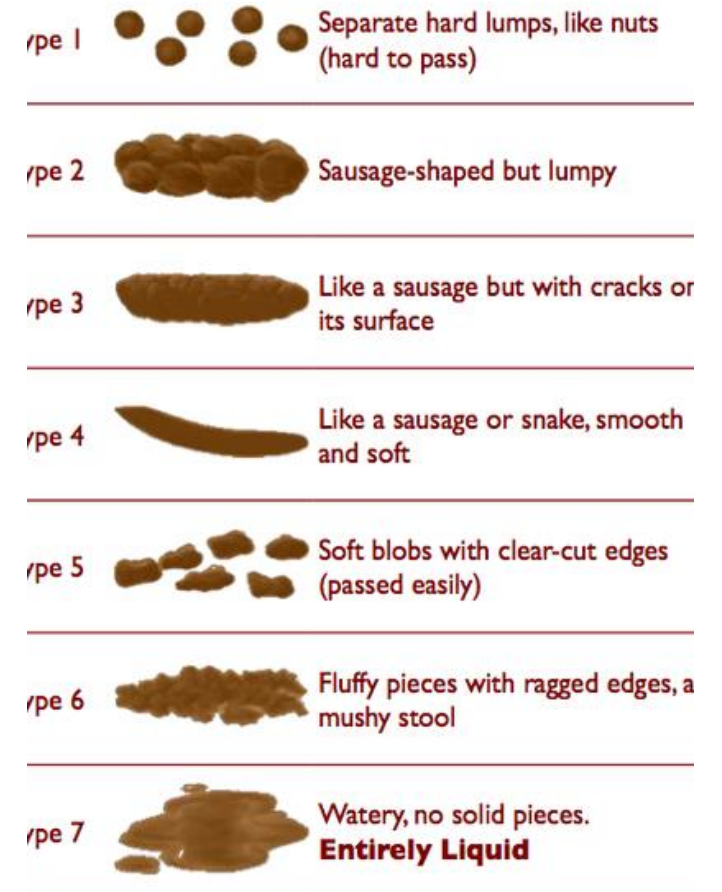
- ❖ **Consistency** – loose or liquid stools
- ❖ **Increased frequency** - ≥ 3 x day
- ❖ **Urgency** – urgent need to evacuate
- ❖ **Stool weight** > 200g/24hrs

Passage of ≥ 3 loose or liquid stools/d

Frequent formed stools \neq diarrhoea

Incontinence \neq diarrhoea

Bristol Stool Chart



Acute versus Chronic

Acute Diarrhoea

Majority settle-48 hrs

- Infectious cause >90%
- Viruses >>> Bacteria
- Self-limited – majority not investigated

Chronic Diarrhoea

- > 4 weeks
- Non-infectious predominate
- Unless explained, they all need to be investigated
- 5% prevalence + chronic → significant morbidity

Pathophysiology of Chronic Diarrhoea

Secretory - neuroendocrine tumours, CDI

- ❖ secretion of iso-osmolar fluid into the lumen
- ❖ persistence with fasting + normal osmotic gap

Osmotic – PEG, lactose intolerance

- ❖ osmotically active substances-ingested or from maldigestion
- ❖ volume reduced during fasting & ↑osmotic gap

Inflammatory – IBD, colo-rectal cancer

- ❖ exudative, secretory, or malabsorptive components
- ❖ presence of mucus and blood or inflammatory cells

Motility – Diabetes (neuropathy, retinopathy + nephropathy) + IBS

- ❖ rapid transit prevents/reduces reabsorption of normally secreted fluid

Iatrogenic – cholecystectomy, T.I resection

- ❖ vagal injury, abdominal/bowel

Table 1. Causes of chronic diarrhoea in adults

Disorder	Commoner causes	Rarer causes
Malignancy	Colorectal adenocarcinoma	Lymphoma Neuroendocrine Metastases, for example, melanoma
Inflammatory	Coeliac disease Crohn's disease Ulcerative colitis	Microscopic colitis Mastocytosis Amyloidosis
Infection and immunocompromise	Tuberculosis HIV Small bowel bacterial overgrowth/dysbiosis	Chronic virus (Adeno-, rota-, noro-) Giardia Cryptosporidium Whipple's disease
'Benign diarrhoeas': Absorption/digestion disorders	Bile acid diarrhoea Hypolactasia Pancreatic exocrine insufficiency	Other carbohydrate maldigestion Intestinal lymphangiectasia
Therapy induced	Radiotherapy and chemotherapy Surgical resection Drug-induced: -Antibiotics -HIV therapy -Laxatives -NSAIDs -PPIs -SSRIs -ACEi -Mycophenolate -Topiramate	Idiosyncratic responses
Functional and metabolic	IBS-D Factitious diarrhoea	Mesenteric ischaemia Hyperthyroidism Addison's disease Hypoparathyroidism



Evaluation

Thoughtful

Systematic

Individualized

Table 1. Historical Features to Record in Patients with Diarrhea

Duration	Acute (< 4 weeks), chronic (> 4 weeks)
Onset	Sudden, gradual
Pattern	Continuous, intermittent
Stool appearance/form	Bloody, fatty, watery; semifformed, mushy, entirely liquid
Fecal incontinence	Present or absent
Abdominal pain	Location, radiation, relation to meals or bowel movements
Aggravating factors	Diet, stress
Alleviating factors	Diet, over-the-counter drugs, prescription drugs
Previous evaluation	Gather and review all notes, laboratory, imaging and pathology reports
Previous medical history	Remote illnesses requiring evaluation or therapy
Previous surgery, radiation	Indication, procedure, complications
Concurrent diseases	Diabetes, endocrine disorders, HIV infection, atherosclerotic cardiovascular disease, collagen-vascular, neoplasia, immunologic
Current medications	Prescription and over-the-counter drugs within last 2 months
Allergies, drug intolerances	Type of food or drug, type of reaction (e.g., hives, anaphylaxis)
Usual diet	Current intake, food intolerances, restrictions
Weight gain or loss	Duration, amplitude
Travel history	Where, how long, food and drink consumed while away
Other people ill	Common source vs. person-to-person spread
Institutionalized	Recent hospital stay, communal living setting, nursing home
Illicit drug use	Type, regularity of use, legal issues
Risk for factitious diarrhea	Peripatetic 'mystery' patient; secondary gain; dependence on caregiver
Review of other gastrointestinal symptoms	Nausea, vomiting, dyspepsia, bloating, belching, flatus, distention, rectal bleeding, feeding/eating disorders, jaundice, itching, appetite
Review of systems	Skin (flushing, hives, rashes), cardiovascular (heart murmur, edema), pulmonary (wheezing), musculoskeletal (arthritis), neurological (tremor, movement disorders)

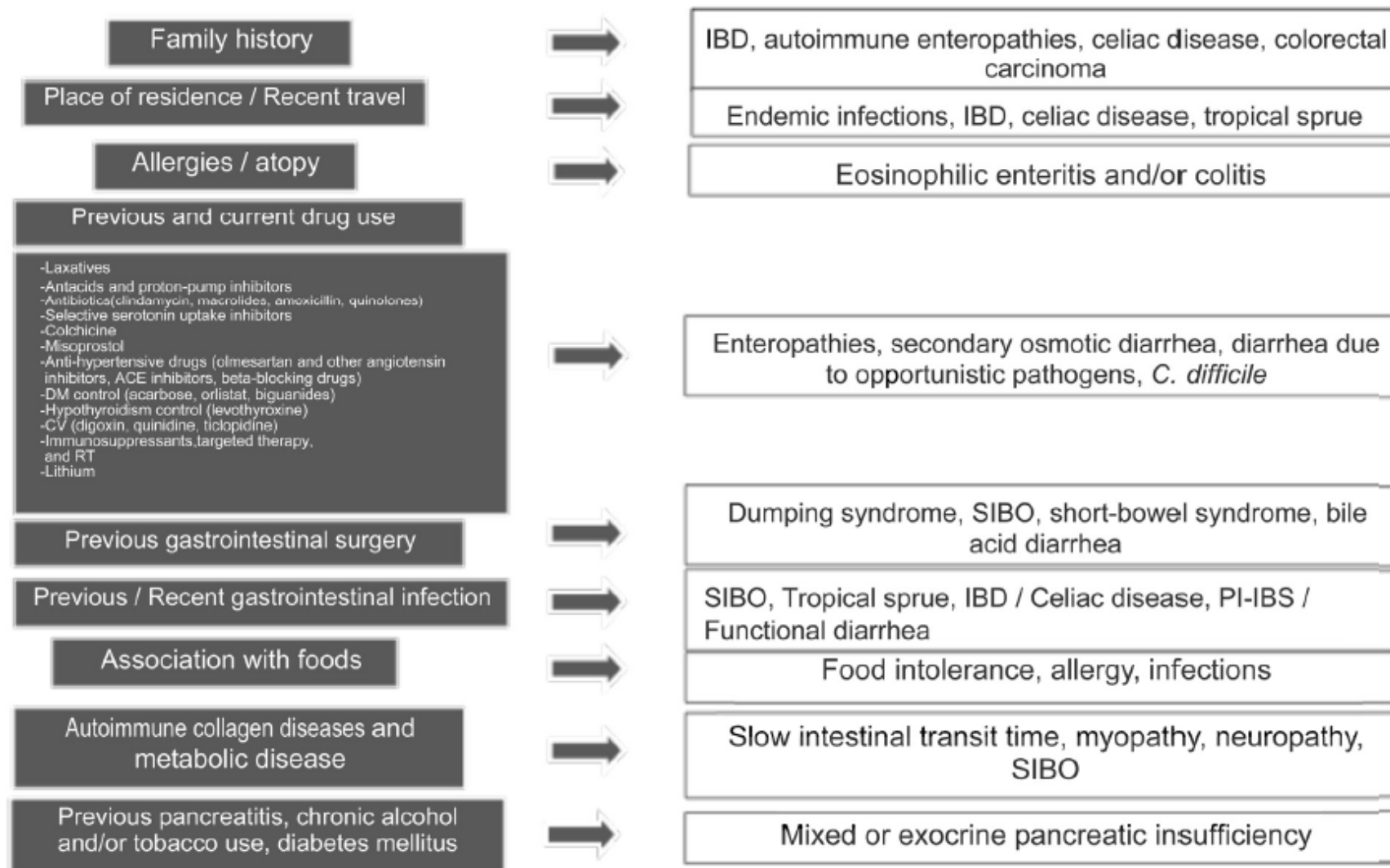
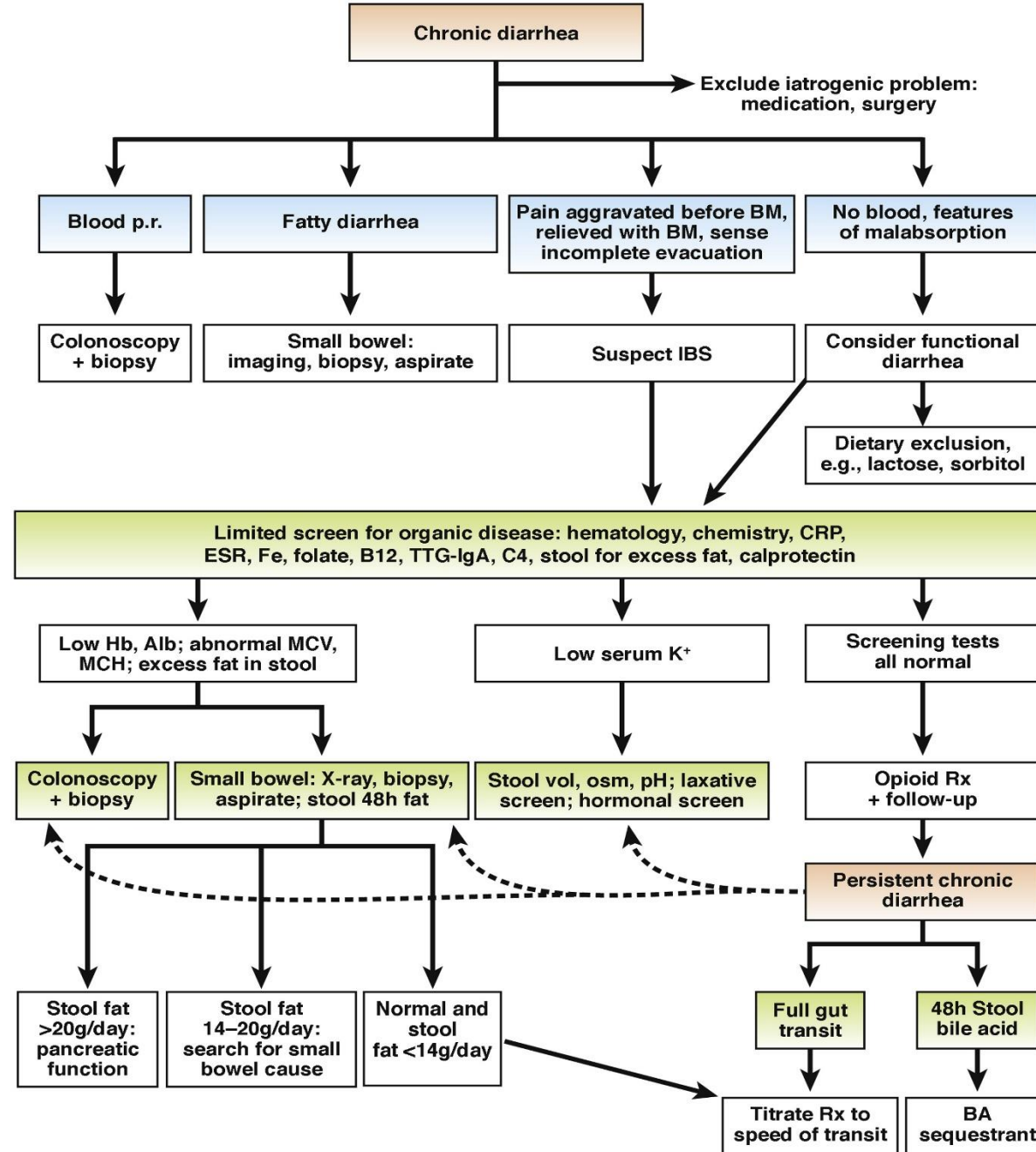


Figure 1 Key aspects in the clinical history for determining the cause of chronic diarrhea.

ACE: angiotensin-converting enzyme; AHT: antihypertensive; CV: cardiovascular; DM: diabetes mellitus; IBD: inflammatory bowel disease; CRC: colorectal cancer; RT: radiotherapy; SIBO: small intestinal bacterial overgrowth; PI-IBS: postinfectious irritable bowel syndrome; PPI: proton pump inhibitor.



CASE 1

- ❖ 49 year old man
- ❖ Chef in a famous restaurant in CPT
- ❖ Chronic, non-bloody diarrhoea for >1year
- ❖ Associated mild abdominal cramps
- ❖ More than 20 kg weight loss
 - friends advised him to get ARVs!
- ❖ Hiv neg.

Stool Analysis

- ❖ Bland
- ❖ Clostridium difficile – neg. for antigen/toxin
- ❖ Culture negative
- ❖ Faecal elastase 43 ug/g stool

Bloods

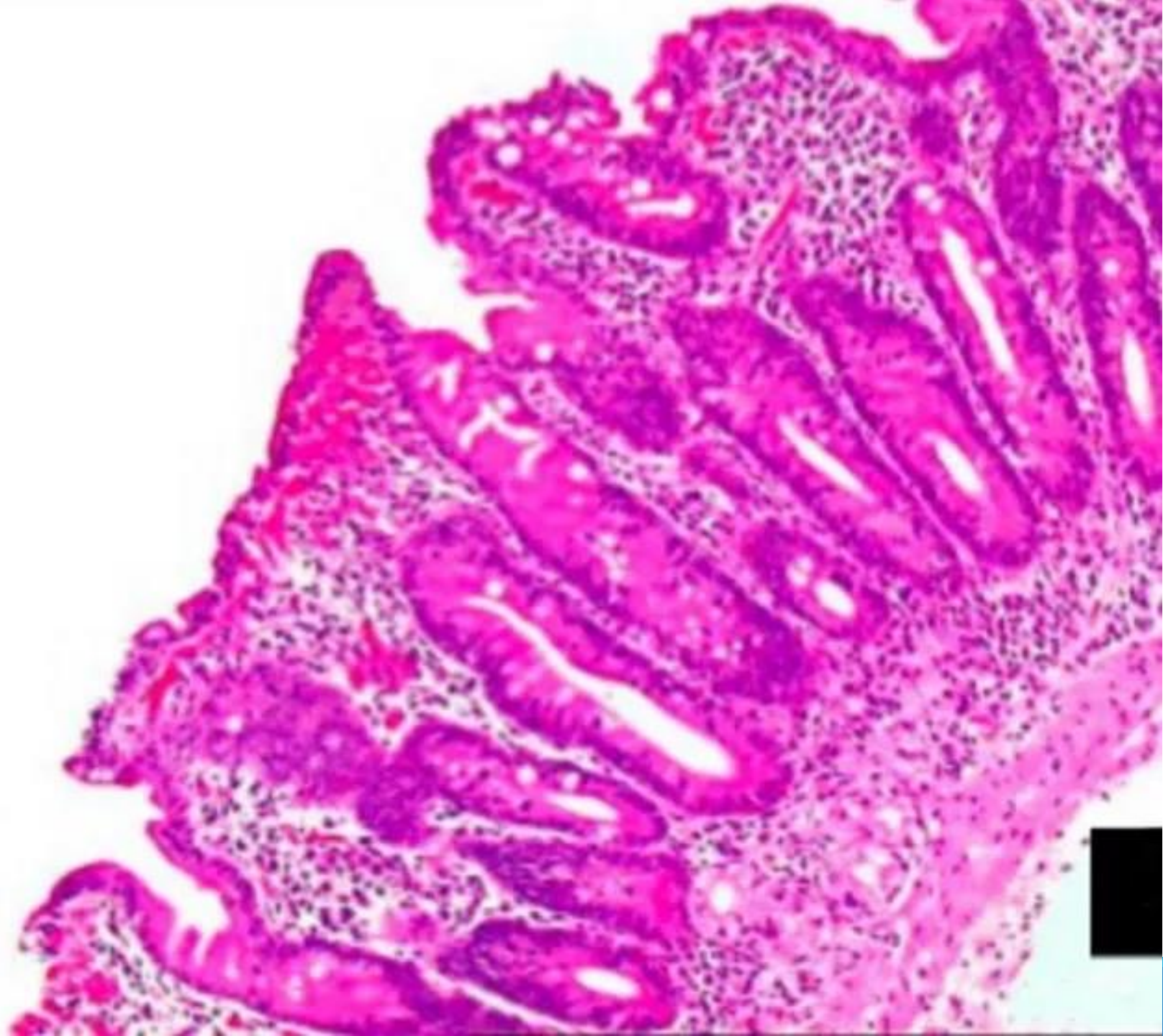
- ❖ Sodium 126 L mmol/L
- ❖ Potassium 3.2 L mmol/L
- ❖ Urea 4.0 mmol/L
- ❖ Creatinine 112 H
- ❖ Calcium 2.28 mmol/L
- ❖ Magnesium 0.73 mmol/L
- ❖ Inorganic phosphate 1.25 mmol/L
- ❖ Vitamin B12 >1476 H pmol/L
- ❖ Serum folate 2.9 L nmol/L

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- ❖ White Cell Count 11.66 H
 - ❖ Haemoglobin 12.9 L g/dL
 - ❖ MCV 110 fL
 - ❖ Platelet Count 205
 - ❖ tTG: IgA result Positive Value 31.0 U/ml
 - ❖ Anti-deamidated gliadin antibody: IgA result Positive Value 45.0 U/mL

DUODENAL BIOPSY

Marsh Score

**Stage 1V disease with
complete villous atrophy**



Case 2

Endocrine clinic referral

16 year old young man

Chef in training

Profound short stature

Delayed puberty & biochemistry confirmed G.H deficiency

Mild abdominal symptoms – cramps and intermittent diarrhoea

→ iron deficiency and abdominal symptoms work up

Examination

Short stature

Pallor +

Minimal abdominal findings

Stool analysis

Bland

Clostridium Difficile –antigen/toxin negative

Culture negative

Bloods

WBC 7.98

Hb 10.3

MCV 68.5

Plts 737

Ferritin 12 L ug/L

Vitamin B12 123 L pmol/L

Serum folate 25.5 nmol/L

Imaging

CXR normal

AXR – unremarkable

MRE – extensive small bowel disease consistent with CD

Endoscopy + biopsy

Colonoscopy

severe T.I disease with ulceration and narrowing.

Histology

Chronic active granulomatous inflammation.

Negative AFB



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