Inflammatory Bowel Disease

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RBWH

Case 1

- 31F south Asian presents to GP with one week of abdominal pain and haematochezia
- 6-7 BM/24 hours

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- 6-7 BM/24 hours
- Murphy’s sign positive
- Arranged blood and stool tests and abdominal US, for repeat appointment in 5 days
- Bloods CRP <5, FBC normal, albumin 44, Creatinine 64, lipase 33, coeliac panel negative, abdominal US normal

Case 1

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- Presented instead to ED after 5 days
- Tachycardic on arrival but now HR 80, afebrile
- FBC and CHEM20 normal, 70 leuks in urine

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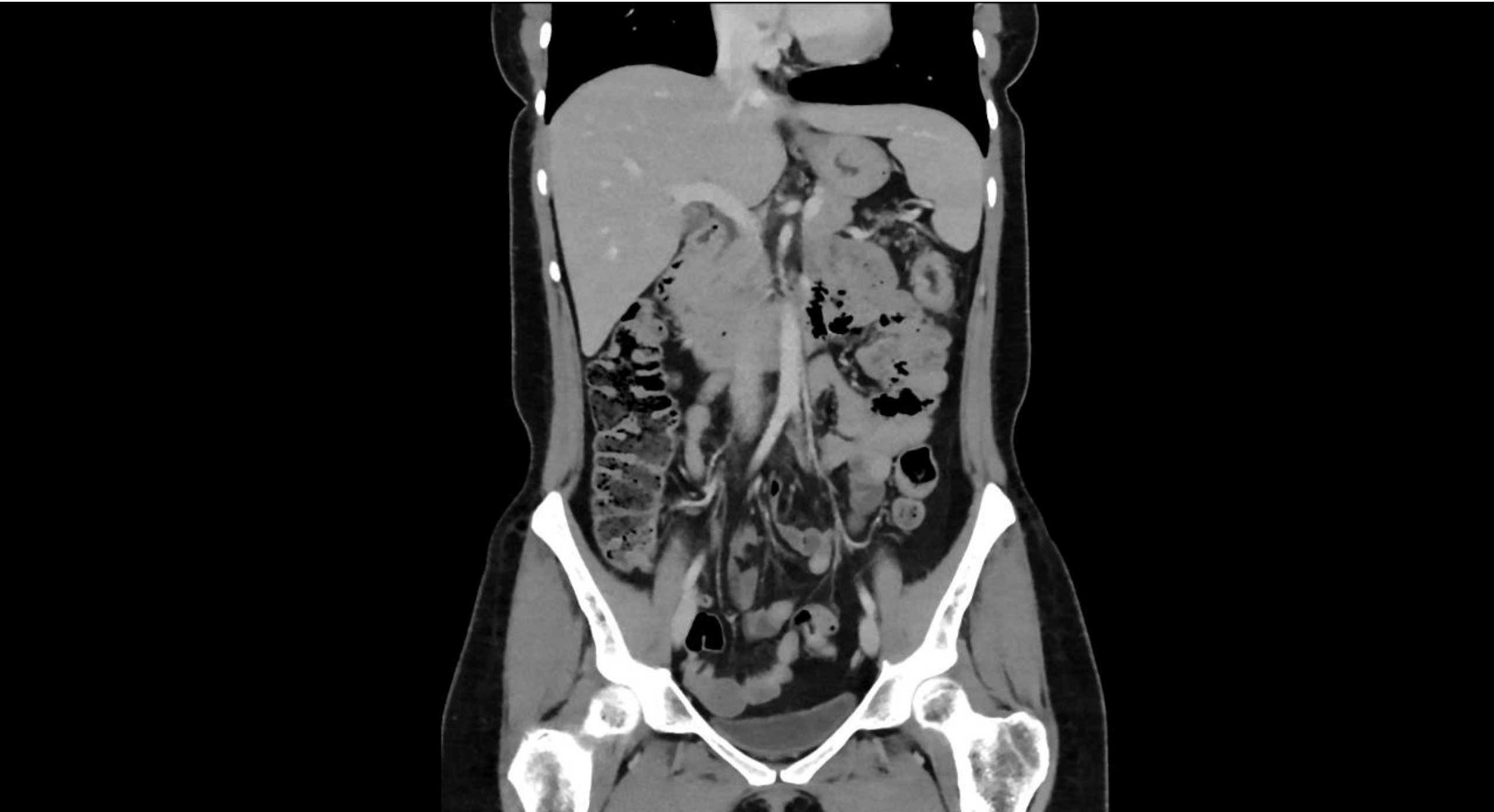
- Imp: infective gastroenteritis (gastrointestinal haemorrhage)
- Plan: follow up with GP to chase results, commence trimethoprim

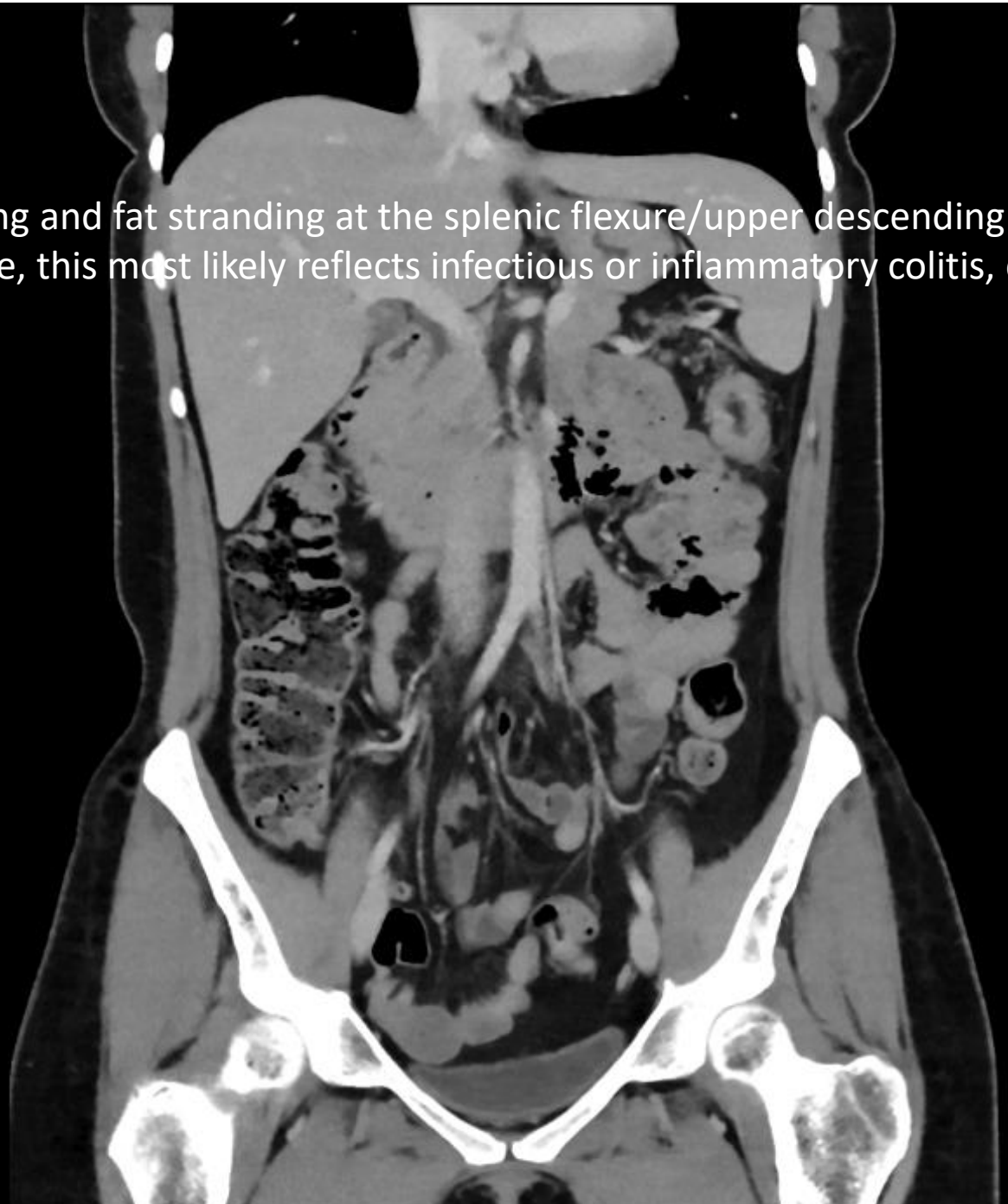
Case 1

- Next day: Represents to ED with letter from GP: “Please kindly review and assess for consideration of gastroenterology and surgical review with concern for ?de novo presentation for inflammatory bowel disease”,
- Seen by ED intern with senior input

- 2/52 of haematochezia
- 8-10 BM/24 hours
- Reperformed abdominal and PR exam
- Formal urine had returned with >500 leukocytes and *Candida* species
- D/W ED senior, GE fellow contacted: ?diverticulitis, for CT



Short segment of mural thickening and fat stranding at the splenic flexure/upper descending colon with prominent adjacent LNs. In a patient this age, this most likely reflects infectious or inflammatory colitis, colonoscopy advised



Case 1

- Haemoglobin 135
- Albumin 39
- CRP 12
- ESR 35
- Faecal calprotectin 1400

- Rediscussed with GE Fellow:
- For D/C home with augmentin DF, Cat 1 outpatient colonoscopy

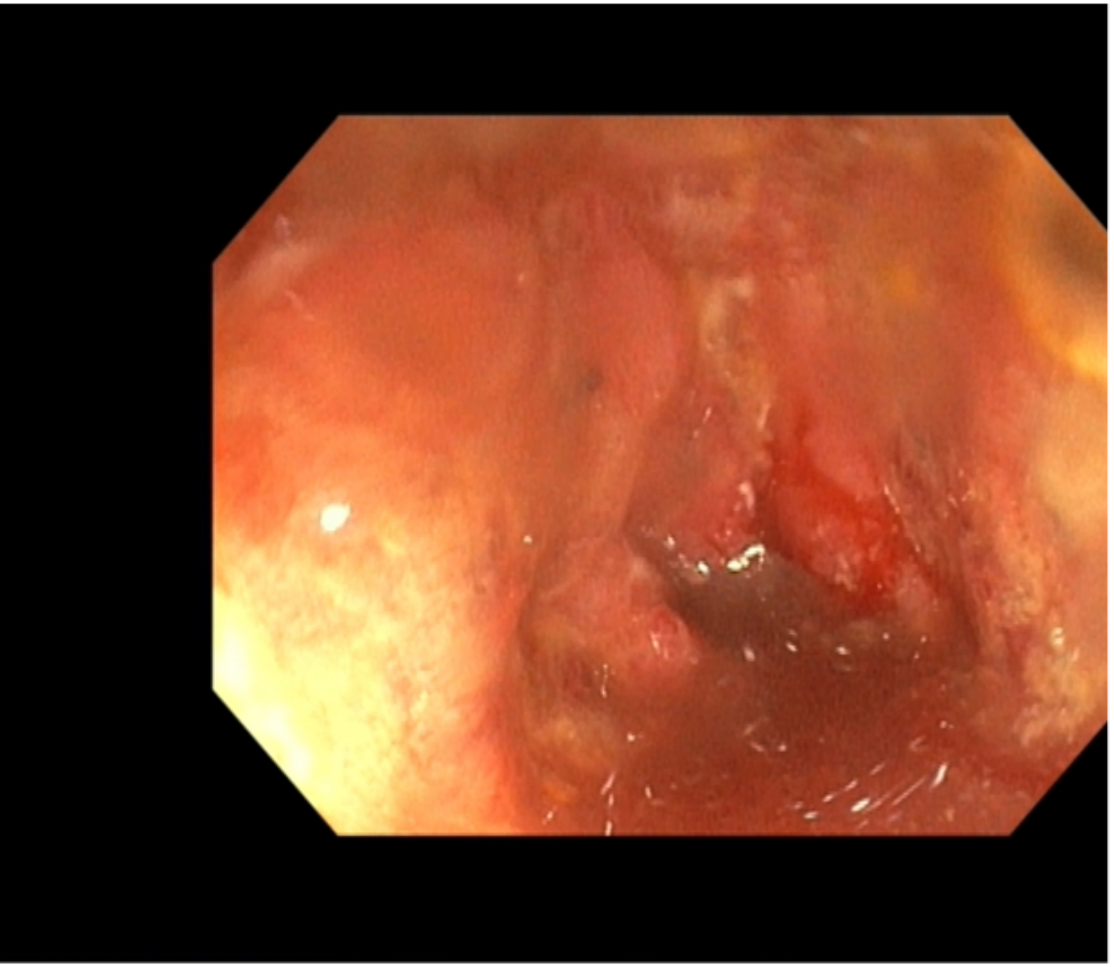
Case 1

- Four days later represented to ED
- Triaged as Cat 3
- Did not wait
- GP referral received by RBWH IBD service and actioned on the same day

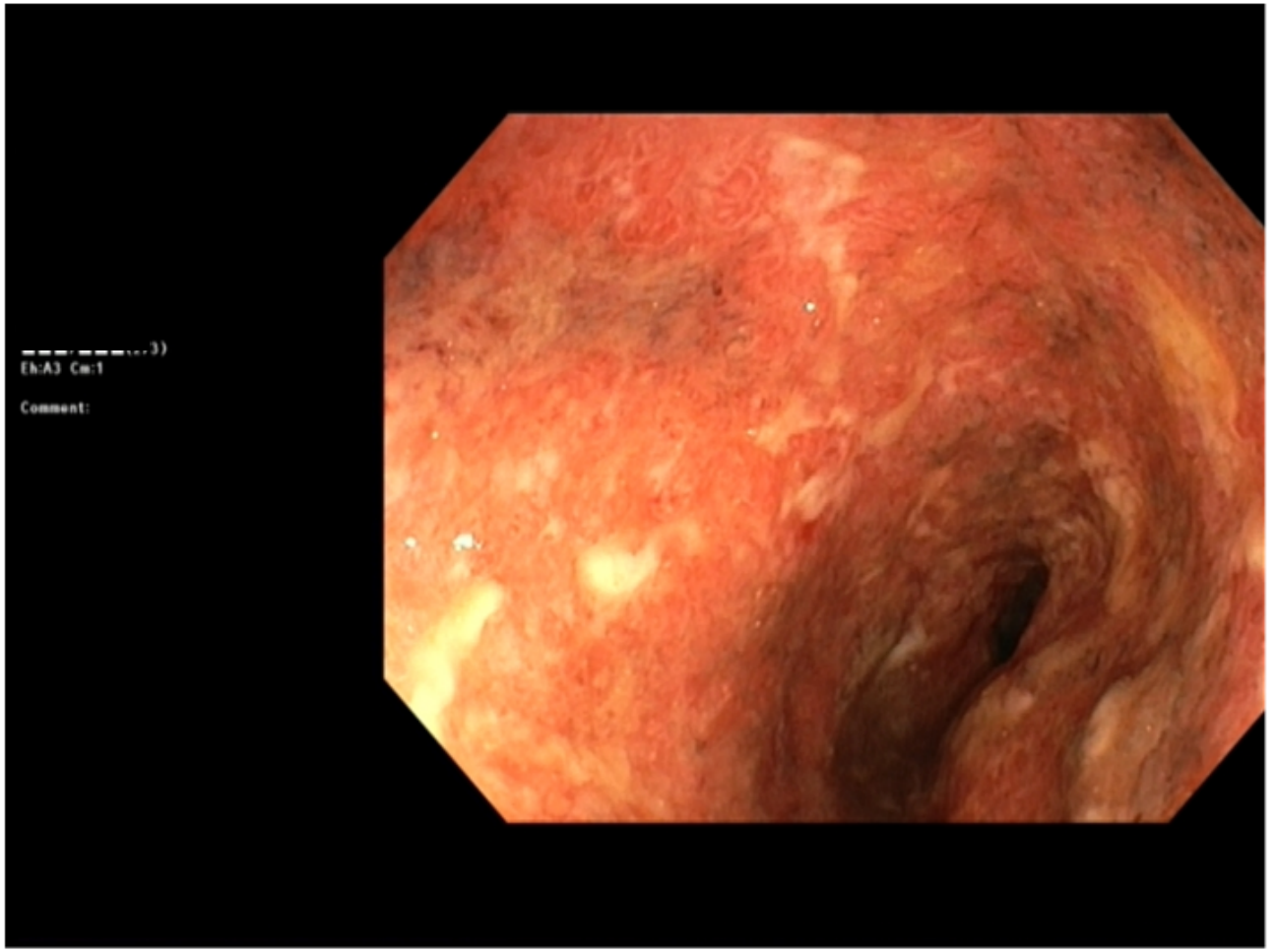
- Following day represented to ED
- Significant abdominal pain, chest pain and large PR blood loss, BM to 12 per 24 hours
- Triaged as a Cat 2
- IV hydrocortisone commenced

Case 1

- Haemoglobin 146
- Albumin 40
- CRP 75
- ESR 30



Sigmoid Colon



3 Sigmoid Colon

Case 1

- Histopathology report:

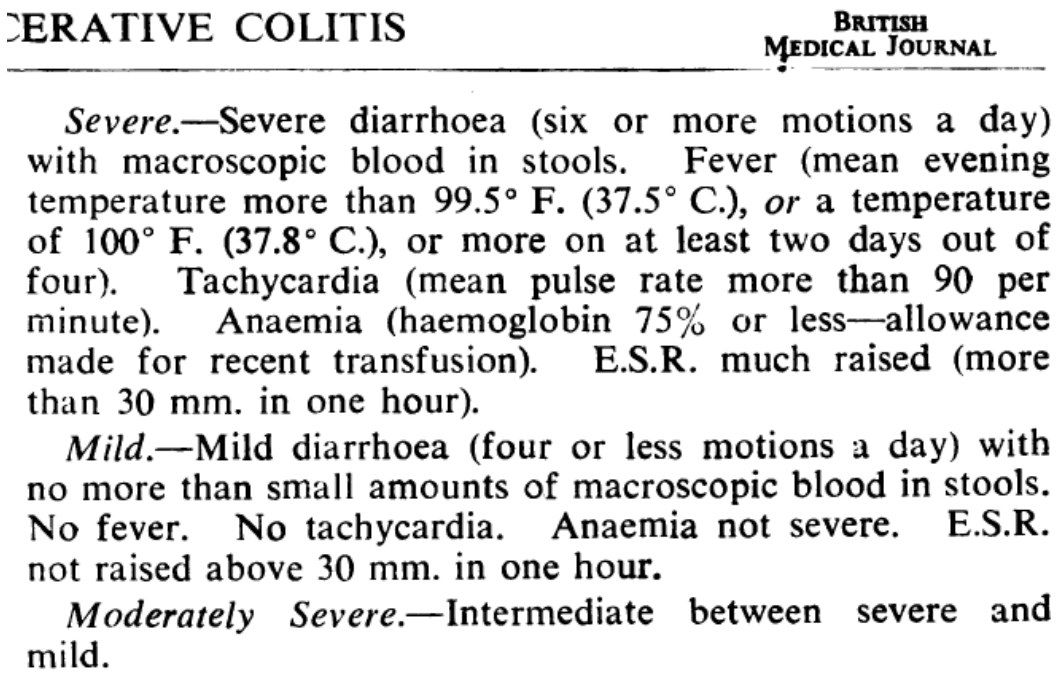
- *The tissue reaction of the colitis would support a clinical diagnosis of treated ulcerative colitis. The histologic differential diagnosis of features present would also include Crohn's colitis. There is no dysplasia.*

Case 1

- What is the diagnosis?

Case 1: What is the diagnosis?

- Truelove and Witts criteria for ASUC



CERATIVE COLITIS — BRITISH MEDICAL JOURNAL

Severe.—Severe diarrhoea (six or more motions a day) with macroscopic blood in stools. Fever (mean evening temperature more than 99.5° F. (37.5° C.), *or* a temperature of 100° F. (37.8° C.), or more on at least two days out of four). Tachycardia (mean pulse rate more than 90 per minute). Anaemia (haemoglobin 75% or less—allowance made for recent transfusion). E.S.R. much raised (more than 30 mm. in one hour).

Mild.—Mild diarrhoea (four or less motions a day) with no more than small amounts of macroscopic blood in stools. No fever. No tachycardia. Anaemia not severe. E.S.R. not raised above 30 mm. in one hour.

Moderately Severe.—Intermediate between severe and mild.

Br Med J 1955;2:1041

Journal of Crohn's and Colitis, 2022, **16**, 1089–1096
https://doi.org/10.1093/ecco-jcc/jjac014
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Original Article

Markers of Systemic Inflammation in Acute Attacks of Ulcerative Colitis: What Level of C-reactive Protein Constitutes Severe Colitis?

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Abstract

Background and Aims: The erythrocyte sedimentation rate [ESR] as a component of the Truelove and Witts Criteria [TWC] is the traditional inflammatory marker used for the assessment of ulcerative colitis [UC] activity. However, the C-reactive protein [CRP] is preferentially used in contemporary clinical practice. We aimed to determine the equivalent CRP cut-off for an ESR of >30 mm/h in patients presenting with acute severe UC.

Methods: Clinical and pathological data were prospectively collected from 163 presentations of severe UC. A CRP cut-off corresponding to an ESR of >30 mm/h was determined using confusion matrices. A validation cohort of 128 presentations was prospectively collected and analysed.

Results: A CRP cut-off of ≥12 mg/L generated an 85% positive predictive value [PPV] with a sensitivity of 95% and an accuracy of 82% for having a paired ESR of >30 mm/h. There were no statistically significant differences between groups determined by the traditional ESR versus the new CRP-based criterion in the presenting faecal calprotectin, Mayo endoscopic subscore, or the rates of intravenous corticosteroid therapy failure and colectomy-by-discharge. Applying the CRP ≥12 mg/L criterion to a validation cohort of 128 presentations generated a PPV of 83% and a sensitivity of 94%.

Conclusions: The proposed CRP ≥12 mg/L cut-off is an inclusive, sensitive, and very practical alternative to ESR as part of the TWC for defining UC presentation severity. It demonstrated similar performance characteristics to the classical ESR criterion when used for the assessment of

Case 1: Acute severe UC (ASUC)

- Complicates 15-20% of UC cases
- Previous mortality rate of 30%, now <1% at specialist IBD centres
- RBWH data (mid 1990s-2022) 71/314 (23%) ASUC was the index presentation of IBD
- 50-70% respond to IV steroids
- Rescue therapy or surgery (colectomy) is second line therapy
- Rescue medical therapy is typically with infliximab or cyclosporin A
- Be mindful of pregnant patients with rectal bleeding and diarrhoea

Case 1 Practice points

What has happened here?

What is the framework to stop this from happening again?

HISTORY: If the set up is right (>5-7 days diarrhoea in a younger person) think whether ASUC can be excluded on clinical grounds (examination)

Case 1 Practice points

What has happened here?

What is the framework to protect other patients from this outcome?

HISTORY: If the set up is right (>5-7 days diarrhoea in a younger person) think whether ASUC can be excluded on clinical grounds (examination)

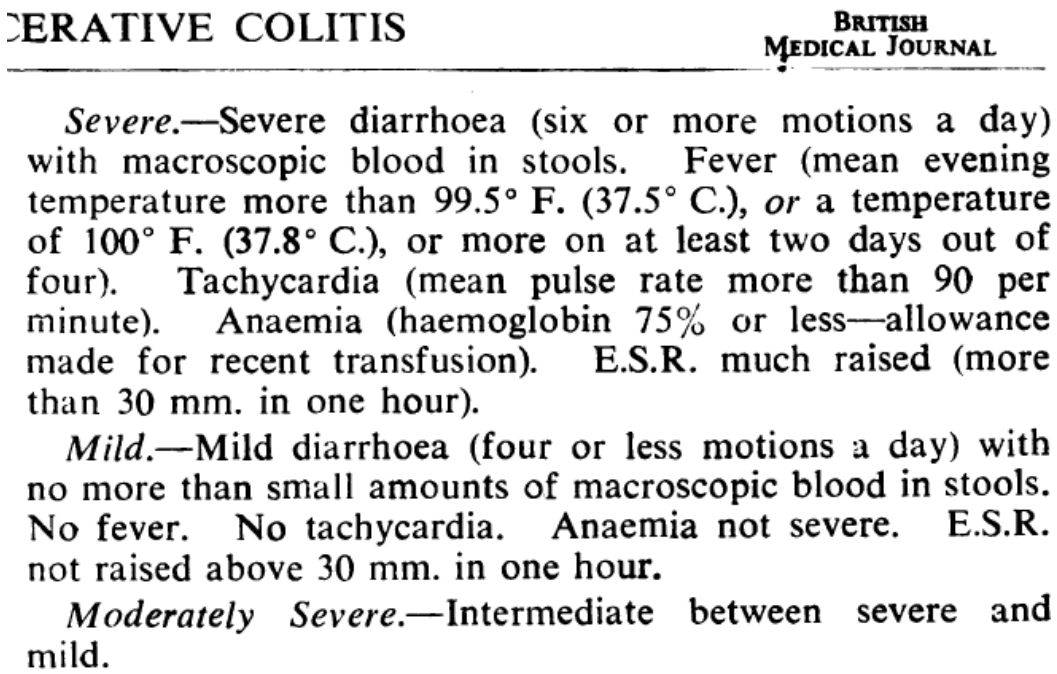
Do bloods (CRP and ESR!) a stool multiplex PCR for bacteria, parasites and C. difficile toxin

Case 1: Practice points

- Pick up the telephone and call the IBD registrar (ideally during business hours)
- Send patient to ED with a letter of referral if you have a high suspicion of ASUC
- Beware the pregnant patient with persistent PR bleeding and faecal urgency
- ASUC is an emergency, delays to therapy are detrimental to outcomes

Case 1: What is the diagnosis?

- Truelove and Witts criteria for ASUC



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Br Med J 1955;2:1041

Case 2:

- 54M Recently diagnosed with extensive UC
- Commenced on mesalazine 4.8g daily orally
- Simple clinical colitis activity index = 0
- Letter from IBD clinic:
  - "Please arrange hepatitis B, varicella, pneumococcal and influenza vaccinations and skin check."
- Is this otherwise well man immunosuppressed?

Symptom	Score
Bowel frequency (day)	
1-3	0
4-6	1
7-9	2
>9	3
Bowel frequency (night)	
1-3	1
4-6	2
Urgency of defecation	
Hurry	1
Immediately	2
Incontinence	3
Blood in stool	
Trace	1
Occasionally frank	2
Usually frank	3
General Well Being	
Very well	0
Slightly below par	1
Poor	2
Very poor	3
Terrible	4
Extracolonic features	1 point per manifestation

Walmsley RS, Ayres RCS, Pounder RE, Allan RN. A simple clinical colitis activity index. Gut. 1998; 43; 29-32

Table 1. IBD therapeutic agents and different degrees of immunosuppression.

Drugs	Degree of immunosuppression	Comment
Aminosalicylates		No systemic effects
Topical steroids		Systemic immunosuppression with oral topical steroids [oral budesonide] at doses >6 mg/day
Systemic steroids		Moderate-severe immunosuppression with doses of ≥20 mg for >2 weeks
Vedolizumab		Gut-selective treatment. No systemic effects, but increased risk for intestinal infections
Methotrexate		Moderate-severe immunosuppression with >20 mg per week [>0.4 mg/kg/week]. Lower doses can be considered as low immunosuppression
Azathioprine/6-MP		Moderate-severe immunosuppression with >3 mg/kg/day [AZA] or >1.5 mg/kg/day [6-MP]. Lower doses can be considered as low immunosuppression
Ciclosporin Tacrolimus Anti-TNF Tofacitinib Ustekinumab		There are different nuances within the group of moderate-severe immunosuppression that cannot be reflected by this simplified category. For instance, combination therapy [combination of any of these or combination with other immunosuppressive drugs such as AZA, methotrexate, or steroids] results in an increased risk for opportunistic infections. Immunosuppression of anti-TNF is probably higher compared with ustekinumab and tofacitinib

IBD, inflammatory bowel disease; 6-MP, 6-mercaptopurine; TNF,tumour necrosis factor; AZA, azathioprine.
Simplified degree of immunosuppression [the table helps to decide if live vaccines can be administered safely]:
No:

Selective:

Low:

Moderate-severe:

T Kucharzik, P Ellul, T Greuter, et al, on behalf of the European Crohn's and Colitis Organisation [ECCO], ECCO Guidelines on the Prevention, Diagnosis, and Management of Infections in Inflammatory Bowel Disease, *Journal of Crohn's and Colitis*, Volume 15, Issue 6, June 2021, Pages 879–913

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Usually frank	3
General Well Being	
Very well	0
Slightly below par	1
Poor	2
Very poor	3
Terrible	4
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- Is this otherwise well man immunosuppressed? No.
- What vaccinations can we offer him?

Walmsley RS, Ayres RCS, Pounder RE, Allan RN. A simple clinical colitis activity index. Gut. 1998; 43; 29-32

Table 5. Adult immunisation schedule for patients with IBD.

	Dosing, schedule, and remarks	Type of vaccine[a]	At diagnosis	At diagnosis and during follow-up	Strongly recommended before immunosuppressive treatment
IBD-specific vaccination programme					
Inactivated influenza [trivalent/quadrivalent or high dose]	Annual vaccination recommended for all patients on immunosuppressive therapy, according to national guidelines	Non-live		Yes	Yes
Zoster recombinant [RZV] [preferred]	For all patients ≥50 years. Consider in patients <50 years at increased risk of herpes zoster infection	Non-live			Yes
Zoster live [ZVL]	Use only if RZV is unavailable and patient is immunocompetent	Live-attenuated vaccine			Yes
Pneumococcal conjugate 13-valent [PCV13] and polysaccharide 23-valent [PPSV23]	Single dose of PCV13 followed by PPSV23 after 8 weeks, and a PPSV23 booster after 5 years. Additional PPSV23 booster according to national guidelines. If PPSV23 provided first, then administer a single dose of PCV13 after 1 year and a PPSV23 booster after 5 years. Additional PPSV23 booster according to national guidelines	Non-live	Yes	Yes	Yes
Hepatitis A [Hep A][b]	Consider hepatitis A vaccination. Schedule and dosage according to national guidelines	Non-live		Yes	
Human papillomavirus [HPV]	Two or three doses depending on age, for unvaccinated patients, both sexes	Non-live	Yes	Yes	
Hepatitis B [Hep B][c]	Three-dose series. Additional booster might be necessary according to level of seroprotection. Titres should be regularly checked	Non-live	Yes	Yes	Yes

Journal of Crohn's and Colitis, Volume 15, Issue 6, June 2021, Pages 879–913

Routine vaccination programme					
Tetanus, diphtheria, pertussis [Tdap or Td]	If previously immunised, single dose of Tdap, then Td or Tdap every 10 years according to national guidelines	Non-live	Yes	Yes	
Meningococcal vaccines[d]	For patients at high risk of invasive meningococcal disease. Schedule and dosage according to national guidelines	Non-live	Yes	Yes	
Measles, mumps, rubella [MMR]	Adults without evidence of immunity should receive 2 doses separated by at least 28 days	Live-attenuated vaccine	Yes		Yes
Varicella	Two doses 4–8 weeks apart only in patients with no history of chickenpox or shingles, no previous immunisation, and negative serology for varicella zoster	Live-attenuated vaccine	Yes		Yes
Poliomyelitis [inactivated parenteral poliovirus]	Schedule and dosage according to national guidelines	Non-live	Yes	Yes	
SARS-CoV-2	Schedule and dosage according to national guidelines	Non-live	Yes		Yes

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Shared care of IBD patients

- Vaccinations https://immunisationhandbook.health.gov.au/

Shared care of IBD patients

Vaccinations https://immunisationhandbook.health.gov.au/

Blood tests FBC, ELFTs, CRP + 6 monthly micronutrients: B12, D, folate, Fe studies

- 5-ASA twice per year
- Immunomodulator or biologic 3-4 times per year

Iron infusions, B12 injections, vitamin D supplementation

Skin check annual or more frequently if indicated

Pap smear as per guidelines

DEXA as per guidelines

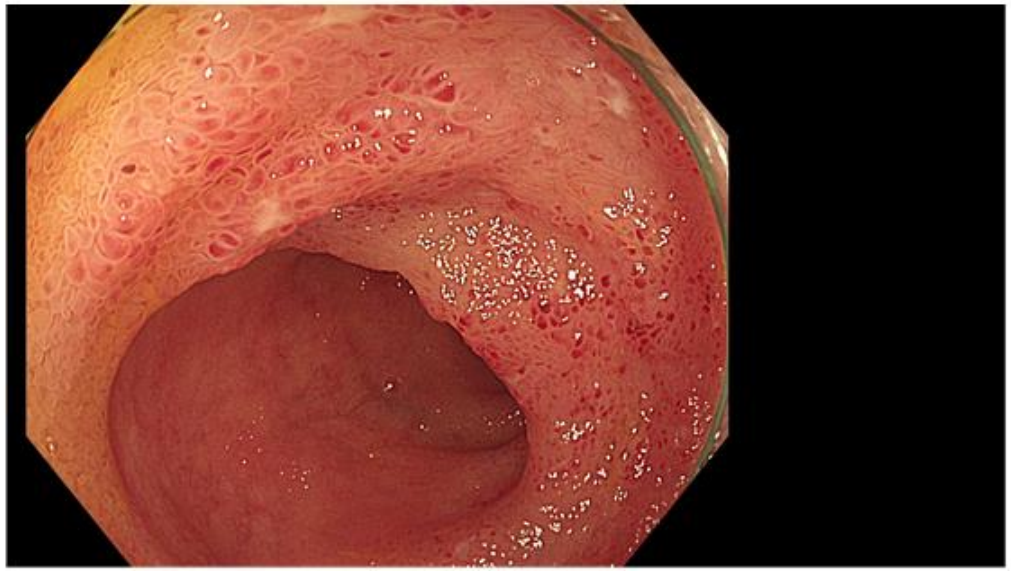
Smoking cessation

Mental health care plan

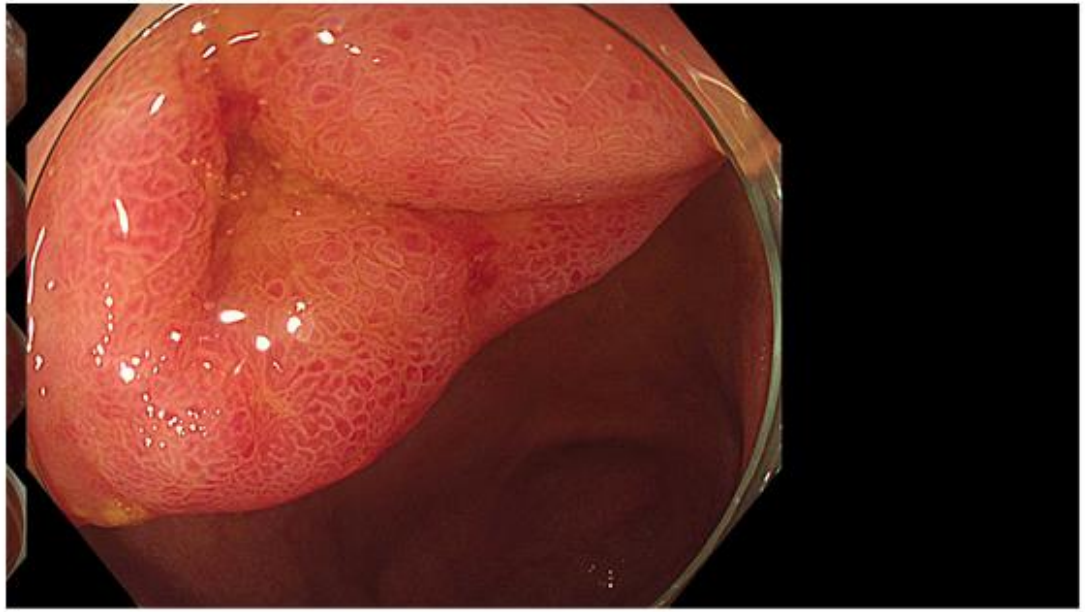
Contact in the event of flare for consideration of earlier IBD clinic visit +/- colonoscopy or flexible sigmoidoscopy for documentation of flare

IBD and diet

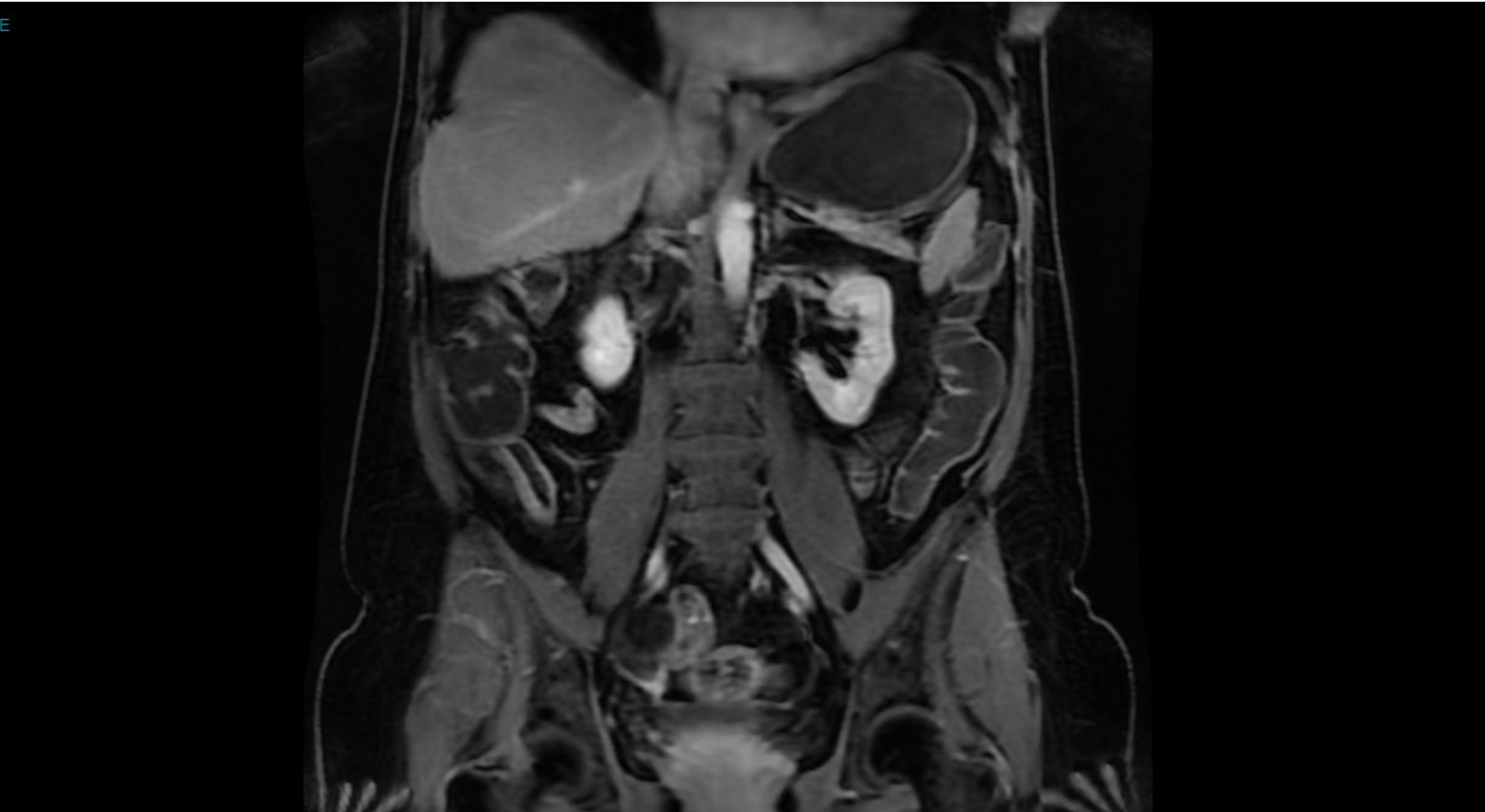
- 55F diarrhoea, now resolved, no NSAIDs, non-specific inflammation without features of chronicity on histology



1 Terminal ileum



4 Ileo-caecal Valve



IBD Diet Therapy

- Topical
- Exclusive enteral nutrition
  - Usually with polymeric formula for 6-8 weeks
  - To induce remission and as pre-operative nutritional therapy in Crohn's disease
  - No immunosuppression or corticosteroid exposure

- EEN actually decreases:
  - Bacterial diversity
  - Butyrate production
  - Protective species, *F. prausnitzii, Prevotella* spp.

IBD Diet Therapy

No evidence for restriction or supplementation of fibre in IBD

However, a broad, healthy high fibre diet is good for health outcomes and constipation avoidance

Crohn's disease exclusion diet (CDED)

CD-TREAT

Ulcerative colitis

Table 6. Expenditure on food during the phases of CDED (2000 kcal/day).

	CDED Phase 1	CDED Phase 2	CDED Maintenance Phase
Breakfast	Modulen ®(250 mL) 3 Banana pancakes (1 banana + 1 egg)	Modulen®(250 mL) Wholewheat bread (1 slice) with olive oil and tomato slices	Modulen®(250 mL) Wholewheat bread (1 slice) with olive oil and tomato slices
Snack	Modulen® (350 mL)	Modulen® (250 mL) Carrot oat muffins (1 egg)	Modulen® (250 mL) 1 pear
Lunch	Homemade potato chips Chicken meatballs (100 g) with homemade tomato sauce 1 banana	Chickpeas (20 g) salad with tuna (1 can), 1 boiled egg, avocado (1/3) and sweet potato (1/2) 1 banana	Quinoa salad (20 g) with tomato and onion Grilled salmon (120 g) 1 apple
Snack	Smoothie: Modulen® (350 mL) and apple	Sliced apple with almond butter (10 g)	Yogurt (125 g)
Dinner	Baked chicken breast (150 g) Baked potato and carrot	Homemade beef burger (100 g) Homemade chips potato (1 potato) 1 banana	Spanish omelette (1 egg, 1 potato, onion) Roasted peppers 1 banana
Price	€3.06	€3.93	€3.95
Modulen IBD®	€20	€10	€10

Herrador-López M, Martín-Masot R, Navas-López VM. EEN Yesterday and Today … CDED Today and Tomorrow. *Nutrients*. 2020; 12(12):3793. https://doi.org/10.3390/nu12123793

Excellent GP IBD resources

MedicineToday 2023; 24(3): 400-400

KEY POINTS

- Alarm symptoms, elevated inflammatory markers and/or elevated faecal calprotectin warrant referral to a gastroenterologist.
- Many treatment options are available for patients. Patients are often undertreated or inappropriately given repeated corticosteroid therapy.
- Early and aggressive treatment for some patients is important to achieve control of inflammation and reduce complications.
- All pregnant patients with IBD should be referred to a gastroenterologist. Most medications can be continued through conception, pregnancy and breastfeeding.
- Anxiety and depression are common in patients with IBD, particularly in the first year after diagnosis.

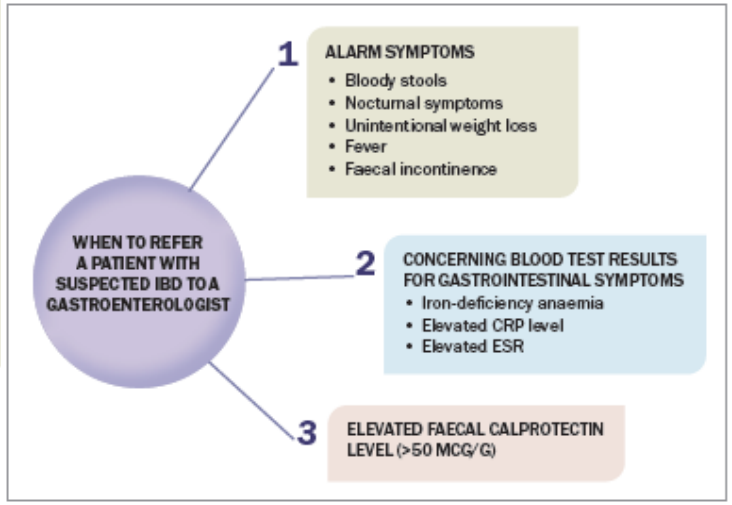


Figure 1. When to refer to a gastroenterologist for investigation of suspected inflammatory bowel disease.

Abbreviations: IBD = inflammatory bowel disease; CRP = C-reactive protein; ESR = erythrocyte sedimentation rate.

Inflammatory bowel disease

Causes, symptoms and treatment

GEORGE TAMBAKIS MB BS (HONS)
EMILY WRIGHT MB BS (Hons), PhD, FRACP

Inflammatory bowel disease (IBD) is characterised by chronic inflammation of the gastrointestinal tract. The recognition of alarm symptoms, raised levels of inflammatory markers or an elevated faecal calprotectin level should prompt referral from a general practitioner to a gastroenterologist for appropriate assessment and treatment.

Inflammatory bowel disease (IBD), which comprises ulcerative colitis (UC) and Crohn's disease, represents a spectrum of chronic inflammatory conditions affecting the gastrointestinal tract. The incidence and prevalence of IBD has been increasing worldwide for the past several decades, and Australia has some of the highest incidence and prevalence rates of IBD in the world.[1,2]

Over the same time period, several novel therapies have been added to our treatment armamentarium, including biologic agents, small-molecule inhibitors, dietary treatment and microbial therapy, as well as stem cell therapy and laser surgery for perianal disease. As treatments have improved, the treatment targets have evolved, with an emphasis on better disease control and standardisation of objective measures of disease activity. This 'treat-to-target' approach aims to achieve biochemical normalisation and endoscopic healing, which in turn reduces corticosteroid use, hospitalisation and surgery in patients with IBD. In the longer term, this approach may alter the natural course of the disease. This article provides an overview of the causal factors and considerations for the diagnosis of IBD, followed by a discussion of management and treatment of the disease.

MedicineToday 2023; 24(3): 400-400

Dr Tambakis is a Gastroenterology Registrar in the Department of Gastroenterology, St Vincent's Hospital Melbourne, Melbourne. Assistant Professor Wright is a Gastroenterologist in the Department of Gastroenterology, St Vincent's Hospital Melbourne, and is a principal research (NHMRC) fellow at The University of Melbourne, Melbourne, Vic.

Natural history and epidemiology

IBD is increasingly prevalent in developed countries, while newly industrialised countries are experiencing an accelerated incidence.1 Australia has one of the highest incidence rates of IBD

IBD for GPs and Physicians

https://meded.gutsmart.com.au/signin/

Inflammatory bowel disease (IBD) is estimated to affect 100,000 Australians. Given the challenges of integrating multidisciplinary IBD care across a variety of healthcare sectors, management is often suboptimal and lacks continuity. If not managed well, IBD can significantly impact a person's quality of life. Crohn's & Colitis Australia (CCA) is partnering with Australian General Practice Accreditation Limited (AGPAL) and the Gastroenterological Society of Australia (GESA) to deliver **IBD for GPs and Physicians** as part of the IBD GP Aware project.

IBD for GPs and Physicians is designed to provide general practitioners, general physicians, gastroenterologists and surgeons with IBD-specific foundational and advanced knowledge that you can apply in your practice. Create an account to access learning materials which includes:

- Online self-directed modules
- Workshops
- Webinars
- Resources
- Self-directed modules and workshops have CPD points allocated

-

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Inflammatory bowel disease GP Aware consortium

Crohn's & Colitis Australia | AGPAL | GESA

WORKSHOP 1

THE GP'S ROLE IN EARLY DETECTION OF CROHN'S DISEASE AND ULCERATIVE COLITIS

TUESDAY 12 SEPTEMBER 2023

6.30PM - 8:00PM

REGISTER HERE

WORKSHOP 2

THE GP'S ROLE IN EARLY DETECTION OF CROHN'S DISEASE AND ULCERATIVE COLITIS

TUESDAY 07 MARCH 2023

7PM - 8:30PM (AEDT)

REGISTER HERE

WORKSHOP 3

THE GP'S ROLE IN EARLY DETECTION OF CROHN'S DISEASE AND ULCERATIVE COLITIS

TUESDAY 21 MARCH 2023

7PM - 8:30PM (AEDT)

REGISTER HERE

10:29 AM
21/03/202

https://www.gesa.org.au/education/clinical-information/; https://crohnsandcolitis.org.au/advocacy/our-projects/gp-aware/

Questions please

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Advance Access publication March 17, 2021
ECCO Guideline/Consensus Paper

OXFORD

JCC
JOURNAL of CROHN'S and COLITIS

ECCO Guideline/Consensus Paper

ECCO Guidelines on the Prevention, Diagnosis, and Management of Infections in Inflammatory Bowel Disease

T. Kucharzik,[a] P. Ellul,[b] T. Greuter,[c] J. F. Rahier,[d] B. Verstockt,[e] C. Abreu,[f] A. Albuquerque,[g] M. Allocca,[h] M. Esteve,[i] F. A. Farraye,[j] H. Gordon,[k] K. Karmiris,[l] U. Kopylov,[m] J. Kirchgesner,[n] E. MacMahon,[o] F. Magro,[p] C. Maaser,[q] L. de Ridder,[r] C. Taxonera,[s] M. Toruner,[t] L. Tremblay,[u] M. Scharl,[v] N. Viget,[w] Y. Zabana,[i] S. Vavricka[v]; on behalf of the European Crohn's and Colitis Organisation [ECCO]

[a]Department of Gastroenterology, Klinikum Lüneburg, University of Hamburg, Lüneburg, Germany [b]Department of Medicine, Division of Gastroenterology, Mater Dei Hospital, Msida, Malta [c]University Hospital Zürich, Department of Gastroenterology and Hepatology, Zürich, Switzerland, and Division of Gastroenterology and Hepatology, Centre

Case 1 ASUC: Discussion points

- What has happened here?
- Patient factors:

- Service factors:

Case 1 ASUC: Discussion points

- What has happened here?
- Patient factors:
  - Appears well on general inspection
  - Presents as a young woman, recent immigrant ?non-organic disease
- Service factors:
  - ED demand during COVID-19 spike
  - Seen by an intern on representation, discussed with senior
  - Lack of experience or discussion with senior GE on call for advice
  - Time taken for GP referral to be received and processed for triage