Acute Management of Inflammatory Bowel Disease (IBD)

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Conflict of Interest Statement

Received honoraria from Takeda, Amgen, Bristol Myers Squib, Lilly

Structure of Talk

- Assessment of the patient with IBD presenting to ED
- Service provision for patients with IBD
- Management of acute severe ulcerative colitis
- Management of acute flare of Crohn’s

- 35 year old female accountant presents with 3 weeks of bloody diarrhoea 8 times a day, abdominal cramps, weight loss 2 kg
- Previously healthy, no recent travel
- FBP 124 g/l; CRP 50; albumin 35
- Abdominal Xray normal

What is your differential diagnosis?

What investigations would you do?

How would you manage her?

- 40 year old male IT specialist working from home presents with 3 weeks of bloody diarrhoea 8 times a day, abdominal cramps, weight loss 2 kg
- History of ulcerative colitis diagnosed 2020 controlled on Octasa 2.4 g daily
- FBP 104 g/l; CRP 50; albumin 34
- Abdominal Xray – normal

What is your differential diagnosis?

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Assessment of the Patient with IBD Presenting to ED with Diarrhoea

Definition of Diarrhoea Presenting to the Acute Take

Diarrhoea is defined as the passage of loose or watery stools, typically at least three time in a 24 hour period

- Acute – 14 days or fewer in duration
- Persistent diarrhoea – more than 14 but fewer than 30 days in duration
- Chronic – more than 30 days in duration

Differential Diagnosis of Acute Diarrhoea Presenting to Hospital

- Infection
- Inflammatory bowel disease
- Medication – NSAIDs, antibiotics
- IBS
- Ischaemic colitis
- Diverticulitis
- Colorectal carcinoma

Causes of acute infectious diarrhea in adults in resource-rich settings

	Likely pathogens	Mean incubation period	Classic/common food sources	Other epidemiologic clues
Watery diarrhea	Norovirus	24 to 48 hours	Shellfish, prepared foods, vegetables, fruit	▪ Outbreaks in: • Restaurants • Health care facilities • Schools and childcare centers • Cruise ships • Military populations
	Clostridioides (formerly *Clostridium*) *difficile**	N/A	N/A	▪ Antibiotic use ▪ Hospitalization ▪ Cancer chemotherapy ▪ Gastric acid suppression ▪ Inflammatory bowel disease
	Clostridium perfringens	8 to 16 hours	Meat, poultry, gravy, home-canned goods	
	Enterotoxigenic *Escherichia coli*	1 to 3 days	Fecally contaminated food or water	▪ Travel to resource-limited settings
	Other enteric viruses (rotavirus, enteric adenovirus, astrovirus, sapovirus)	10 to 72 hours	Fecally contaminated food or water	▪ Daycare centers ▪ Gastroenteritis in children ▪ Immunocompromised adults
	Giardia lamblia	7 to 14 days	Fecally contaminated food or water	▪ Daycare centers ▪ Swimming pools ▪ Travel, hiking, camping (particularly when there is contact with water in which beavers reside)
	Cryptosporidium parvum	2 to 28 days	Vegetables, fruit, unpasteurized milk	▪ Daycare centers ▪ Swimming pools and recreational water sources ▪ Animal exposure ▪ Chronic diarrhea in advanced HIV infection
	Listeria monocytogenes	1 day (gastroenteritis)	Processed/delicatessen meats, hot dogs, soft cheese, pâtés, and fruit	▪ Pregnancy ▪ Immunocompromising condition ▪ Extremes of age
	Cyclospora cayetanensis	1 to 11 days	Imported berries, herbs	▪ Chronic diarrhea in advanced HIV infection

Inflammatory diarrhea (fever, mucoid or bloody stools)¶	Nontyphoidal *Salmonella*	1 to 3 days	Poultry, eggs, and egg products, fresh produce, meat, fish, unpasteurized milk or juice, nut butters, spices	▪ Animal contact (petting zoos, reptiles, live poultry, other pets) ▪ Travel to resource-limited settings
	Campylobacter spp	1 to 3 days	Poultry, meat, unpasteurized milk	▪ Travel to resource-limited settings ▪ Animal contact (young puppies or kittens, occupational contact)
	Shigella spp	1 to 3 days	Raw vegetables	▪ Daycare centers ▪ Crowded living conditions ▪ Men who have sex with men ▪ Travel to resource-limited settings
	Enterohemorrhagic *E. coli*	1 to 8 days	Ground beef and other meat, fresh produce, unpasteurized milk and juice	▪ Daycare centers ▪ Nursing homes ▪ Extremes of age
	Yersinia spp	4 to 6 days	Pork or pork products, untreated water	▪ Abnormalities of iron-metabolism (eg, cirrhosis, hemochromatosis, thalassemia) ▪ Blood transfusion
	Vibrio parahemolyticus	1 to 3 days	Raw seafood and shellfish	▪ Cirrhosis
	Entamoeba histolytica	1 to 3 weeks	Fecally contaminated food or water	▪ Travel to resource-limited settings ▪ Men who have sex with men

* *Clostridioides* (formerly *Clostridium*) *difficile* can also present with inflammatory diarrhea.

¶ Pathogens that are more classically associated with inflammatory diarrhea can also cause watery diarrhea, particularly early in the course of infection.

Relevant History

Crohn's Disease

- Extent of gut involvement
- Complications – stricture, abscess
- Surgery
- Course of disease
- Most recent investigations
- Previous treatment and reasons for stopping
- Current treatment

Ulcerative Colitis

- Extent of colon involvement
- Course of disease
- Most recent investigations
- Previous treatment and reasons for stopping
- Current treatment

Baseline Investigations

- Full blood picture
- CRP
- Urea and electrolytes
- Liver function tests
- Stool infection screen including C Diff
- Abdominal Xray
- Flexible * sigmoidoscopy

*in selected individuals

- 35 year old female accountant presents with 3 weeks of bloody diarrhoea 8 times a day, abdominal cramps, weight loss 2 kg
- Previously healthy, no recent travel
- FBP 124 g/l; CRP 50; albumin 35
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What is your differential diagnosis? Infection v first presentation of IBD

What investigations would you do? Baseline investigations. If doesn't settle after 24 hours, for inpatient flex sigmoidoscopy + biopsies

How would you manage her? Fluid resus if necessary, correct electrolytes, low molecular weight heparin, stool chart, ?empirical antibiotics

Consider Empirical Antibiotics if they have the following:

Severe illness

Temperature > 38 C

Signs or symptoms of hypovolaemia

≥ 6 unformed stools in 24 hours

Severe abdominal pain (CT abdomen/pelvis)

High risk patient features

Age ≥ 70 years

Serious comorbidities, eg cardiac disease, immunocompromised

- 40 year old male IT specialist working from home presents with 3 weeks of bloody diarrhoea 8 times a day, abdominal cramps, weight loss 2 kg
- History of ulcerative colitis diagnosed 2020 controlled on Octasa 2.4 g daily
- FBP 104 g/l; CRP 50; albumin 34
- Abdominal Xray – normal

What is your differential diagnosis? Infection v acute severe ulcerative colitis

What investigations would you do? Baseline investigations + inpatient flex sigmoidoscopy + biopsies within 24 hours

How would you manage him? Fluid resus if necessary, correct electrolytes, low molecular weight heparin, stool chart, IV hydrocortisone 100 mg 6 hourly

Service Provision

IBD UK
Strategy
Partnership
Quality Improvement

Working together for everyone affected by Inflammatory Bowel Disease

IBD Standards | IBD UK Benchmarking | Reports | Resources for IBD Services | About IBD UK

IBD UK Standards

Statement 6.1

Patients requiring inpatient care relating to their IBD should be admitted directly, or transferred within 24-48 hours, to a designated specialist ward area under the care of a consultant gastroenterologist and/or colorectal surgeon.

Statement 6.3

Inpatients with IBD must have 24-hour rapid access to critical care services if needed.

IBD UK Standards

Statement 6.4

Children and adults admitted as inpatients with acute severe colitis should have daily review by appropriate specialists.

Statement 6.9

All IBD inpatients should have access to an IBD nurse specialist.

IBD UK Standards

Statement 6.2

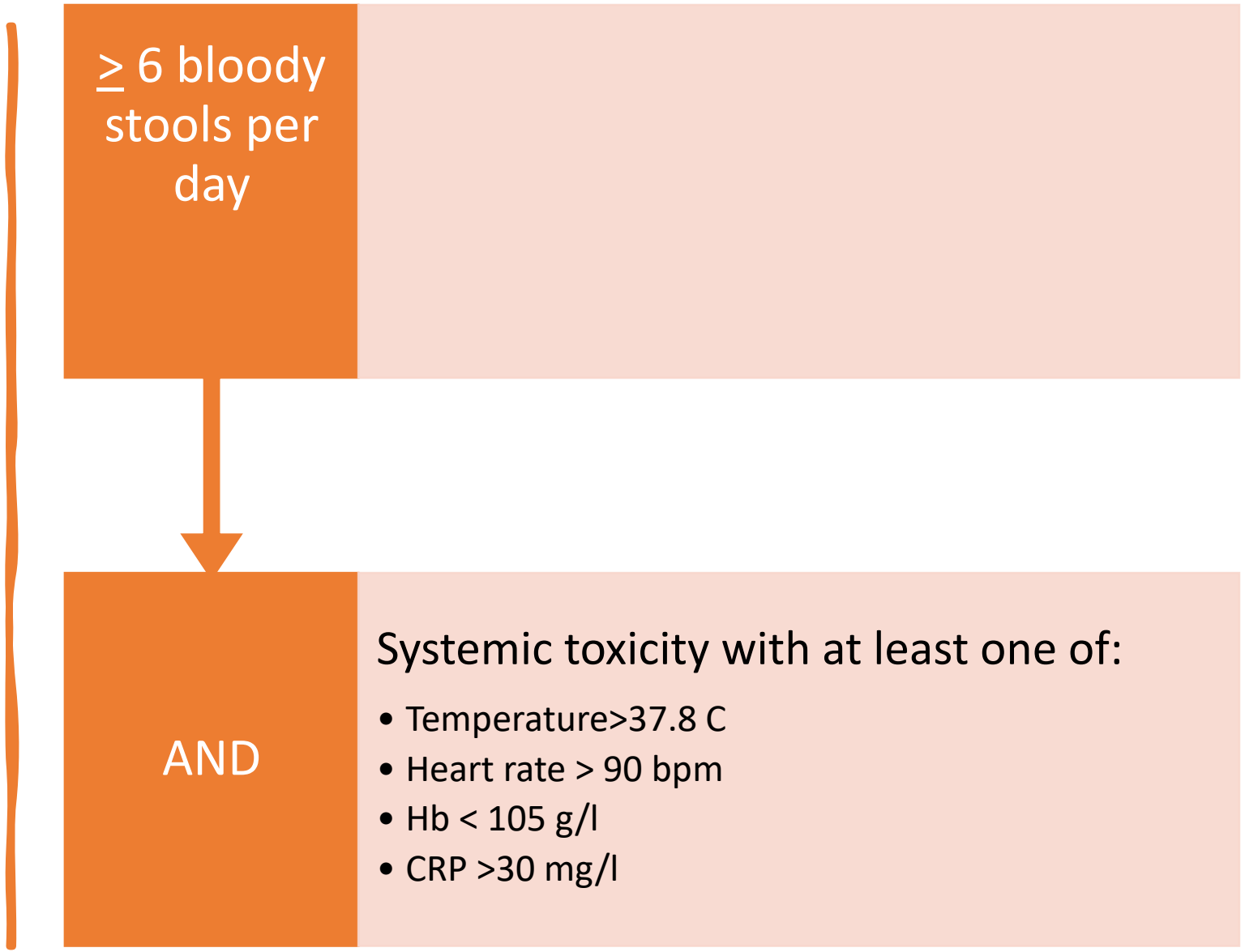
Where ensuite rooms are not available, inpatients with IBD should have a minimum of one easily accessible toilet per three beds on a ward.

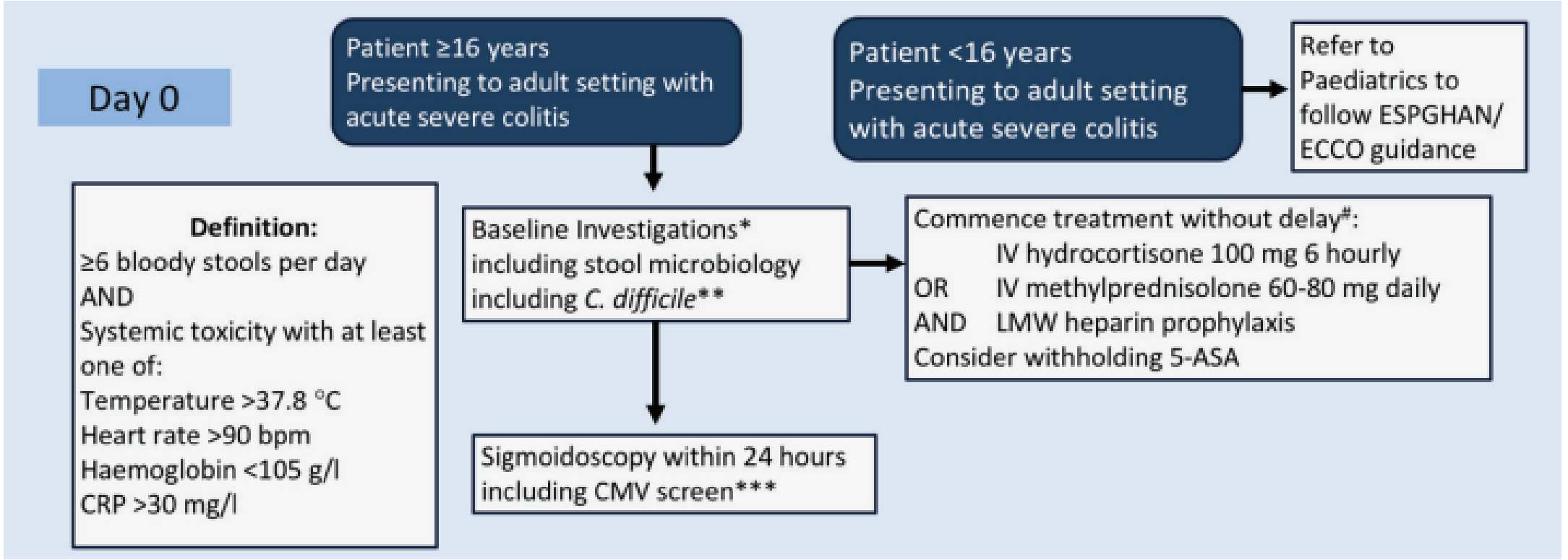
Statement 6.8

On admission, patients with IBD should have an assessment of nutritional status, mental health and pain management using validated tools and be referred to services and support as appropriate.

Management of Acute Severe Ulcerative Colitis

Definition of Acute Severe Ulcerative Colitis



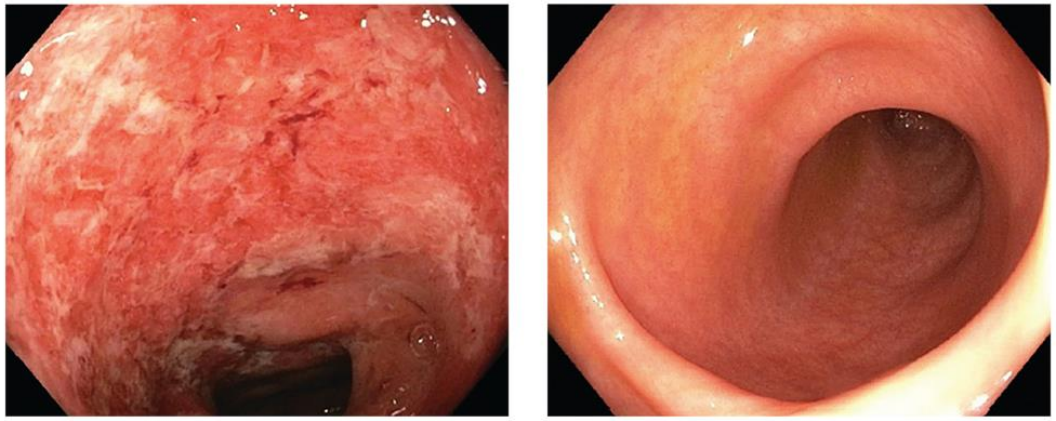


Daily throughout stay: Senior gastroenterology review; FBC, U&E, CRP, imaging + surgical review if continued systemic toxicity, severe abdominal pain, oedema with low albumin or suspicion of toxic megacolon or perforation. CT preferable to abdominal X-ray if severe complications, notably perforation, are suspected

Toxic megacolon

Flexible Sigmoidoscopy

- Confirm diagnosis
- Histology
- Evaluate for CMV
- Prognosis



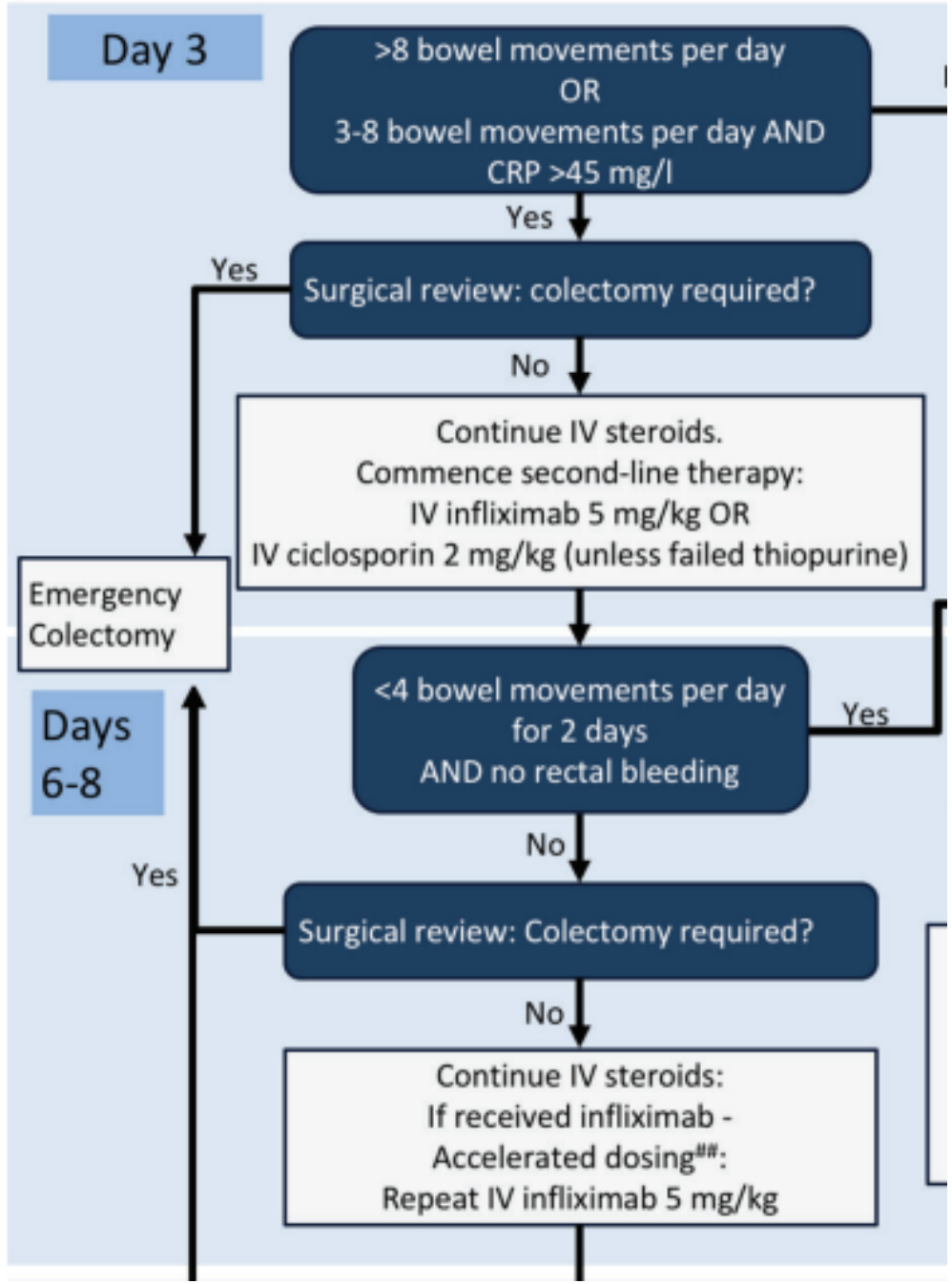
Figures 2a and b. a (left). Acute severe ulcerative colitis prior to anti-TNF therapy. b (right). Endoscopic remission during anti-TNF therapy.

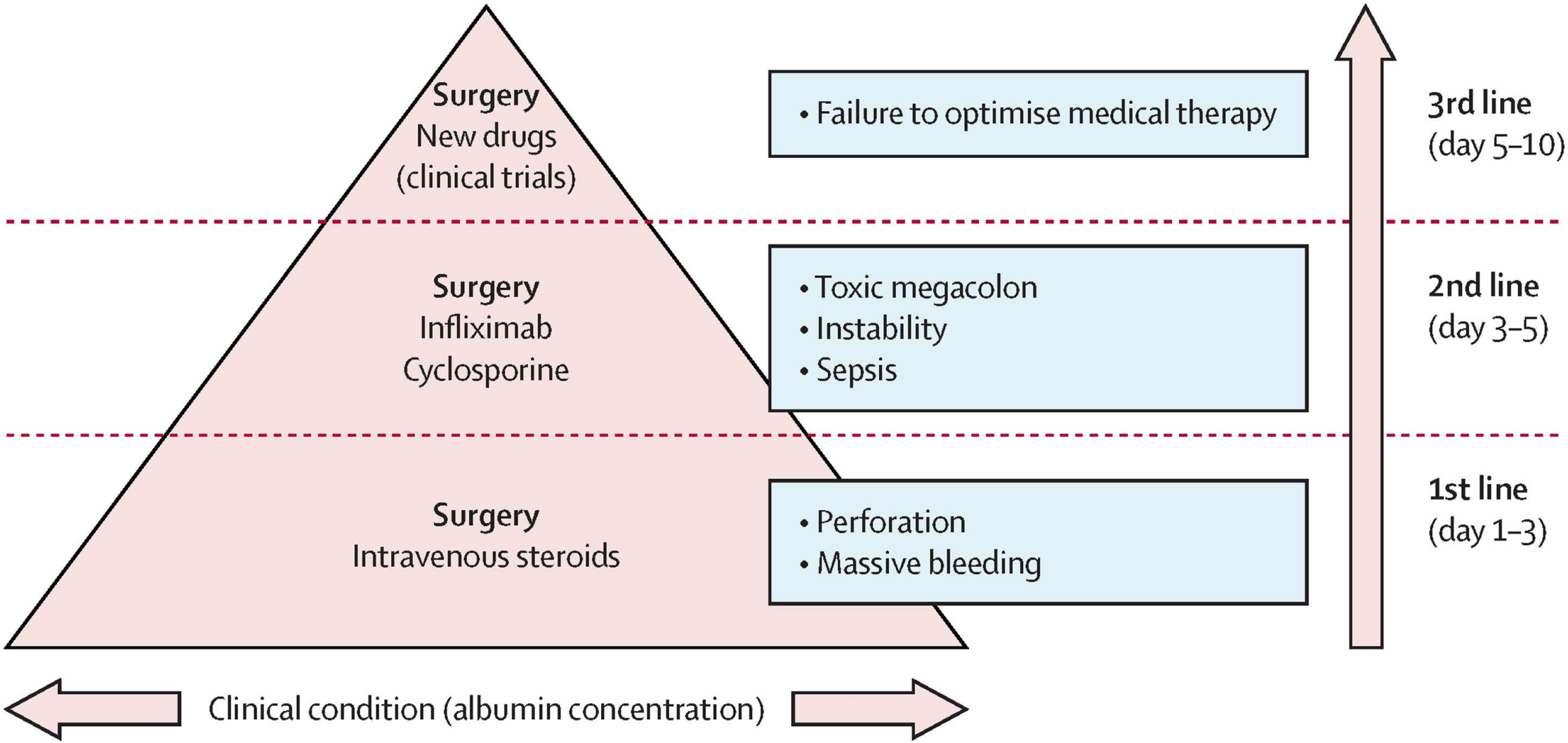
Abbreviation: TNF = tumour necrosis factor.

Table 5 Indices predictive of failure of corticosteroid therapy for ASUC

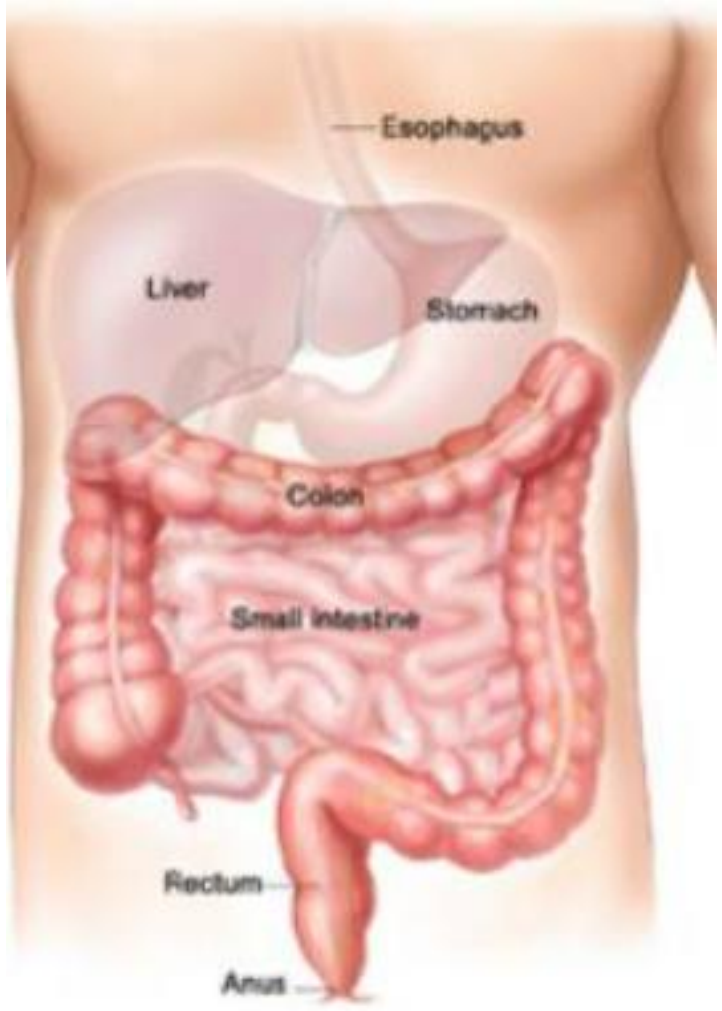
Assessment at day 3 of corticosteroids			Chance of treatment failure*	Reference
BO >8/day or BO 3–8/day and CRP >45 mg/L			85%	Travis *et al*[1281]
Mean stool frequency day 1–3		Total:		Ho *et al*[1282]
<4	0			
4–6	1	0–1	11%	
7–9	2	2–3	45%	
>9	4	≥4	85%	
Transverse colonic dilatation on abdominal X-ray ≥5.5 cm	4			
Albumin on admission <30 g/L	1			
Number of stools in 24 hours + (0.14×CRP (mg/L)) >8			72%	Lindgren *et al*[1283]
CRP/albumin ratio >0.85 combined plus stool frequency >3			74%	Gibson *et al*[223]

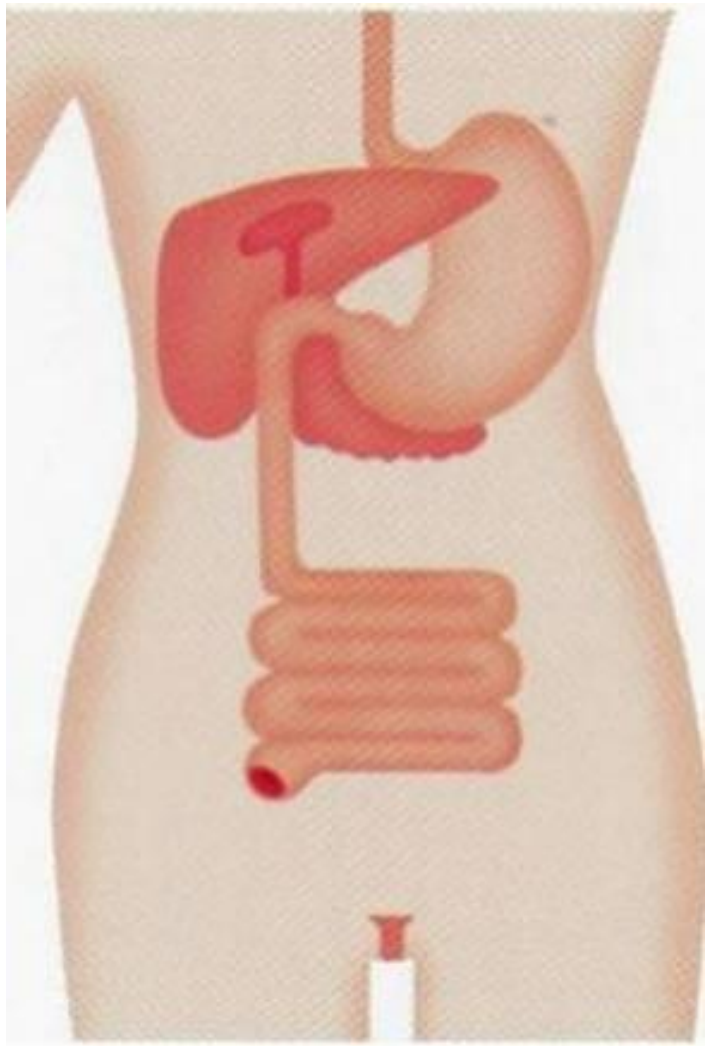
*Variably defined as failure of steroid therapy or risk of inpatient colectomy.


Day 3
>8 bowel movements per day
OR
3-8 bowel movements per day AND
CRP >45 mg/l
Yes
Yes
Surgical review: colectomy required?
No
Continue IV steroids.
Commence second-line therapy:
IV infliximab 5 mg/kg OR
IV ciclosporin 2 mg/kg (unless failed thiopurine)
Emergency
Colectomy
Days
6-8
<4 bowel movements per day
for 2 days
AND no rectal bleeding
Yes
No
Yes
Surgical review: Colectomy required?
No
Continue IV steroids:
If received infliximab -
Accelerated dosing##:
Repeat IV infliximab 5 mg/kg


Surgery
New drugs
(clinical trials)
Surgery
Infliximab
Cyclosporine
Surgery
Intravenous steroids
• Failure to optimise medical therapy
• Toxic megacolon
• Instability
• Sepsis
• Perforation
• Massive bleeding
3rd line
(day 5–10)
2nd line
(day 3–5)
1st line
(day 1–3)
Clinical condition (albumin concentration)

Subtotal colectomy with end ileostomy and rectal stump





Management of Acute Flare of Crohn’s

Investigating Patients with Severe Flare of Crohn's

History and exam

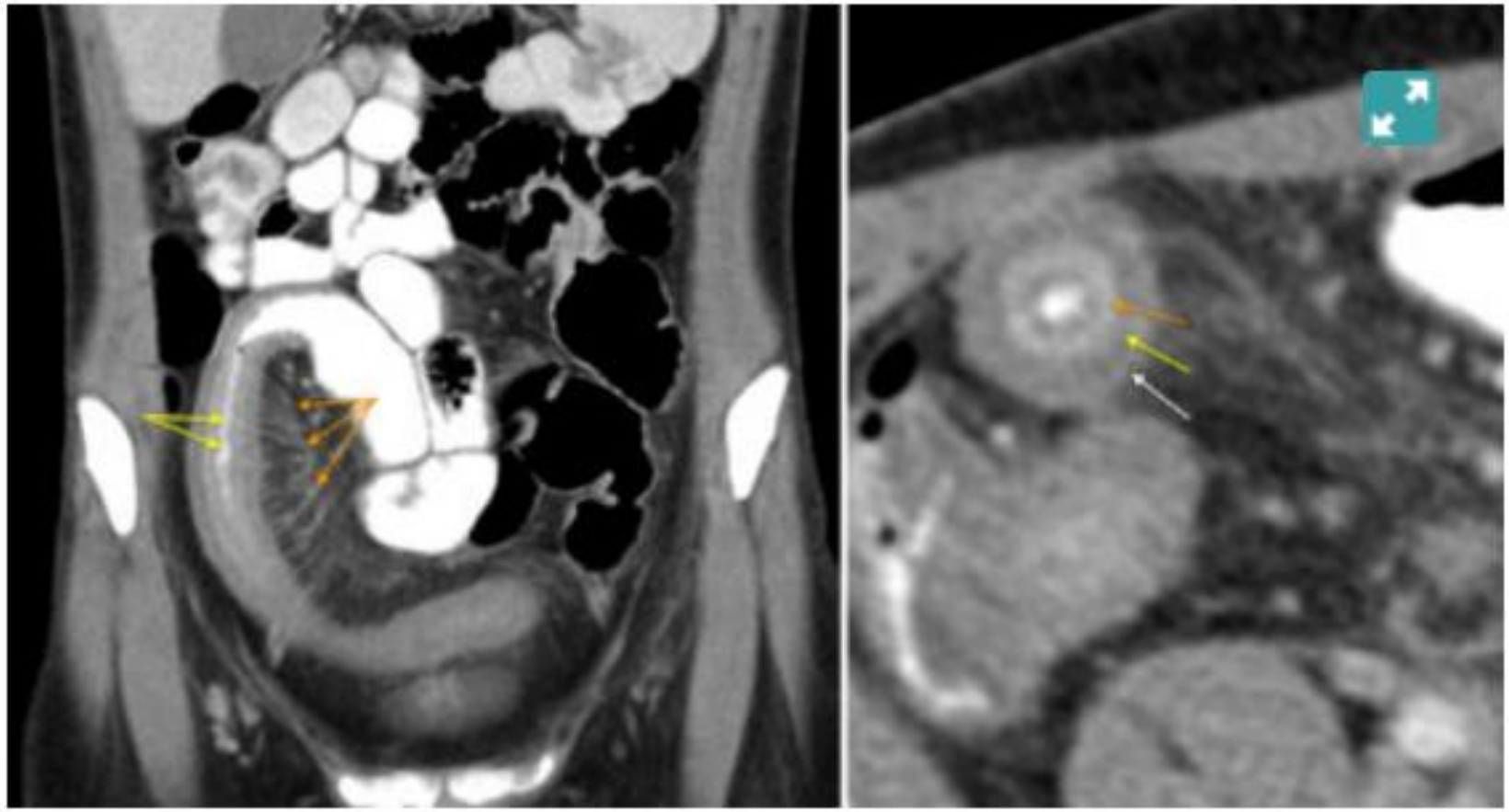
FBP, CRP, U&E, LFTs, abdominal Xray, stools for infection and C diff

CT abdomen and pelvis if:

- Clinical suspicion of stricturing, abscess, perforation, fistula
- No recent imaging or endoscopy

MRI pelvis and rectum if perianal disease suspected

CT appearances of Crohn’s



Initial Management of Severe Flare of Crohn's

- Low molecular weight heparin
- IV hydrocortisone 100 mg 6 hourly if systemic toxicity with at least one of the following:
  - Temperature >37.8 C
  - Heart rate > 90 bpm
  - Hb <105 g/l
  - CRP > 30 mg/ml
- Consider advanced therapy – ie start new, or switch therapy
- Surgical opinion if complications such as stricture, obstruction, fistula, abscess, perianal disease, not responding to medical therapy

Summary

- Differential diagnosis of patients with IBD presenting with acute diarrhoea includes infection eg C diff
- Patients with an acute flare of IBD should be under the care of a consultant gastroenterologist and/or colorectal surgeon
- They should be transferred to a designated specialist ward/area within 24-48 hours
- Patients with acute severe UC not responding to medical therapy within 3 days should be considered for colectomy
- Patients with severe flare of Crohn's should be considered for CT if there is suspicion of stricturing, abscess, perforation or fistula

Thank you