Inflammatory Bowel Disease (IBD)

Disclaimer

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Background

About Inflammatory Bowel Disease

➢ Inflammatory bowel disease (IBD) includes Crohn’s disease (CD), ulcerative colitis (UC), and indeterminate colitis (IC).

➢ All are characterised by inflammation of the gut mucosa leading to symptoms such as diarrhoea, rectal bleeding, abdominal pain, and weight loss.

➢ The location and type of inflammation distinguishes CD from UC:
  o UC affects the colon only, with continuous mucosal inflammation extending proximally from the anus.
  o CD can affect the terminal ileum and/or colon with transmural inflammation and is often discontinuous.
  o IC or IBD-U (IBD-type unspecified) is when the bowel is inflamed but there are no features to definitively diagnose UC or CD.

➢ Peak incidence is between 15 and 35 years, but may occur at any age.

➢ Diagnosis is made by colonoscopy and biopsy, with further radiological investigations as required.

➢ Australia has one of the highest reported rates of IBD in the world and clinicians should have a low index of suspicion for investigating appropriate symptoms.

Assessment

Practice Point – Avoiding delay in diagnosis

The biggest delay in making a diagnosis of IBD occurs because of not suspecting it.

Take a history:

• Assess symptoms and their effect on quality of life e.g., work, social life, relationships, and mental health.

Symptoms

IBD shares symptoms with other more common conditions:

➢ Diarrhoea:
  o Commonly bloody in ulcerative colitis (UC).
  o Can be associated with urgency and tenesmus as UC gets more severe (due to rectal inflammation).
  o The need to pass stool at night, awakening from sleep or faecal incontinence is highly suggestive.

➢ Abdominal pain:
Not a good discriminating symptom as it is present in many other conditions e.g., IBS, infectious gastroenteritis.

If peritonism is present on physical examination, this is a medical emergency.

- Fever – more often present in CD, but if UC is severe, can also be noted.
- Weight loss – more common in CD.
- Malaise, anorexia, and vomiting – more common in CD.
- Tachycardia – non-specific for IBD, but if present it is a sign of severity.

Consider **differential diagnosis**

**Differential diagnoses**

- Infectious gastroenteritis – common, short-lived, abrupt onset, symptoms at their worst soon after starting, contacts with similar illness, travel.

- Irritable bowel syndrome (IBS). See Crohns and Colitis – [Differentiating between IBS and IBD](#) and GESA – [IBS4GPS](#):
  - 50 times more common than IBD.
  - Long-standing, with no **warning signs**, fluctuating severity, no abnormal blood tests.

**Warning signs of IBD**

- New symptoms < 6 months
- Rectal bleeding
- Unexplained weight loss or fever
- Abdominal mass
- Nocturnal symptoms
- Severe perianal pain or discharge
- Family history of IBD
- New symptoms in a patient > 50 years old

- Nocturnal symptoms are unusual.

- **Faecal calprotectin** is low and been found to be highly accurate in this setting precluding the need for more expensive and invasive tests such as colonoscopy.

**Faecal calprotectin**

Faecal calprotectin is a:

- recommended test, but not yet funded by the MBS.
- sensitive, non-invasive marker of intestinal inflammation, and can be useful in the following settings:
  - Differentiating between those with and without current inflammation in the lower gut needing further evaluation.
  - Distinguishing between people with IBS and IBD. Can cost between $80 to $100 – but easier than a colonoscopy. Particularly useful for rural patients where access to colonoscopy can involve travel and extended waiting times.
  - It is used to monitor IBD patients on therapy to determine whether there is current disease activity and risk of relapse, response to treatment.
• There is potential for false positive results in infectious diarrhoea in the absence of IBD. Therefore do not use where diarrhoea is present for < 6 weeks.

• It is not useful when there is PR bleeding from any cause as it will be high.

➢ Coeliac disease – where there is diarrhoea without blood as the predominant feature with or without malabsorption. More common than IBD.

➢ Colorectal cancer:
  o Also presents with rectal bleeding, abdominal pain, significant weight loss, and sometimes urgency.
  o Increasingly common from age 50 years.

• Ask about: family history, smoking, vaccinations, and medications – especially NSAIDS causing enteropathy, antibiotics, and laxatives.

Smoking

➢ Check timing relative to IBD symptoms as there is a paradoxical relationship between smoking and IBD.

➢ Smoking increases the risk of developing CD and reduces the risk of developing UC.

➢ Smoking cessation can precipitate UC.

2. Perform examination – check weight, BMI, vital signs, and abdomen. Consider any:

• complications of IBD.

  Complications

  ➢ Intestinal obstruction – due to strictures, more common in CD

  ➢ Fistulae – often perianal, in CD

  ➢ Abscesses – in CD

  ➢ Nutritional deficiencies and malabsorption – in CD. (Many patients manage their IBD with dietary restrictions).

  ➢ Anaemia – due to blood loss and decreased nutrient intake – in CD and UC

  ➢ Acute abdomen (shock and peritonism)

  ➢ Sepsis

• extra-intestinal manifestations of IBD

  Extra-intestinal manifestations of IBD

  ➢ Skin e.g., erythema nodosum, pyoderma gangrenosum

  ➢ Arthritis

  ➢ Eye e.g., episcleritis, iritis

  ➢ Mouth ulcers

  ➢ Night sweats

  ➢ Primary sclerosing cholangitis
3. Arrange investigations

**Investigations**

- **Initial tests** – there is no one test which can reliably diagnose every case of IBD, particularly if mild disease. In suspected IBD, tests are aimed at differentiating IBD from the main differential diagnoses, particularly IBS, as well as helping to define current IBD activity and severity.

**Initial tests**

- **FBE** – may show anaemia usually iron deficiency (B12 deficiency can also occur if severe or long segment ileal disease).
- **CRP or ESR** – may be helpful if elevated but normal values do not exclude inflammation (especially in UC where they are usually normal except in severe disease).
- **E/LFT** – low albumin due to inflammation and malnutrition. Elevated creatinine/urea due to dehydration. Electrolyte disturbances due to poor diet and diarrhoea with low magnesium, selenium, potassium and zinc also possible.
- **Coeliac screen** – if no blood in the stool and no abdominal mass.
- **Faecal culture (ova and parasites if appropriate) with PCR testing for faecal pathogens (only appropriate if symptoms < 6 weeks).**
- **Clostridium difficile (C. diff) toxin** (when acute increase in symptoms).
- **Iron studies** – with low ferritin and transferrin saturation. Ferritin may be normal or elevated in the setting of inflammation. Order this test if there is anaemia or abnormal red cell indices.
- **Faecal occult blood** – there is no role for this test in the investigation of IBD.

- Consider:
  - **faecal calprotectin**
    - Faecal calprotectin is a:
      - recommended test, but not yet funded by the MBS.
      - sensitive, non-invasive marker of intestinal inflammation, and can be useful in the following settings:
        - Differentiating between those with and without current inflammation in the lower gut needing further evaluation.
        - Distinguishing between people with IBS and IBD. Can cost between $80 to $100 – but easier than a colonoscopy. Particularly useful for rural patients where access to colonoscopy can involve travel and extended waiting times.
        - It is used to monitor IBD patients on therapy to determine whether there is current disease activity and risk of relapse, response to treatment.
        - There is potential for false positive results in infectious diarrhoea in the absence of IBD. Therefore do not use where diarrhoea is present for < 6 weeks.
        - It is not useful when there is PR bleeding from any cause as it will be high.

- **other investigations** – these are mostly arranged by specialist.

**Other investigations**

- Colonoscopy with ileoscopy – to establish the diagnosis of IBD and assess severity and extent. Screening colonoscopy for dysplasia surveillance.
- Upper gastrointestinal endoscopy – for upper GI symptoms.
- Barium studies – should no longer be ordered as they are insensitive and unnecessary and give a high radiation dose.
- Capsule endoscopy – in limited circumstances.
Abdominal X-ray – can show bowel obstruction and toxic megacolon.
CT abdomen – to assess disease extent and severity and look for complications. USS and MRI are now preferred due to radiation dose.
Intestinal ultrasound: limited availability – recently developed as a tool to monitor IBD.
MR enterography.

Management

First Presentation

1. Arrange immediate gastroenterology referral or admission if:
   - **Acute severe colitis**
     The criteria for an acutely unwell patient with ulcerative colitis (S3 severe) includes:
     - ≥ 6 bloody bowel motions per day, plus
     - ≥ 1 of the following:
       - Temperature > 37.8°C
       - Heart rate > 90 bpm
       - Hb < 105 g/L
       - CRP > 30
       - ESR > 30 mm/hour.
   - Suspected or known Crohn’s disease with acute complications.
     - Bowel obstruction.
     - Sepsis or intra-abdominal or pelvis abscess.

2. Arrange urgent or routine gastroenterology referral and colonoscopy if:
   - known inflammatory bowel disease.
   - strongly suspected inflammatory disease based on history, imaging, or faecal calprotectin.
   - previous endoscopy findings consistent with inflammatory bowel disease.

3. Note treatment by a gastroenterologist involves inducing remission and then maintaining remission with drugs or surgery. The specialist will commonly advise screening and immunisation before starting immunosuppressive therapy.

**Pre-treatment immunisation and screening**

- History and examination for evidence of:
  - past exposure to TB e.g., living in, or travel to, an at-risk country.
  - signs of chronic skin, sinus, dental, lung infections.
  - history of significant bacterial, viral or fungal infections.
  - cervical screening up to date.

- Immunisation history:
  - hepatitis B
  - varicella
  - influenza
  - pneumovax
  - tuberculosis
  - human papilloma virus
  - MMR
  - tetanus
o pertussis
➢ Serological testing:
➢ Consider whether testing is required for hepatitis B and C, varicella, tuberculosis and HIV.
➢ Vaccination as required prior to treatment:
  o Any live vaccines must be given a month prior to commencing immunosuppressive therapy.
  o Consider repeat dTPa and MMR in addition to results of serological testing above.
  o Influenza prior to and annually thereafter commencement of therapy.
  o Pneumococcus with booster if necessary.

Ongoing Management

Ongoing management is usually in association with a gastroenterologist. However, it depends on the severity of IBD and medications used.

1. Advise smoking cessation
   - smoking significantly worsens the course of Crohn's disease.
   - If ulcerative colitis, reduce cautiously as smoking cessation can exacerbate symptoms.

2. Check medications:
   - Compliance, side-effects, and drug monitoring.

3. Consider special issues:
   - **Nutrition** specific for IBD.

   **Nutrition**
   - In active Crohn’s disease, malnutrition with weight loss, protein deficiency, and specific deficiencies in vitamins, minerals, and trace elements are common.
   - Patients in clinical remission are more likely to be malnourished than healthy patients. Malnutrition can coexist with obesity.
   - Malnutrition has a negative impact on clinical course, rate of postoperative complications, and mortality.
   - Encourage a healthy balanced diet. Diet may be helpful in reducing symptoms and lessening the effects of IBD complications.
   - Consider and treat any nutritional deficiencies e.g., iron, vitamin B12, vitamin D. Less common are vitamin K, zinc, and folate deficiencies.
   - If active Crohn’s disease and on a high fibre diet, consider reducing fibre intake.
   - If coexisting functional gut symptoms, consider a low FODMAP diet.
   - Arrange dietitian referral for advice and support.

   - Check bone density as there is a risk of osteoporosis due to repeated courses of prednisolone, or low vitamin D levels.
   - Confidence and self-image. Depression is more frequent in IBD. Consider psychological therapy or counselling.

   - **Extra-intestinal manifestations.**

   **Extra-intestinal manifestations of IBD**
   - Skin e.g., erythema nodosum, pyoderma gangrenosum
   - Arthritis
   - Eye e.g., episcleritis, iritis
   - Mouth ulcers
   - Night sweats
Primary sclerosing cholangitis

- Immunisation in IBD:
  - Patients on immunomodulating drugs (e.g. corticosteroids, azathioprine, methotrexate, or biologics) remain at high risk of opportunistic infections.

**Risk of opportunistic infections**
- Possibility of varicella due to immunosuppression (increased by immunomodulators, long term steroids, and biologics, especially if on > 1 medication).
- Encourage early presentation if unwell.
- Offer patients the opportunity to complete vaccination, particularly live vaccines, prior to starting Immunomodulator therapy or Biologics.
- Offer HPV vaccination to females
- Treat HSV early with topical or oral antiviral therapy to avoid severe exacerbations.

- Ensure vaccination is up-to-date including annual influenza vaccination, and especially prior to commencing immunosuppressive agents and biologics. See Immunisation – Adults and Vaccination of Immunocompromised Persons for further information.

4. Arrange:
- cervical screening (HPV test) – recommended every 3 years in women with IBD.
- regular screening for colorectal cancer.

**Regular screening for colorectal cancer**
- There is an increased risk of colorectal cancer for both ulcerative colitis and Crohn’s disease.
- The main risk is related to the duration, extent, and activity of the disease rather than the type of colitis.
- Commence surveillance colonoscopy 8 to 10 years after the onset of the disease.
- Optimal intervals for surveillance colonoscopy in IBD patients depend upon disease activity and the presence of dysplasia.
- See Algorithm for Colonoscopic Surveillance Intervals – Inflammatory Bowel Disease

5. Encourage patients to participate in a patient support group such as Crohn’s & Colitis Australia.
See also Living with IBD: IBD Toolkit.

**Women and IBD**

1. Discuss contraception
**Contraception**
- Combined oral contraceptive pill (COC) absorption may be reduced if there is small bowel involvement in Crohn’s disease.
- Large bowel involvement does not affect absorption.
- Do not use COC in patients prone to severe hospitalised exacerbations, as their risk of venous thromboembolism (VTE) is increased.
- IBD increases the risk of osteoporosis, and the effect of Depo-Provera on bone density may be additive. Alternative, progestogen-only contraceptives that do not affect bone density may therefore be better.
➢ For more information on contraception in IBD see Sexual and Reproductive Health for Individuals with Inflammatory Bowel Disease: IBD and Contraceptive Choice.

2. Consider preconception planning

Preconception planning
➢ Good control of IBD is the single most important factor to optimising fertility and successful pregnancy. Continue all medications except methotrexate before and during pregnancy. See IBD & Fertility
➢ Methotrexate is an absolute contraindication in pregnancy. Both women and men should delay a pregnancy for at least 3 to 6 months after stopping methotrexate.
➢ Consider using a higher dose of folic acid dose (5 mg) for women taking sulphasalazine or those with malabsorption following small bowel resection.
➢ If planning a pregnancy, arrange urgent or routine gastroenterology referral.
➢ See also:
   ▪ Preconception Assessment
   ▪ The Second European Evidence-Based Consensus on Reproduction and Pregnancy in Inflammatory Bowel Disease

3. Arrange cervical screening (HPV test) – recommended every 3 years in women with IBD.

4. Discuss the use of IBD medications during pregnancy and breastfeeding.

IBD medications during pregnancy and breastfeeding
➢ Methotrexate is teratogenic and not considered safe in conception, pregnancy, or breastfeeding. Cease 6 months prior to conception.
➢ It is safe to continue 5-ASA in pregnancy and breast feeding.
➢ Steroids may be associated with cleft palate in 1st trimester, but should be used if required to control disease. Discuss with a gastroenterologist if unsure.
➢ While safety classifications suggest caution, consensus is that thiopurines e.g., azathioprine (Aza), 6 mercaptopurine (6 MP), are safe to use in conception, pregnancy, and breastfeeding.

Safety of thiopurines in conception, pregnancy, and breastfeeding
○ Although the FDA categorises some IBD medications as category C and D and PBS classifies mercaptopurine as Pregnancy: Category D, important post-marketing studies and observational surveillance data indicate that thiopurines e.g., azathioprine (Aza), 6-mercaptopurine (6-MP), are safe to use in pregnancy and breastfeeding.
○ Uncontrolled active IBD is associated with significantly negative pregnancy outcomes.

➢ Biologics e.g., adalimumab, infliximab:
  • Considerations are complex and evolving as options and regimens expand.
  • Seek specialist advice for treatment individualization, use in pregnancy, and cessation discussions.
  • No significant pregnancy abnormalities to date.
  • Considered safe during breast-feeding, but data limited.
• Generally stop at 32 weeks, unless required to maintain adequate disease control, as biologics cross the placenta.
• Babies exposed in utero may be immunosuppressed:
  o Avoid giving live vaccines (BCG and rotavirus) to infants for 12 months after birth.
  o Give inactivated vaccines according to the recommended schedule. Additional inactivated vaccine doses may be required as immune responses may be suboptimal. Seek specialist advice.
• Do not give live vaccines to babies aged < 12 months when the mother is on biologics.

If further advice required, phone Monash Medicines Information Centre on (03) 9594-2361.

5. If a pregnancy is confirmed, arrange urgent or routine gastroenterology referral. The gastroenterologist may arrange a further specialist obstetric assessment for women with active disease.

### Flare-ups

In ulcerative colitis and Crohn’s disease, long-term use or recurrent courses of steroids is not appropriate. Arrange urgent or routine gastroenterology referral for steroid-sparing treatments.

1. Arrange immediate gastroenterology referral or admission if:
   • Acute severe colitis
   • suspect megacolon, perforation, bowel obstruction, or an abscess.

2. Arrange investigations:
   • Faecal culture and Clostridium difficile (C. diff) toxin. Relapses are often associated with pathogens or due to C. diff after antibiotics.
   • Blood tests – FBE, CRP, LFTs, electrolytes.

3. In ulcerative colitis, optimise 5-Aminosalicylate (5-ASA):
   • Increase oral 5-ASA e.g., Mesalazine 4 to 5 g per day which can be taken as a once daily dose.
   • Start rectal 5-ASA e.g., Mesalazine enemas if left-sided disease. Can be difficult to hold but encourage patient to persist.
   • Use suppositories for proctitis.
   • If on maximal 5-ASA or limited response after one week, start steroids and arrange urgent or routine gastroenterology referral to consider starting an immunomodulator or changing the current medications.

4. In Crohn’s disease, start steroids and arrange urgent or routine gastroenterology referral to consider starting an immunomodulator or biologic, or changing the current medications.

5. If unsure about the best medication to use, seek gastroenterology advice. It may be more appropriate to arrange an urgent gastroenterology assessment, especially if a patient is already on an immunomodulator or biologic.
Referral

- Arrange **immediate gastroenterology referral or admission** if:
  - Acute severe colitis
  - Suspected or known Chron’s disease with acute complications:
    - Bowel obstruction.
    - Sepsis or intra-abdominal or pelvis abscess.
- Arrange **urgent or routine gastroenterology referral** and colonoscopy if:
  - known inflammatory bowel disease.
  - strongly suspected inflammatory disease based on:
    - recurrent perianal fistulas or abscesses
    - imaging results that strongly suggest Crohn’s disease or colitis
  - previous endoscopy findings consistent with inflammatory bowel disease.
- If planning a pregnancy, arrange **urgent or routine gastroenterology referral**.
- An **IBD nurse specialist** may be available for patient enquiries, counselling new patients, and to assist with timely gastroenterology assessment.
- Arrange dietitian assessment:
  - if IBD with unintentional weight loss or nutrient deficiencies as evidenced by blood test or diet history.
  - if patient wishes to see a private dietitian.

Information

For health professionals

- Australian Family Physician – [Inflammatory Bowel Disease in Adolescents](#)
- Crohn’s & Colitis Australia – [IBD Management Tools](#)
- Gastroenterological Society of Australia (GESA) – [Australian Guidelines for General Practitioners and Physicians: Inflammatory Bowel Disease 4th Edition](#)
- Faculty of Sexual and Reproductive Healthcare Clinical Guidance:
  - [Sexual and Reproductive Health for Individuals with Inflammatory Bowel Disease](#)
  - [Drug Interactions With Hormonal Contraception](#)
- National Institute for Health and Care Excellence (NICE) – [Crohn’s Disease: Management](#)
- NPS MedicineWise – [Long-term Management of Patients Taking Immunosuppressive Drugs](#)
- Therapeutic Guidelines – Inflammatory Bowel Disease (subscription required)

For patients

- Better Health Channel – [Crohn’s Disease and Ulcerative Colitis](#)
- [Crohn’s & Colitis Australia](#)
- Gastroenterological Society of Australia (GESA) – [Crohn’s and Colitis](#) (factsheet)
- [IBD Support Australia](#)
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Last Reviewed: January 2020

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