Bowel symptoms: is it cancer?

Dr. Hooi Ee
Department of Gastroenterology/ Hepatology
Sir Charles Gairdner Hospital
Queen Elizabeth II Medical Centre
Bowel (Colorectal) Cancer

- Second commonest internal cancer after prostate
- Commonest cancer affecting Men and Women – Risk = 1 in 12 by 85 yrs
- Risk: M = 1:10  F = 1:15
- 1330 new cases in WA in 2010
- 420 deaths in WA per year

Adenoma → Carcinoma
5 - 15 year sequence
Bowel symptoms are very common

- Which symptoms must we worry about?
Bowel/abdominal symptoms

- Abdominal
  - pain, bloating, fullness, distension
- Bowel habits
  - Constipation, diarrhoea
- Defaecation
  - Straining, pain, incomplete emptying
- Output
  - Blood, mucus
  - Stool calibre, colour, texture
Systemic symptoms

- Loss of appetite
- Weight loss
- Fatigue
- Anaemia
- Iron deficiency
Other “symptoms”

- Halitosis
- Body odour
- Excessive borborygmi
- Gurgling feelings
- Mobile abdominal sensations
Take these seriously

- Rectal bleeding
- Iron deficiency anaemia
- Sustained altered bowel habits, especially looseness
- Palpable mass (abdominal, rectal)
Overstated for cancer

• Constipation
• Chronic bloating
• Changes in stool calibre, colour
• Young age
  – <40 y.o. uncommon
  – <30 y.o. rare
• Family history alone rarely useful
• Weight loss usually incurable
Bowel cancer in Australia

Table 2.1  Age-specific and age-standardised incidence rates of bowel cancer in Australia, 2006.

(Source: AIHW 2009)

• Incidence markedly increases after 50 yo
Symptoms requiring investigation

- Age over 40 years
- Recent symptoms (6-12 months):
  - Bleeding (needs explanation at all ages)
  - Anaemia, especially iron deficiency
  - Altered bowel habit, especially looseness
  - Abdominal pain
Colonoscopy prioritisation

• ASAP
  – Mass on digital rectal examination
  – Imaging suspicion: barium, CT

• < 4 weeks
  – Chronic rectal bleeding
  – FOBT +
  – Iron deficiency anaemia
  – Change in bowel habit + alarm*
    • *anaemia, weight loss, mass, severe pain
Interesting points

• In WA, 1 cancer found for every 50 colonoscopies
• Cancer unlikely within 5 years of colonoscopy
• Delayed diagnosis: 3 months probably does not affect outcome
• Early bowel cancer usually asymptomatic
Symptoms are late

- 50% of patients found to have bowel cancer will die from it
Bowel cancer is ideal for screening

- Common serious disease
- No symptoms during early phases
- Cancer can be prevented
- Early detection makes treatment simpler
- Earlier detection improves survival
- Safe, effective, screening tests available
- Widespread screening saves lives
Screening/surveillance (NHMRC) Asymptomatic

- **Average Risk**: 50-74 year old
  - Biennial faecal occult blood test (FOBT)
- **Increased risk → Colonoscopy**
  - First degree relative <55 yo
  - Multiple first or second degree relatives
  - Genetic syndromes: FAP, HNPCC
  - Longstanding colitis

Program Roll-out in WA

Phase 1
- 55 & 65 y.o.
- Jan 07 – June 08

Phase 2
- 50, 55, 65 y.o.
- July 08 - June 13

Phase 3
- 50, 55, 60, 65 y.o.
- July 13 – June 15

Phase 4
- 50, 55, 60, 65, 70 y.o.
- July 15 – June 17

Ongoing biennial rollout from 2017 to include all persons 50-74 to be achieved by 2034
Sample collection

Collection Method:

The collection method is simple:

1. Empty your bladder, then flush the toilet.
2. Place the collection sheet, printed side up, on the surface of the water in the toilet bowl.
3. Pass the bowel movement onto the sheet.
4. To collect the test sample use the small blue collection stick and the small blue collection tube.

   a) Insert the tip of the small blue collection stick into the faeces up to the red line then drag the tip along the length of the faeces several times (see diagram).

   Collect the test sample immediately as the sheet will disintegrate within five minutes. The sheet is biodegradable and can be flushed away.

   b) Insert the small blue collection stick into the small blue collection tube through the white end (in a single action). Ensure that the collection stick fits tightly.
Screening Pathway

Kit sent in mail

Perform test at home and mail to lab

FOBT (-)

Recommend repeat in 2 years (not funded)

FOBT (+)

Colonoscopy (if needed)

Submit Assessment Form

Therapy (if needed)
Irritable Bowel Syndrome
Irritable Bowel Syndrome

- Characterized by:
  - variable bowel habits
  - abdominal pain
  - absence of detectable pathology

- Interplay between:
  - genetics, diet, gut flora, psychology, hormones, medications, concurrent illness

- No predisposition to cancer
Diagnostic difficulties

You're either in love, or you have irritable bowel syndrome — it's often difficult to differentiate between the two.
Epidemiology

- Very common, 40-50% of GE referrals
- Wide symptom spectrum
- Female : Male = 3:1
  - females make up 80% of severe IBS
- Young, most new cases before 45 yo
- IBS symptoms occur in 20% of normals
Symptoms

- Pain, often crampy
- Bloating, distension
- Change in bowel frequency
- Change in stool texture
- Sense of incomplete emptying
- Mucus discharge in stools
- Relief with bowel movements
Major IBS subgroups

• Constipation-predominant
  – Cramping, bloating
  – Difficulty defaecating
  – Hard, dry stools

• Diarrhoea-predominant
  – Active bowel sounds, gurgling, bloating
  – Urgency
  – Loose, watery stools

• Alternating constipation/diarrhoea
Other Features

• Upper gut symptoms very common
  – heartburn, early fullness, nausea, vomiting, dyspepsia, frequent burping
• Urge to defaecate after food
• Worse with stress, emotional turmoil
• Pain can be very severe
  – present to ED, admitted
  – require opiates
Associated Illnesses

- Chronic functional abdominal pain
- Non-ulcer dyspepsia
- Fibromyalgia/fibrositis syndrome
- Chronic fatigue syndrome

Higher incidence of:
- low back pain, headaches, fatigue, poor concentration, insomnia, anxiety, depression, taste disturbances
Differential diagnoses

- Colorectal cancer
- Coeliac disease
- Crohn’s disease
- Ulcerative colitis
- Lactose intolerance
- Medication effects
Pathophysiology

- Abnormal peristalsis (dysmotility)
  - excessive spasms (cramping pain)
  - too fast (diarrhoea) or too slow (constipation)
  - gas trapping (bloating)

- Visceral hypersensitivity
  - more sensitive to pain, distension stimuli
  - may explain more widespread pain symptoms

- Psychological: brain-gut axis
  - 80% of serious IBS sufferers have psychiatric features e.g., anxiety, depression, sleep disturbances
Pain patterns with balloon inflation

Normal

IBS
Diagnosis

• Identify positive features
  – clearly defined symptoms
  – exacerbating features
  – associated symptoms

• Exclude significant pathology
  – normal physical examination
  – selective blood tests
  – colonoscopy (esp. if over 40 yo)
Treatment

- Establish diagnosis
- Explain nature of syndrome
- Accept that symptoms are real
- Symptoms can be incapacitating
- Reassure
  - absence of serious pathology
  - good prognosis
- Identify precipitating, exacerbating factors
  - dietary, emotional, hormonal, recent infection
Figure 1. The complexity of potential interactions of food components with the intestinal wall and potential mechanisms for triggering of symptoms.
Dietary Modification

• Exclude specific foods if consistently implicated, but little scientific proof
  – everyone is different
  – common complaints: fatty, dairy, wheat, spicy foods, citrus fruits, tomatoes

• Excessive gas and flatulence
  – exclude dairy products, beans, lentils, onions, cabbage, cauliflower, broccoli
FODMAP diets

- Fermentable oligosaccharides, disaccharides, monosaccharides and polyols
- Unabsorbed short chained carbohydrates
  - $\rightarrow$ bacterial fermentation in distal SI and proximal colon
  - $\rightarrow$ gaseous distension
- Do not cause IBS, but worsen symptoms
### Table 1. Some common food sources of FODMAPs (42,43,72)

<table>
<thead>
<tr>
<th>Food type</th>
<th>Free fructose</th>
<th>Lactose</th>
<th>Fructans</th>
<th>Galacto-oligosaccharides</th>
<th>Polyols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>Apple, cherry, mango, pear, watermelon</td>
<td>Peach, persimmon, watermelon</td>
<td>Apple, apricot, pear, avocado, blackberries, cherry, nectarine, plum, prune</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>Asparagus, artichokes, sugar snap peas</td>
<td>Artichokes, beetroot, Brussels sprout, chicory, fennel, garlic, leek, onion, peas</td>
<td>Cauliflower, Mushroom, Snow peas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grains and cereals</td>
<td></td>
<td>Wheat, rye, barley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuts and seeds</td>
<td></td>
<td>Pistachios</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>Milk, yoghurt, ice-cream, custard, soft cheeses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legumes</td>
<td></td>
<td>Legumes, lentils, chickpeas</td>
<td>Legumes, chickpeas, lentils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Honey, high-fructose corn syrup</td>
<td>Chicory drinks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food additives</td>
<td>Inulin, FOS</td>
<td>Sorbitol, mannitol, maltitol, xylitol, isomalt</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

FODMAPs, fermentable oligo-, di-, and mono-saccharides and polyols; FOS, fructo-oligosaccharides.

Gibson and Shepherd, Am J Gastro 2012, 107:657
Fiber Supplements

- In constipation: stool lubrication, softening
- In diarrhoea: forms and bulks stool
- Examples:
  - fruit and vegetables
  - wheat bran, oat bran
  - supplements: psyllium (Metamucil), ispaghula (Fybogel)
- Start slowly, low doses to prevent cramping, bloating
Constipation myths

- Drink lots of water
- Laxatives induce tolerance
- Chronic laxative use leads to dependence
- Current thinking:
  - Encourage regular laxatives when bowels are hypotonic
  - Untreated constipation promotes deterioration
Managing Constipation

• Slowly increase fibre, roughage
  – Wheat bran fibre
  – Commercial supplements may be more tolerable, e.g., Metamucil, Fybogel, Granocol

• Increase fluid intake if dehydrated

• Laxatives
  – Magnesium compounds e.g., Epsom salts
  – Osmotic agents: sorbitol, lactulose, bowel preparation
  – Stool softeners: Coloxyl
  – Colonic stimulants e.g., senna, Agarol
Managing Diarrhoea

- Fibre to improve stool bulk
- Cholestyramine (Questran) binds to irritant bile salts
- Imodium, Lomotil, codeine reduce intestinal motility
- Tricyclics e.g. imipramine, amitriptyline reduce intestinal motility
- Antibiotics controversial
Managing Pain

• Reduce constipation
• Antispasmodics
  – Atrobel, Buscopan, Colofac, Mintec
• Tricyclics reduce visceral hypersensitivity
  – imipramine, amitriptyline, but beware constipation
• New generation of neuropharmaceuticals
  – Effexor, Aropax, Avanza little scientific evidence, but worth considering
Difficult cases

- Anxious, concerned about missed diagnosis
- Angry, defensive
- Feels constantly fobbed off
- Many previous referrals
- No one knows what’s going on
- No one believes them, not taken seriously
- Extensive investigations, all negative
- Unwilling to accept diagnosis
- Unwilling to accept psychological factors
IBS Summary

- Commonest specialist GI condition
- Not perceived as “real” disease
- Not simply stress or psychological
- Make definitive diagnosis
- Explanation/reassurance essential
  - Not cancer, does not lead to cancer
- Individualise management to specific symptoms
Case 1

- 30 yo female accountant
- Chronic abdo bloating, cramping pains
- Alternating diarrhoea, constipation
- Symptom relief with defaecation
- Worse with:
  - broccoli, cabbage
  - Stress
- No bleeding
Case 1 (ii)

- Probable irritable bowel syndrome
- Routine blood tests including iron studies, thyroid FT
- Check coeliac serology
- Reassure (OGD/colonoscopy optional)
- Dietary suggestions
Case 2

- 60 yo salesman
- Tiredness, fatigue, exertional dyspnoea
- Overweight, poor diet
- 10 cigs/d, 6 std drinks/d
- Previously well
- Hb: 100 g/L; Ferritin 5 (N 30-600)
- Other bloods normal
Case 2 (ii)

- Is his presentation worrying?
- Is it cancer?
- What investigation?
- What urgency?
Case 3

- 70 yo woman
- Bright red PR bleeding for 3 months
  - 2 teaspoons, splatters bowl
  - On and off, 1 week at a time
- Colonoscopy 2 years ago
  - 5mm adenomatous polyps X2 removed
- Normal rectal exam
Case 3 (ii)

- What investigation?
- What urgency?
- What is likelihood of cancer?
Case 4

- 55 yo woman
- 6 months bloating, altered bowel habits
- Foul smelling stools, often greenish
- No exacerbating factors
- Mild fatigue, poor concentration
- Not feeling stressed
- Otherwise well
- Unremarkable examination
- Routine bloods normal
Case 4 (ii)

- What investigation?
- What urgency?
- What is differential diagnosis?
- What is likelihood of cancer?
Case 5

- 80 yo woman, hostel resident
- Worsening constipation over 2 years
- Occasional bloating discomfort
- No PR bleeding
- Normal abdominal and rectal examination
- Normal routine blood tests
Case 5 (ii)

- What likely causes?
- What investigation?
- What urgency?
- What is likelihood of cancer?
- What should we do?