

## Chapter 2 – Gastro-intestinal conditions

### IRRITABLE BOWEL SYNDROME (IBS)

K58

(Synonyms: spastic colon, irritable colon)

#### DESCRIPTION

Functional bowel disorder. Motility disturbance of the entire GIT resulting in recurrent symptoms of pain, constipation and/or diarrhoea and bloating.

#### NON-DRUG TREATMENT

Reassure patient, after limited investigations, that there is no serious organic disorder.

High fibre/bran diets may be tried for patients with constipation. Warn about temporary increased flatus and abdominal distension. High fibre/bran diets are not effective for GLOBAL IBS (i.e. all symptoms).

Dietary advice by dietician.

#### DRUG TREATMENT

Not specifically indicated.

Based on patients predominant symptoms

Short-term symptomatic treatment for diarrhoea and/or constipation.

Laxatives only for constipation specific, see Section 1.1.3: Constipation/ Faecal Impaction.

Antidiarrhoeals only for diarrhoea specific, see Section 1.3.3: Diarrhoea, Acute Non-Inflammatory.

## Abdominal pain

#### **Description**

Abdominal pain is a common symptom which may be non-specific. It is frequently benign, but may indicate a serious acute pathology. A thorough evaluation is necessary to exclude a surgical abdomen or other serious condition.

The history should include

- Duration, location, type, radiation and severity of pain
- Relieving or aggravating factors e.g. food, antacids, exertion,
- Associated symptoms e.g. fever or chills, weight loss or gain, nausea, vomiting, fresh blood per rectum, melaena stools, jaundice, change in stool or urine colour
- Past medical and surgical history e.g. previous abdominal surgeries and medications, e.g. NSAIDs, ARVs, etc.
- Alcohol intake
- Family history of bowel disorders

## FOR COMMENT

- Menstrual and contraceptive history in women

Examination should emphasise detection of:

- Tachycardia, fever
- Jaundice
- Abdominal masses, distension, tenderness
- Signs of peritonitis (rebound tenderness and guarding)

### Drug treatment

Symptomatic treatment if no specific cause or indication for referral is found

For pain relief (adults)

Analgia as appropriate..Refer to Chapter X: Pain

For spasmodic pain in adults

Hyoscine butylbromide, im/iv, 10 mg immediately as single dose

And/or

Hyoscine butylbromide, oral, 10–20 mg 6–8 hourly for a maximum of 3 days

### Referral to doctor if

- Severe pain with no confirmed cause treatable at PHC
- Signs of acute abdomen
- associated bloody non-diarrhoeal stools
- associated abdominal mass

## 2.01, Dyspepsia, heartburn, indigestion

### Description

Dyspepsia, heartburn and indigestion are common conditions, which often present with epigastric discomfort and minimal change in bowel habits.

Intermittent indigestion, heartburn or dyspepsia may be associated with:

- use of NSAIDs, e.g. aspirin, ibuprofen, pain powders
- spicy food, alcohol, carbonated drinks
- smoking

### Non-drug treatment

- stop smoking
- limit alcohol intake
- eat small frequent meals
- check haemoglobin
- check for a drug cause likely to be associated with dyspeptic symptoms

### Drug treatment

Initiate drug therapy only after full assessment.

## FOR COMMENT

- Aluminium hydroxide 250 mg/magnesium trisilicate 500 mg, oral, 1–2 tablets to be chewed 1 hour before and 3 hours after meals and at night when needed. Maximum of 16 tablets daily or continuous treatment for 7 days

### if there is no response

- cimetidine, oral, 400 mg at bedtime for 14 days

### Referral criteria

- Presence of warning signs.
  - Weight loss
  - Persistent vomiting
  - Dysphagia
  - Anaemia
  - Haematemesis
  - Palpable abdominal mass
- No response within 7 days of starting cimetidine treatment
- Recurrence of symptoms
  - Especially in Age over 50
  - Family history of gastric carcinoma
  - Previous gastric surgery

## 2.02 Anal conditions

### 2.02.1 Anal fissures

K60.2

#### Description

Painful small cracks just inside the anal margin. Often seen together with a sentinel pile or external haemorrhoids. May cause spasm of the anal sphincter.

#### Non-drug treatment

- dietary advice to promote soft stools

#### Drug treatment

- lignocaine 2%, gel, topical, applied after each bowel action

#### children

If hard stools are present

- lactulose, oral, 0.5 mL/kg/dose once or twice daily titrate according to response

#### adults

- lactulose, oral, 10-20 mL once or twice daily

#### Referral

- severe pain

## FOR COMMENT

- recurrent episodes
- poor response to symptomatic treatment

### 2.02.2 Haemorrhoids

I84.9

#### Description

Varicose veins of the ano-rectal area, usually accompanied by a history of constipation.

In older patients consider a diagnosis of underlying carcinoma.

#### Non-drug treatment

- high-fibre diet
- counsel against chronic use of laxatives
- avoid straining at stool

#### Drug treatment

symptomatic treatment for painful haemorrhoids

- lignocaine 2%, cream, topical, applied after each bowel action

#### Referral

- for surgical intervention if necessary
  - if the haemorrhoid cannot be reduced
  - if the haemorrhoid is thrombosed
- children

### 2.03 Appendicitis

K35

#### Referral

- all patients with suspected appendicitis (right iliac fossae tenderness, right iliac fossae rebound pain, severe persistent abdominal pain)

### 2.04 Cholera

A00.9

**Note: notifiable condition.**

#### Description

Very acute severe watery diarrhoea due to infection with the micro-organism *Vibrio cholerae*.

Clinical features include:

- rice water appearance of stools
- no blood in stools
- no pus in stools

## FOR COMMENT

- no faecal odour
- possible vomiting
- rapid severe dehydration

### Note

The prime objective is to prevent and treat dehydration.

### Non-drug treatment

Rehydrate aggressively with ORS

### Drug treatment

Treat vigorously.

### Children:

Treat dehydration according to Acute Diarrhoea in children... See section

### Adults

- oral rehydration solution (ORS)

or

- homemade sugar and salt solution (see section 2.06)

The volume of fluid required for oral rehydration depends on the severity of the dehydration.

Oral rehydration is preferable to IV.

For patients in shock: IV treatment

- sodium chloride 0.9%, IV

If no IV access, use nasogastric tube under doctor's supervision.

Ciprofloxacin, oral, as single dose immediately

Ciprofloxacin						
Oral	Stat single dose mg per kilogram per dose 10- 20					
Weight Kilograms	Dose mg	Susp 250mg/5ml	Tab 250mg	Tab 500mg	Age Mnth/ys	
> 3.5 - 5	50	1 ml			1m - 3m	
> 5 - 7	100	2 ml			3m - 6m	
> 7 - 9	125	2.5 ml			6m - 12m	
> 9 - 11	250	2.5 ml	1 tab	1/2 tab	12m - 18m	
> 11 - 14	250	2.5 ml	1 tab	1/2 tab	18m - 3y	
> 14 - 17.5	250	5 ml	1 tab	1/2 tab	3y - 5y	
> 17.5 - 25	250	5 ml	1 tab	1/2 tab	5y - 7y	
> 25 - 35	500		2 tab	1 tab	7y - 11y	

## FOR COMMENT

> 35 - 55	500		2 tab	1 tab	11y - 15y
> 55	1000		4 tab	2 tab	> 15yrs
Contraindication: Known allergy to ciprofloxacin or other quinolones. Use with caution in patient <18 years of age. (benefit must exceed risk)					

### Prevention

#### Non-Drug

- All water consumed or used for food preparation to be either:
  - Processed (municipal chlorinated supply)
  - Boiled
  - Or filtered and chlorinated domestically
    - Can use domestic non perfumed bleach
      - 5 drops in 1 L water – leave for 1 hour.
      - 5 ml in 25 L water – leave for 2 hours.

#### Referral

- severely ill patients
- according to provincial and local policy

## 2.05 Constipation

K59.0

### Description

A condition characterised by a change in usual bowel habits and dry, hard stools. There is a decreased frequency of bowel action and patients should be assessed individually.

Constipation may have many causes

- incorrect diet (fibre and fluid)
- pregnancy
- certain drugs
- endocrine
- lower bowel abnormalities
- chronic use of enemas and laxatives
- ignoring the urge
- lack of exercise
- old age
- metabolic
- neurogenic
- psychogenic disorders
- cancer of the bowel
- behavioural problems in children

### ! CAUTION !

In adults be especially suspicious of a change in bowel habits, as there is a possibility of cancer of the large bowel

## FOR COMMENT

### Non-drug treatment

- encourage exercise
- increase intake of fibre-rich food, e.g. vegetables, coarse maize meal, bran and cooked dried prunes
- encourage regular bowel habits
- discourage continuous use of laxatives

### Drug treatment

#### children over 12 months

- lactulose 0.5 mL/kg/dose once or twice daily titrate according to response

#### adults

- sennosides A and B, oral, 7.5 mg, 2 tablets at night. In resistant cases increase to 4 tablets.

OR

- lactulose 10-20 mL once or twice daily

**! CAUTION !**  
prolonged severe constipation may present with overflow "diarrhoea"

### Referral

- recent change in bowel habits
- faecal impaction
- poor response to treatment
- uncertain cause of constipation

## 2.06 Diarrhoea, acute

A09

**! CAUTION !**  
there is no place for antidiarrhoeal preparations in the treatment of acute diarrhoea in children or dysentery

### 2.06.1 Diarrhoea, acute, in children

#### Description

Sudden onset of change in consistency and frequency of stools with or without vomiting in children.

It is commonly caused by a virus but may be caused by bacteria or parasites.

The cause of these conditions cannot be diagnosed without laboratory investigation.

It may be an epidemic if many patients are infected at the same time.

## FOR COMMENT

### Approach to diarrhoeal disease

Carry out the normal history and examination

### Special risk situations

Diarrhoea in infants less than 2 weeks, malnourished babies, and babies with other danger signs such as:

- convulsions
- altered level of consciousness
- persistent vomiting
- respiratory distress
- persistent diarrhoea
- hypothermia
- surgical abdomen

These babies should be referred for treatment and should receive a first dose of antibiotics ceftriaxone, IM, before transfer.

Ceftriaxone						
IM	Stat	child mg per kilogram per dose:			50-	80
Weight Kilograms	Dose mg	Inj 250mg vial mixed to 2ml with water for injection	Inj 500mg vial mixed to 2ml with water for injection	Inj 1 g vial mixed with water for injection	Age Mnths/yrs	
> 2 - 2.5	125	1 ml	0.5ml		34w-	36w
> 2.5 - 3.5	200	1.6ml	0.8ml		Birth-	1m
> 3.5 - 5	250	2 ml	1 ml		1m-	3m
> 5 - 7	375	3 ml	1.5ml		3m-	6m
> 7 - 9	500	4 ml	2 ml		6m-	12m
> 9 - 11	625	5 ml	2.5ml		12m	18m
> 11 - 14	750	6 ml	3 ml		18m-	3y
> 14 - 17.5	875	7 ml	3.5ml		3y-	5y
> 17.5 - 25	1000		4 ml	3.5ml	5y-	7y
> 25 - 35	1000		4 ml	3.5ml	7y-	11y

Contraindication: previous immediate severe hypersensitivity to any penicillin or cephalosporin; history of any severe reaction to a cephalosporin.

### Special types of diarrhoea

- bloody diarrhoea - consider dysentery, give ciprofloxacin. See Section...Dysentery
- diarrhoea with high fever or very ill – consider typhoid, refer

## FOR COMMENT

- persistent diarrhoea, more than 14 days – consider referral
- diarrhoea in children in the context of an adult epidemic – consider cholera

**FOR COMMENT**

<b>Treatment according to hydration classification</b>			
<p><b>Assess hydration</b> Identify signs present to classify dehydration as (beginning from the left column):</p> <ul style="list-style-type: none"> <li>▪ severe dehydration – C</li> <li>▪ some dehydration – B</li> <li>▪ no visible dehydration – A</li> </ul>			
<b>Signs of classification</b>	<p><b>C</b> <b>Severe dehydration</b> 2 of the signs below</p>	<p><b>B</b> <b>Some dehydration</b> 2 of the signs below but not severe dehydration</p>	<p><b>A</b> <b>No visible dehydration</b> None of the signs of dehydration</p>
<b>Level of consciousness</b>	lethargic or unconscious	restless or irritable	well alert
<b>Sunken eyes</b>	eyes sunken	eyes sunken	eyes not sunken
<b>Ability to drink</b>	drinks poorly <b>or</b> not able to drink	thirsty, drinks eagerly	drinks normally, not excessive thirst
<b>Skin pinch (Turgor)</b>	severe decrease in skin turgor. skin pinch returning over 2 seconds or more	moderate decrease in skin turgor - by slow skin pinch, returning in less than 2 seconds	skin pinch goes back immediately
	<p>Give rapidly:</p> <ul style="list-style-type: none"> <li>• Ringer-Lactate, IV, 20 mL/kg.</li> </ul> <p>Repeat up to twice if radial pulse is weak or undetectable. Continue with 20 mL/kg every hour for the next 5 hours.</p> <p>Then</p> <p>Refer urgently for continued</p>	<p>Give:</p> <ul style="list-style-type: none"> <li>• ORS, oral, 80 mL/kg over 4 hours, e.g. 5 mL/kg every 15 minutes</li> </ul> <p>Give more if the child wants more.</p> <p>Show the caregiver how to give ORS with a cup and spoon using frequent small sips. If child vomits wait 10 minutes and then continue more slowly.</p>	<p>Show the caregiver how to give ORS with a cup and spoon using frequent small sips. Encourage caregiver to give 10 mL/kg after each diarrhoeal stool until diarrhoea stops, i.e.</p> <ul style="list-style-type: none"> <li>• child age up to 2 years, 50–100 mL</li> <li>• child age 2 years or more, 100–200 mL after each loose stool.</li> </ul>

## FOR COMMENT

	<p>management continuing with 20mL/kg every hour for the next 5 hours during urgent referral unless the child is reclassified as B some dehydration.</p> <p>Reassess every 2 hours while awaiting transfer. If hydration status does not improve, give IV fluids more rapidly.</p> <p>As soon as the child can drink, usually after 3–4 hours in infants and 1–2 hours in children, also give:</p> <ul style="list-style-type: none"> <li>• ORS, oral, 5 mL/kg/hour</li> </ul> <p>If IV administration is not possible, insert a nasogastric tube and while awaiting and during urgent transfer give:</p> <ul style="list-style-type: none"> <li>• ORS, 20 mL/kg/hour over the next 6 hours via the nasogastric tube</li> </ul> <p>If only oral administration is possible, or the condition is not improving, transfer the child urgently giving ORS during transfer.</p> <p>Reassess every <b>4 hours</b> for</p>	<p>Encourage the caregiver to continue feeding the child especially breast-feeding.</p> <p>If after 4 hours there are:</p> <ul style="list-style-type: none"> <li>• no signs of dehydration treat as <b>A – No visible dehydration</b></li> <li>• still some dehydration signs continue as above</li> <li>• signs of severe dehydration treat as <b>C – Severe dehydration</b></li> </ul>	<p>Continue at home. Encourage the caregiver to continue feeding the child, especially breast-feeding. Instruct the caregiver how to make ORS/SSS at home and to continue treatment.</p> <p>Instruct the caregiver how to make ORS/SSS at home and to continue treatment.</p>
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**FOR COMMENT**

	<b>classification – if improves to classification</b> <b>B</b> Some dehydration – treat as such		
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## FOR COMMENT

### Child should return immediately if:

- no improvement
- condition deteriorates
- poor drinking or feeding
- blood in stool
- fever develops
- sunken eyes
- slow skin pinch

In all children who are able to take oral medication give:

Zinc Acetate, oral for 14 days:

If < 10 kg give 10 mg / day

If > 10 kg give 20 mg / day

Home made sugar and salt solution may be used if oral rehydration formula is not available and is promoted for home use pending primary health care consultation:  
(See section 2.06)

#### HOMEMADE SUGAR AND SALT SOLUTION (SSS)

$\frac{1}{2}$  level medicine measure of table salt

8 level medicine measures of sugar

dissolved in 1 litre of boiled (if possible) then cooled water

(1 level medicine measure = approximately 1 level teaspoon)

### Prevention

#### Non Drug

- All water consumed or used for food preparation to be either:
  - Processed (municipal chlorinated supply)
  - Boiled
  - Or filtered and chlorinated domestically
    - Can use domestic non perfumed bleach
      - 5 drops in 1 li water – leave for 1 hour.
      - 5 ml in 25 li water – leave for 2 hours.
- Promotion of breastfeeding
- Where breast feeding is declined – safe breast milk substitute techniques and hygiene

#### Referral

- severe dehydration with other complications
- dysentery in children less than 12 months
- malnourished children
- children with general danger signs, e.g. altered level of consciousness, convulsions, inability to feed or drink, intractable vomiting.
- suspected acute surgical abdomen

## FOR COMMENT

### 2.06.2 Diarrhoea, acute, without blood, in adults

K52.9

#### Description

Acute diarrhoea is usually self-limiting and is managed by fluid replacement.

#### Drug treatment

Treat vigorously.

- oral rehydration solution (ORS)

or

- homemade sugar and salt solution (SSS) (see section 2.06)
- loperamide, oral, 4 mg immediately and 2 mg as required after each loose stool up to 6 hourly. Not more than 12 mg daily.

#### Referral

- suspected acute surgical abdomen
- diarrhoea with complications

### 2.06.3 Diarrhoea, chronic, in adults

K52.9

#### Description

Diarrhoea lasting more than 2 weeks.

The majority of cases may be HIV related. Encourage HIV testing.

A stool sample should be requested for microscopy for ova, cysts and parasites (Note that culture and sensitivity should not be requested on the form).

Giardiasis is a common cause of chronic diarrhoea in adults, and may be difficult to diagnose on stools. Therefore empiric treatment for giardiasis is recommended before referring such patients.

#### Drug treatment

Giardiasis

- metronidazole, oral, 2 g daily for 3 days

**chronic diarrhoea in HIV/AIDS** (see section 20)

#### Referral

- all HIV negative cases with no pathogen identified and significant diarrhoea

## FOR COMMENT

### Diarrhoea, persistent in children

#### Definition:

Diarrhoea for 14 days or longer.

#### Non-drug treatment

Assess for possible HIV infection, and manage appropriately.

Prevent dehydration using Sugar Salt Solution (see Plan A in acute diarrhoea section)

Counsel mother regarding feeding.

If breastfeeding, give more frequent, longer feeds. If not breastfed, replace milk with fermented milk products such as amasi (maas) or yoghurt.

Continue with solids - give small, frequent meals at least 6 times a day.

Follow-up 5 days. If diarrhoea persists, refer to doctor for investigation.

#### Drug treatment

Give an additional dose of Vitamin A

Age	Additional dose
0 – 5 months	50 000 IU
6 – 11 months	100 000 IU
12 – 60 months	200 000 IU

Give Zinc for 2 weeks

Age	Dose
< 6 months	10 mg elemental Zinc as a daily dose
> 6 months	20 mg elemental Zinc as a daily dose

#### Referral

Child younger than two months of age

Signs of dehydration (refer section on acute diarrhoea).

Malnutrition or weight loss

## FOR COMMENT

### 2.07 Dysentery

A06.0

Dysentery or diarrhoeal stool with blood or mucus is usually due to bacteria and should be treated as bacillary dysentery. If there is no clinical response within three days consider managing as amoebic dysentery or refer for formal assessment. It is important to exclude surgical conditions, e.g. intussusception in children. Commonly encountered infectious conditions include *Shigella*, *Salmonella*, *E. Coli*, and *Campylobacter*.

#### Referral

- no response to treatment

### 2.07.2 Dysentery, bacillary

A03.0

#### Description

Acute infection of the bowel usually caused by *Shigella*, *Salmonella* or *Campylobacter*.

There is sudden onset diarrhoea with:

- blood (not due to haemorrhoids or anal fissure) or mucus in the stools
- convulsions (in children)
- fever
- tenesmus

#### Non-drug treatment

Prevent spread of micro-organism by:

- preventing contamination of food and water through good sanitation
- washing hands thoroughly before handling food
- washing soiled garments and bed clothes

#### Drug treatment

Treat hydration vigorously.

Children:

Treat dehydration according to Acute Diarrhoea in children

Adults

oral

- rehydration solution

or

- homemade sugar and salt solution

## FOR COMMENT

### HOMEMADE SUGAR AND SALT SOLUTION

½ level medicine measure of table salt  
 8 level medicine measures of sugar (no more)  
 dissolved in 1 litre of boiled (if possible) then cooled water  
 (1 level medicine measure = approximately 1 level teaspoon)

The amount of fluid required for oral rehydration depends on the severity of the dehydration.

IV treatment

- sodium chloride 0.9% or Ringer-Lactate, IV

Antibiotic therapy is indicated for:

children over 1 year old and adults with blood in the stools  
 HIV infected patients

Ciprofloxacin (bacillary dysentery)						
Oral	12 hourly x 3 days			mg per kilogram per dose		5- 10
Weight Kilograms	Dose mg	Susp 250mg/5ml	Tab 250mg	Tab 500mg	Age	Mnths/ys
> 9 - 11	75	1.5 ml				12m - 18m
> 11 - 14	100	2 ml				18m - 3y
> 14 - 25	125	2.5 ml	1/2 tab			3y - 7y
> 25 - 55	250	5 ml	1 tab	1/2 tab		7y - 15y
> 55	500		2 tab	1 tab		> 15yrs
Contraindication: Known allergy to ciprofloxacin or other quinolones. caution in patient <18 years of age. (benefit must exceed risk)						Use with

#### Note

Check for complications such as intestinal perforation or peritonitis and ensure adequate urine output to exclude haemolytic uraemic syndrome.

#### Prevention

##### Non Drug

- All water consumed or used for food preparation to be either:
  - Processed (municipal chlorinated supply)
  - Boiled
  - Or filtered and chlorinated domestically
    - Can use domestic non perfumed bleach
      - 5 drops in 1 li water – leave for 1 hour.
      - 5 ml in 25 li water – leave for 2 hours.

## FOR COMMENT

### Referral

- Malnutrition in children
- severe illness
- dehydration in children
- children less than 12 months of age
  - ceftriaxone, IM, 50mg/kg, immediately, before referral
- Persistent blood in urine on dipstick or macroscopically
- Acute abdominal signs (severe pain, acute tenderness, persistent or bilious vomiting),
- bloody mucus passed in absence of diarrhoea.

### 2.07.1 Dysentery, amoebic

icd10

#### Description

A condition characterised by loose stools or rarely diarrhoea, caused by the parasite *Entamoeba histolytica*, with:

- blood
- mucus
- may alternate with constipation
- usually without fever

The presentation is usually subacute.

#### Management objectives

- rehydrate the patient in the acute phase
- refer for investigation and treatment if case cannot be confirmed

#### Drug treatment

if dehydrated

Treat dehydration vigorously.

Children:

Treat dehydration according to Acute Diarrhoea in children

Adults

oral

- rehydration solution

or

- homemade sugar and salt solution

#### **ADULT HOMEMADE SUGAR AND SALT SOLUTION**

½ level medicine measure of table salt

8 level medicine measures of sugar (no more)

dissolved in 1 litre of boiled (if possible) then cooled water

(1 level medicine measure = approximately 1 level teaspoon)

## FOR COMMENT

The amount of fluid required for oral rehydration depends on the severity of the dehydration.

IV treatment

- sodium chloride 0.9%, or Ringer-Lactate, IV

If case confirmed by identification of organisms on wet stools or if dysentery treated with antibiotics has not improved within 3 days:

- metronidazole, oral, 8 hourly for 7 days

<b>Metronidazole</b>							
Oral	8 hourly					mg per kilogram per dose	
Weight Kilograms	Dose mg	Syrup 200mg/5ml	Tab 200mg	Tab 400mg	Age Mnth/ys		
> 9 - 11	160	4 ml			12m	18m	
> 11 - 17.5	200	5 ml	1 tab	½ tab	18m-	5y	
> 17.5 - 25	300	7.5 ml	1½ tab		5y -	7y	
> 25 - 35	400	10 ml	2 tab	1 tab	7y -	11y	
> 35 - 55	600		3 tab	1½ tab	11y -	15y	
> 55	800			2 tab	> 15yrs		

Contraindications: Caution in epilepsy and other CNS disease, patients with hepatic dysfunction, porphyria or haematological conditions

### Prevention

#### Non Drug

- All water consumed or used for food preparation to be either:
  - Processed (municipal chlorinated supply)
  - Boiled
  - Or filtered and chlorinated domestically
    - Can use domestic non perfumed bleach
      - 5 drops in 1 li water – leave for 1 hour.
      - 5 ml in 25 li water – leave for 2 hours.

#### Referral:

- malnutrition in children
- severe illness
- dehydration
- no improvement after 3 days treatment
- children less than 12 months of age.
  - Before referral, ceftriaxone, IM, 50mg/kg, immediately.
- Persistent blood in urine on dipstick or macroscopically

## FOR COMMENT

- Acute abdominal signs (severe pain, acute tenderness, persistent or bilious vomiting),
- bloody mucous passed in absence of diarrhoea.

### 2.09 Helminthic infestation

B82.0

#### 2.09.1 Helminthic infestation, tapeworm

B81.4

##### Description

Infestation with tapeworm occurs after eating infected, undercooked or raw meat like beef or pork.

Infestation may be caused by:

- beef tapeworm – *Taenia saginata*
- pork tapeworm – *Taenia solium*

Signs and symptoms include:

- vague abdominal pain
- diarrhoea
- weight loss
- flat white worm segments seen in the stool (blunt ended)

##### Non-drug treatment

- health education on adequate preparation of potentially infected meat

##### Drug treatment

If the patient has diarrhoea, wait for it to settle.

- praziquantel, oral, single dose

Praziquantel (tapeworm)						
Oral	Single dose		child mg per kilogram per dose: 10- 20			
Weight Kilograms	Dose mg		Tab	600mg	Age Mnths/ys	
> 7 - 14	150				¼ tab	6m- 3y
> 14 - 25	300				½ tab	3y - 7y
> 25 - 55	600				1 tab	7y - 11y
> 55 - 110	1200				2 tab	11y - 15y
> 110	10-20mg/kg					> 15yrs
Contraindications: cysterci in eye						
Caution with porphyria						

## FOR COMMENT

### Referral

- abdominal tenderness or pain
- abdominal masses
- vomiting

### 2.09.2 Helminthic infestation, excluding tapeworm

B82.0

### Description

Types of worm infestation and the characteristics is shown in the table below. Check for anaemia and failure to thrive. The infestations are often asymptomatic.

Type of worm	Description	Signs and symptoms
Common Roundworm <i>Ascaris lumbricoides</i>	<ul style="list-style-type: none"> <li>• Long pink/white worms with sharp ends</li> <li>• Up to 25-30cm long</li> <li>• Often seen in the stools and vomitus</li> </ul>	<ul style="list-style-type: none"> <li>• Cough</li> <li>• If there is vomiting consider intestinal obstruction</li> </ul>
Pinworm <i>Enterobius vermicularis</i>	<ul style="list-style-type: none"> <li>• White and thread-like</li> <li>• Up to 10mm long</li> <li>• Often seen in the stools</li> <li>• Self-infection common</li> </ul>	<ul style="list-style-type: none"> <li>• Anal itching – worse at night</li> <li>• Sleeplessness</li> </ul>
Hookworm <i>Necator americanus</i>	<ul style="list-style-type: none"> <li>• Up to 8mm long</li> </ul>	<ul style="list-style-type: none"> <li>• No symptoms or pain</li> <li>• Anaemia</li> </ul>
Threadworm <i>Strongyloides stercoralis</i>	<ul style="list-style-type: none"> <li>• Very small, up to 4mm long</li> <li>• Very rare</li> </ul>	<ul style="list-style-type: none"> <li>• No obvious symptoms</li> </ul>
Whipworm <i>Trichuris trichiura</i>	<ul style="list-style-type: none"> <li>• Up to 5cm long</li> <li>• Anterior half thinner than posterior half</li> </ul>	<ul style="list-style-type: none"> <li>• No symptoms</li> <li>• Abdominal pain</li> <li>• Diarrhoea</li> <li>• Possible anaemia and rectal prolapse</li> <li>• Abdominal discomfort</li> <li>• Weight loss</li> </ul>

## FOR COMMENT

### Non-drug treatment

- patient counseling and education
- wash hands with soap and water
- after passing a stool
- before working with food or eating
- keep fingernails short
- wash fruit and vegetables well or cook
- keep toilet seats clean
- teach children to use toilets and wash hands
- do not pollute the soil with sewage or sludge
- dispose of faeces properly

### Drug treatment

<b>Mebendazole</b>					
<b>Oral</b>	Stat dose for adults and children (<2years), children (1-2years) 12 hourly x 3 days				
<b>Weight</b> Kilograms	<b>Dose</b> mg	<b>Syrup</b> 100mg/5ml	<b>Tab</b> 100mg	<b>Tab</b> 500mg	<b>Age</b> Mnths/yrs
>1y -2 yr	100	5ml	1 tab		12m-24m
>2y -Adult	500		5 tab	1 tab	24m-Adult

Caution: in chronic bowel, ulcerative bowel disease, hepatic impairment and porphyria. Avoid in 1st trimester of pregnancy. Special comment: tablets can be crushed.

For *Strongyloides stercoralis* refer for specific therapy.

### Referral

- signs of intestinal obstruction
  - abdominal tenderness
  - pain
  - persistent vomiting

## 2.10 Nausea and vomiting, non-specific

R11

### Description

There are many possible and sometimes serious causes of nausea and vomiting and this should be assessed.

Vomiting alone may be a symptom of many conditions, e.g. motion sickness (vertigo and vomiting under specific circumstances).

Exclude alcohol abuse as a cause.

## FOR COMMENT

It is called non-specific even when organic causes are known, e.g.:

- early pregnancy
- depression
- gastro-intestinal disease
- liver disease
- renal failure

Establish if the vomiting is associated with:

- nausea
- abdominal pain
- diarrhoea
- food intake
- drugs, e.g. iron preparations, digitalis
- the sequence of the illness, e.g. migraine

### Non-drug treatment

- withhold food for a period or give frequent small meals (do this with caution in children)
  - maintain adequate hydration with clear fluids
- In children to not stop feeds for more than 1 hour –
  - Then give child sugar salt solution while attending clinic if vomiting does not resolve (10ml/kg given after vomits as small frequent feeds)

### Drug treatment

Treat dehydration

Children:

Treat according to Acute Diarrhoea in children

Do not use anti-emetics in children.

Adults

- oral rehydration solution (ORS)

or

- homemade sugar and salt solution (SSS) (see section 2.06)

#### Adult HOMEMADE SUGAR AND SALT SOLUTION (SSS)

½ level medicine measure of table salt  
**and**  
8 level medicine measures of sugar (no more)  
dissolved in 1 litre of boiled (if possible) then cooled water  
1 level medicine measure = approximately 1 level teaspoon

The amount of fluid required for oral rehydration depends on the severity of the dehydration.

## FOR COMMENT

IV treatment

- sodium chloride 0.9% or Ringer-Lactate, IV, for 3 days only

metoclopramide, IV/oral, 10 mg 6-8 hourly

### Referral

#### URGENT

if patients are:

- dehydrated (see section 2.07)
- shocked
- known diabetic or patient with glycosuria
- septicaemic
- jaundiced
- infants with projectile vomiting
- showing signs of intestinal obstruction, i.e. no stool or flatus passed
- presenting with abdominal tenderness with guarding and rigidity
- vomiting with digested or fresh blood present
- complex combination of signs and symptoms

### Referral

- symptoms are present for more than one week
- obvious causes

## 2.11 Typhoid fever

A01.0

**Note: notifiable condition.**

### Description

A septicaemic illness with fever caused by the micro-organism *Salmonella typhi*.

The cause of the fever is difficult to diagnose except in an epidemic.

It may present with:

- acute abdomen (see section 2.01)
- prolonged or high fever in a previously healthy individual
- fever with a slower pulse rate than expected
- headache and possible convulsions
- early onset of constipation
- diarrhoea may occur later in the illness and may be accompanied by frank bleeding
- confirmation is only by stool culture or blood tests

### Drug treatment

Treat dehydration if present and refer.

### Referral

## FOR COMMENT

- all cases or suspected cases