Abdominal pain in children

Dr J O Menakaya
Consultant Paediatrician
Hillingdon Hospital
Constipation

- Define constipation.
- Case history.
- Assessment of constipation
- Management.
## Normal Stool Patterns

<table>
<thead>
<tr>
<th>Age of Child</th>
<th>Mean No of stools /day</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3 months (BF)</td>
<td>2.9</td>
</tr>
<tr>
<td>0 - 3 Months (FF)</td>
<td>2.0</td>
</tr>
<tr>
<td>6 -12 months</td>
<td>1.8</td>
</tr>
<tr>
<td>1 - 3 years</td>
<td>1.4</td>
</tr>
<tr>
<td>&gt; 3 years</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Acta Paedia Scand 1987 (78) 682
Definition.

- Delay or difficulty in passing stools present for two or more weeks.

NASPghan 2006
Constipation

- Idiopathic: No evidence of pathologic disorder.

Case study.

- 3 year old boy, Jack.
- Presents with central abdominal pain.
- Up to 7 days without stool output.
- Pain on defecation.
- Had lactulose with minimal improvement.
Assessment (I)

History.

Age at passing meconium...
Description of pain.
Frequency, consistency of stools – Bristol stool chart.
Presence of blood in stools.
With holding behaviour.
Assessment (II)

History:

Presence of diarrhoea (exclude soiling).
Family history of constipation.
Schooling and psychosocial impact.

Medications so far – what has been effective…..
Assessment (III)

Red Flags in history:

- Fever.
- Weight loss.
- Anorexia.
- Vomiting.
Assessment (IV).

Examination:

- General physical examination
- Faecal loading *per abdomen*
- Check Spine
- Tendon Reflexes
- Rectal Examination?
Treating Constipation

- Impacted Faeces – Disimpact.
- Maintenance Treatment.
- Rescue Treatment.
Disimpaction Tx

- **Oral Route.**
  - Movicol Paediatric plain
    - 4 sachets per day – increasing up to 12 sachets per day

- **Rectal Route.**
  - Phosphate or Citrate enemas. (Hospital)

NICE 2010
Maintenance Treatment

- Osmotic laxatives
  - Lactulose
    Movicol 2 to 4 sachets daily

- Stimulant Laxatives
  - Senna 5mls daily
  - Sodium picosulphate 2.5-5mg daily
  - Docusate sodium
‘Other’ Treatment

- Dietary changes.
  - Healthier diet
  - Dietary exclusions

- Behaviour modification.
  Star charts
  Scheduled toileting
  Exercise
  ?Psychologist.
Investigation of constipation

- Abdominal X ray?
- Coeliac Disease
- Thyroid Function test
- Calcium studies
- Immunoglobulins
- Colon Transit Markers studies
Colonic Transit Marker Study
Colonic Transit Times

- Right Colon 19hr
- Left Colon 19 Hr
- Rectosigmoid Colon 32hr
- Whole Colon 45.7hr

Gutierrez et al J PGN 2002
Summary.

- Most children have idiopathic constipation
- History and examination.
- If impacted – **Disimpact First**
- Institute maintenance treatment.

- Refer to secondary care if red flags or poor response
Urinary Tract Infection in Children
UTI in Children.

- Definition of UTI
- Diagnosis of UTI
- Case study
- Assessment
- Management
- Investigations & Follow Up
UTI

- UTI is common
  1 in 16 girls before 16 years
  1 in 30 boys before 16 years

- Organisms involved: usually E coli.

- Age difference.
UTI

- Definition:

- Pure growth of $10^5$ CFU of an organism.

- (symptoms of pain, fever, dysuria)
UTI

- One-off vs Recurrent UTI
- Age of onset of UTI
- Male vs Female incidence
- Typical vs Atypical UTI
- Upper tract vs lower tract UTI
Case history UTI

- 6 year old, Amanda
- Abdominal pain, dysuria, Smelly urine
- Urinalysis suggestive, sent for urine culture
- Pure growth of E. coli.

- How will you manage her?
Making accurate diagnosis

- Clean catch urine
- Urine collection Pads
- SPA
- Catheter specimen

- Cotton wool  X
- Sanitary pad   X
Accurate Diagnosis

- Urine specimen
- Refrigerate
- Store in Boric Acid specimen containers
History

- Dysuria
- Fever of unknown origin
- Failure to thrive
- History of UTI
- Enlarged bladder
- Constipation
## Initiation of Treatment

<table>
<thead>
<tr>
<th>Urinalysis Findings</th>
<th>Treat for UTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leucocyte +ve</td>
<td>YES</td>
</tr>
<tr>
<td>Nitrite +ve</td>
<td></td>
</tr>
<tr>
<td>Leucocyte –ve</td>
<td>YES</td>
</tr>
<tr>
<td>Nitrite +ve</td>
<td></td>
</tr>
<tr>
<td>Leucocyte +ve</td>
<td>YES/NO</td>
</tr>
<tr>
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<td></td>
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<td>NO</td>
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Treatment:

- Acute pyelonephritis:
  - Parenteral Antibiotics
  - 7-10 days of antibiotics

  Lower UTI: 3 days of antibiotics.
  - Nitrofurantoin, Trimethoprim

  Prophylaxis: If initial Ix are abnormal following UTI
Imaging UTI

- Younger than 6 months.
- 6 months – 3 years.
- Older than 3 years.

NICE 2007
## Less than 6 mo

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<th>Recurr UTI</th>
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<tr>
<td>USS during acute infection</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>USS at 6 weeks</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>DMSA 4 -6mo</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>MCUG</td>
<td>No</td>
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### 6mo - 3 year

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### Older than 3 yr

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Follow Up

No follow up if no investigations done

Blood pressure, urinalysis, height & weight (important)

No need to retest urine if well after UTI
‘Other’ Treatment

- Good hydration
- Avoid / Treat constipation.
- Scheduled toileting - school may help
- Prompt treatment of symptoms.
Summary

- Most children have uncomplicated UTI

- Treatment can be initiated with urinalysis results.

- Complex I nx not necessary in uncomplicated UTI

- Refer for further I x if atypical or recurrent UTI.