An Approach to Abdominal Pain
Block 10

Dr AJ Terblanche
Department of Paediatrics and Child Health

Abdominal pain

- Most common gastrointestinal complaint
- Diagnosis and management often challenging
- Associated of a wide variety of disorders
  - Acute and life-threatening…obstructions, infections
  - Chronic functional disorders…difficult to tolerate, not typically associated dire consequences
Types of abdominal pain

- **Visceral pain**
  - Dull aching, midline, poorly localized
- **Somatic**
  - Superficial structures peritoneum, sharp, well localized
- **Referred pain**
  - From parietal pleura to abdominal wall

**Visceral pain**

- Sensation produced in response to
  - Stretching or distention wall of hollow organ or capsule solid organ
  - Inflammation
  - Ischemia
- Dull, crampy, poorly localized pain in midline on level of dermatomes that innervate the organ
- Accompanied nausea, emesis, diaphoresis
- Visceral pain becomes somatic if the affected viscus involves a somatic organ eg peritoneum or abdominal wall
Location visceral pain

- **Epigastric T5-T9**
  - Foregut: Liver, pancreas, biliary tree, stomach, proximal intestine (duod)
- **Periumbilical T8-L1**
  - Midgut: Distal small intestine, asc colon, prox 2/3 transverse colon, appendix
- **Suprapubic T11-L1**
  - Hindgut: Dist 1/3 transverse colon, descending and rectosigmoid colon

Lateral T10-L1

Nephrogenic cord:
Kidneys, ureters, ovaries, falopian tubes

Somatic pain

- Peritoneal inflammation
- Localized area involved viscera
- Steady, sharp pain
- Associated voluntary guarding and involuntary rigidity overlying muscles
- Rebound pain
- Aggravated motion
  - Restlessness versus immobility
    Colic (visceral) vs peritonitis (somatic)
Referred pain

- Well localized pain area remote pathology
- Skin hyperalgesia over cutaneous dermatome supplied by same neural segment injured organ
- Pancreas: T5-T9 interscapular region
- Liver / biliary tree : right subscapular area

Evaluation abdominal pain

1. “How ill?”
2. “How long?”
Approach to abdominal pain

Duration

Chronic

Acute
Clinical approach: Acute History

• Pain:
  – time of onset, duration, relation initiating event
  – Character, change over time, radiate
  – Relation pain to other symptoms
    • Bilious vomiting
    • Diarrhoea, constipation, fever
• Medical history, previous surgery

Physical examination

• Difficult : too much distress to cooperate
• Motionless / wrthes about?
• Distention, gross asymmetry, associated skin lesions
• Bowel sounds
• Palpation, guarding, rebound tenderness
Diagnostic studies

- Abdominal radiographs, sonar, CT
- Laboratory
  - FBC, differential
  - Suspected etiology directed
Approach to abdominal pain

Duration

Chronic

Acute

Approach chronic abdominal pain:
Detailed history

- Age onset
- Location and nature pain
- Relation to feeding
- Severity, time, frequency occurrence and duration
- Aggravating or relieving factors
- Associated symptoms
  - LOW, fever, vomiting, bloating, diarrhea, hematoschezia, urinary symptoms
- Intercurrent illness or recent trauma
- Prior treatment
Chronic or recurrent abdominal pain

- Very common 10 – 15% of children
- Duration longer than 3 months, affecting normal activity
- Range of anatomic, infectious, inflammatory, biochemical disorders
- Presents in 3 main patterns
  - Isolated paroxysmal abdominal pain
  - Abdominal pain with dyspepsia
  - Abdo pain with altered bowel pattern
Functional abdominal pain

- Typically 5 – 14 years old
- Unrelated to meals or activity
- Clustering of pain episodes: several times per day to once a week, recurring at days to weeks intervals
- Physical or psychological stressful stimuli
- Personality type obsessive, compulsive, achiever
- Family history of functional disorders: reinforcement of pain behaviour

Functional abdominal pain

- Vague, constant, peri-umbilical or epigastric pain more often than colic: visceral type of pain
- Duration <3 hours in 90%, variable intensity
- Associated symptoms: headache, pallor, dizziness, low-grade fever, fatiguability
- May delay sleep, but does not wake the child
- Well-grown and healthy
- Normal FBC, ESR, Urinalysis, Stool microscopy for blood, ova, parasites
Management of functional pain

- Positive clinical diagnosis: careful history
- Do not over-investigate: more anxiety
- FBC, ESR, Urinalysis and culture, Stool for occult blood, ova and parasites
- Positive reassurance that no organic pathology is present
- Little place for drugs
- Dietary modification
- Reassuring follow-up

Pointers to organic pain in children

- Age of onset <5 or >14 years
- Localized pain away from umbilicus
- Nocturnal pain waking the patient
- Aggravated or relieved by meals (dyspepsia)
- Loss of appetite and weight
- Alteration in bowel habit
- Associated findings: fever, rash, joint pain
- Abdominal distension, mass, visceromegaly
- Occult blood in stools, anaemia, high ESR
Abdominal pain

- Common complaint
- Not to be underestimated
- Life threatening to functional disorders
- Art distinguish between two groups
- Appropriate management