

Paediatric physical assessment within continence care

Bowel and Bladder

1. General

For an examination to be effective, the room where the examination is conducted must be sufficiently lit.

Before and during the examination, the nurse speaks to the child, distracts him/her and explains it according to his/her age.

The examination is performed with warm hands; the stethoscope is rubbed to warm the surface.

Position: The nurse stands on the right-hand side of the patient during the examination. The examination will take place with the patient in the supine position. For older children, a pillow is placed under the head and under the knee. The arms are placed in a relaxed position parallel to the body (CAVE: stretching of the abdominal wall if the child puts hands above head).

Performance of examination: The physical examination of the abdomen is carried out in four steps: Inspection, auscultation, percussion and palpation. The examination must take place in this order, as the percussion and palpation can alter the frequency of bowel sounds.

The abdomen is divided into four quadrants:

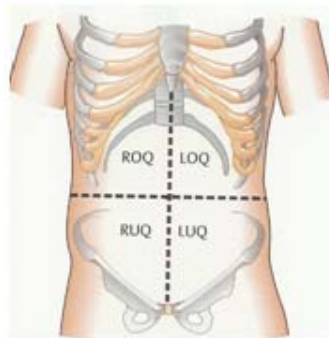


Figure 1 The 4 quadrants of the abdomen (Bickley, 2000)

URQ = upper right quadrant, LRQ = lower right quadrant, ULQ = upper left quadrant, LLQ = lower left quadrant

2. Inspection

Definition: External examination of the abdomen.

Performance of examination: The abdomen is viewed from the side and from above.

Pay attention to: Skin, navel (contour and position), abnormal vascular markings, abnormalities in abdominal wall, contour (flat, round, convex or caved), symmetry, pulsation, peristalsis and peripheral vascular irregularities.

Abnormalities	Possible cause
Asymmetry	- Enlarged organ - Tumour
Sunken abdomen (scaphoid abdomen)	- Upper gastrointestinal closure (atresia) - For states of starvation - Diaphragmatic hernia
Visible peristaltic waves	- Mechanical ileus - Pyloric stenosis - Hirschsprung's disease
"Flattened navel"	- Ileus
Strong abdominal veins displayed	- Normal until puberty - Portal hypertension
Pre-bulged abdomen and flattened navel	- Ascites
Abdominal distension	- Normal after eating - Normal in infants because the abdominal muscles are poorly developed

Table 1 Inspection (Bickley, 2000 & Rosenecker & Schmidt, 2008)

3. Auscultation

Definition: Listening to the abdomen with a stethoscope. The intestine's peristaltic activity can be detected through auscultation of the abdomen.

Performance of examination: The procedure will address the 4 quadrants systematically (LRQ → URQ → ULQ → LLQ).

Pay attention to: Frequency and duration of bowel sounds. "Expected sounds" means 5-12 bubbling and gurgling bowel sounds per minute.



Bowel sounds	Causes
More intense and lively	Gastroenteritis, fasting, celiac disease
Sloshing (borborygmi)	Gastroenteritis
Sloshing, rippling	Stenosis
Metallic sounding (when upright)	Mechanical ileus
Reduced or absent	Paralytic ileus

Table 2 Auscultation (Bickley, 2000 & Rosenecker & Schmidt, 2008)

4. Percussion

Definition: Tapping the abdomen. Percussion helps in the identification of masses (e.g. tumours), organ size and localised pain.

Performance of examination: In accordance with the systematic percussion scheme (Fig. 2).

Generally, a tympanic sound (dull sound, like the sound produced when one taps on an inflated cheek) the sections of the gastrointestinal tract are filled with air (flatulence). A crural sound (muffled knocking sound, quieter and shorter sound, comparable to that made when one taps a thigh) points to solid organs, free liquid, or a full bladder.

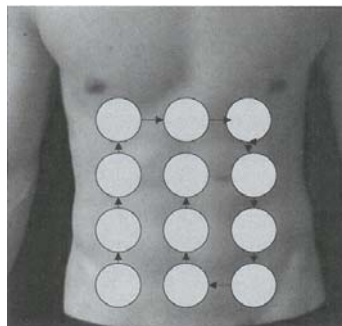


Figure 2 Systematic percussion (Rosenecker & Schmidt, 2008)

Cave: Infants swallow air when feeding and when crying; they therefore have more air in the stomach and intestinal lumen.

5. Palpation

Definition: Checking the abdomen to assess the underlying organs or body structures, and to check for hard faecal pellets in children with constipation problems.

Execution of light palpation: The abdomen is palpated using light pressure. Different palpation methods are used depending on the age of the child: for infants, palpation is done using 2 fingers; for small children, with the 3 middle fingers; and in older children with the whole hand. All 4 quadrants are gently palpated.

Cave: Carefully palpate superficial organs or tumours and in areas that are sensitive to pressure or offer additional resistance to the hand.

Execution of deep palpation: Bimanually, the organs are palpated for consistency, elasticity, mobility, tenderness and size.



Figure 3 Light and deep palpation (Bickley, 2000)

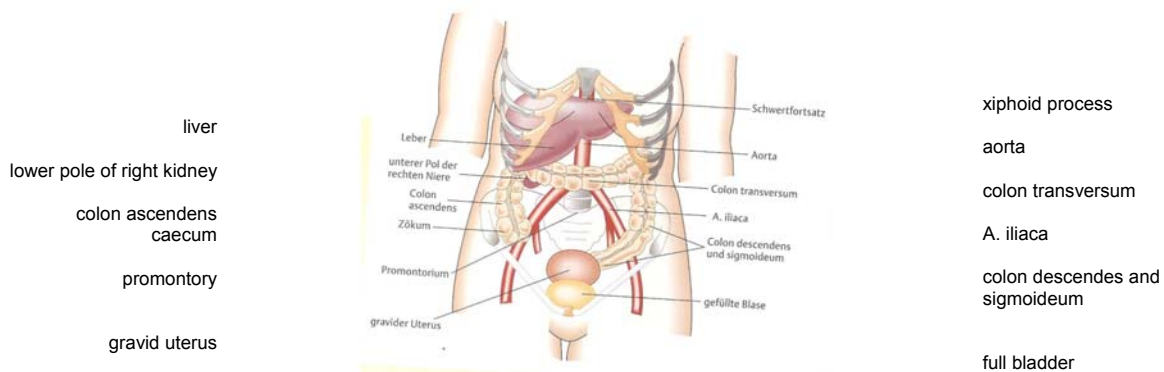


Figure 4 Internal structures (Bickley, 2000)

Bladder	Often at the level of navel
colon descendens	Sausage-shaped mass in the LLQ; check for faecal bulk
colon sigmoideum	Fixed, narrow line in LLQ
Caecum and colon ascendens	Softer, thicker "tube" in the LRQ

Table 3 Organ palpation (Bickley, 2000 & Rosenecker & Schmidt, 2008)

Cave: It is recommended that the child be distracted during the examination. Another option is for the examiner to take the child's hand in his/her own, so that the child is involved in the palpation. This will help reduce the child's anxiety and relax the abdominal muscles.

6. Rectal examination

Definition: Rectal digital examination of the rectum.

Cave: Only according to the recommendations of Ness et al. (2012). The examination is uncomfortable, but not painful. Children undergoing the examination experience the sensation of needing to defecate.

Performance of examination: In young children, the feet are kept together with bent knees. Older children are asked to turn onto their side. The examiner puts on a glove and puts lubricant on the index finger. The index finger is slowly inserted into the rectum. In a two-handed examination, the free hand is placed on the abdomen.

Perianal skin	<ul style="list-style-type: none"> - Skin assessment - Pay attention to: Fissures, prolapse, erythema, skin tags (anal folds), any surgical sutures
Sphincter tone = degree of activity (tension) of sphincters	<ul style="list-style-type: none"> - Strong or weak - Resistance
Ampulla recti	<ul style="list-style-type: none"> - Empty - Filled with faeces (sign of constipation)

Table 5 Rectal examination (Bickley, 2000)

7. Resources for Assessment

- Focused health history
- Bladder Scan, Uroflow
- Urinary diary and Fluid balance
- Color /Odor/ Urine & Stool analysis
- Bristol Stool Form Chart
- e.g. Cleveland Clinic Incontinence Score
- Additional: Pain scales, ADL; GCS

8. Nursing diagnoses in connection with the assessment of bowel and bladder

- Constipation
- Risk for Constipation
- Diarrhoea
- Overflow Incontinence (Stool)
- Urinary retention
- Urinary Incontinence
- etc.

References

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