

Approach to Surgical Abdominal Problem in Pediatric

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Objectives

- 1-Realize the impact of age
 - Where/who are the history sources
- 2-Recognize and interpret the
 - important symptoms
 - Important signs

Color Index:

-Doctor's Notes -Surgery Recall -Doctor's Slides+433 team -Important -Extra

History:-



The impact of age ..

★ Less than 3-4 year

(Younger patients can't communicate with you, so you should rely on someone else.)

○ Difficult to communicate

- Verbal expression
- Fear of strangers

○ History sources

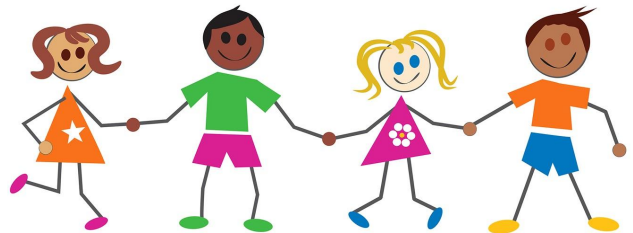
- Mother is the best source (most accurate)
- Social barrier less than what we expect
- Father is not very reliable
- Nurses are reliable (if the baby is hospitalized for long time > the mother spent less time with him/her > so you should ask the medical team)
 - Not always possible
 - Important in PICU/ NICU
- Other doctors

★ More than 4 years

(you can ask them, however, the mothers still more reliable.)

Symptoms of surgical abdomen:-

(you have to ask parents about)



Physiological signs → in healthy baby

- ★ **Feeding** > normally babies feel hungry every 3-4 hours.
- ★ **Growing** > proper increase in weight compared to the average (in the cross chart) > normal gut
- ★ **Vomiting** > small amount of vomit after each feed is physiological specially in younger babies; because they have weak esophagogastric sphincter, so whenever they over feed them, they start to vomit the excess amount of food.

How could you know if it's physiological?? The baby will continue to gain weight.

any disturbance in growing or feeding might indicate that there is a problem in the abdomen

cont. :-

Pathological signs → in sick baby

★ **Poor feeding** > baby reject feeding for more than 4 hours



Babies will refuse feeding if they are:

- Have metabolic problem
- CNS problem
- Have an GI obstruction (usually comes with vomiting)
- In Pain
- Have sepsis
- Have a systemic problem

★ **Persistent vomiting + the baby is not growing**

ASK about:

- Frequency > after each feed and even without feeding
- Color > the color become greenish, if the obstruction is after the ampulla vater; because of the presence of bill. If the obstruction above the ampulla vater the color will be white (milky)
- Force
 - Projectile (the vomit is going far from the baby) → proximal obstruction; because the stomach is pumping strongly against an obstruction. > so in distal obstruction the vomit is not projectile.

★ **Bowel movement (BM)**

Normal BM → in healthy baby

Frequency >

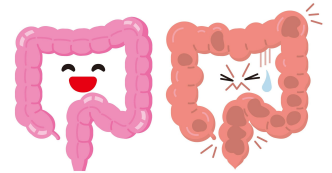
1) **Meconium** > 90% of babies pass it during the first 48 hours

meconium is the first BM, which contains the amniotic fluids and debris

2) **BM after meconium** > could be 3-4/ day, or once in 2-4 days

Consistency > very soft and sticky

Color > light yellow and dark



*You will know if it's physiological if the baby doesn't have **abnormal vomiting**, and the baby is **growing well***

Abnormal BM → in sick baby

Frequency

- Constipated, obstructed > if more than 4 days,
- Failure to pass **meconium for more than 2 days** in newborns > indicates **congenital problem**, it could be either obstruction or Hirschsprung disease.

***Hirschsprung disease** It is a congenital condition which affect the bowel nerves and causes a blockage of the large intestine, due to poor muscle movement in the bowel.

cont. :-

Consistency

- Loose / watery → diarrhea
- Firm & dry → constipation

Color

- Very pale (white) → obstructive jaundice
- Black → Melena (upper GI bleeding > very uncommon)
- Bright red → rectal or anal fishers > very common in babies due to constipation

Note : If the baby didn't pass stool for 48 hours after birth → suspect obstruction.

The most common cause of obstruction in babies is Hirschsprung's disease



★ Crying baby

Normally > Babies communicate their needs by crying

- Hungry (the most common cause of crying in babies)
- Wet
 - > Babies older than 6 month → they learn to cry for other reasons
- Want to be carried
- Want to play



Abnormally > when the Baby is irritable > continue crying + refuse feeding and dry → that's mean there is pain (any where)

- Abdominal pain (you will know if it's abdominal pain if it's associated with other symptoms like: vomiting, or blood in stool .. extra)
- Ear ache

> when the Baby is not crying, even if it wet or hungry> that's indicates that the baby is very sick

- Septic baby

★ Development

Normally > proper Physical growth (height and weight)

Abnormally

> Chronic problems affecting the growth (weight and height) : *most important*

Either :

- 1) Metabolic problems > genetic disease
- 2) Nutrition
- 3) chronic severe constipation, partial bowel obstruction > failure to thrive.
 - > Psychological
 - Mental problem, chromosomal abnormalities > Motor
 - Syndrome
 - Metabolic



External Abnormalities:-

Anything that is seen/felt as abnormal by parents.

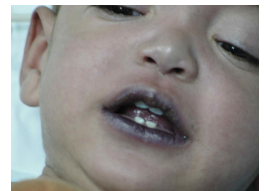
Like:

- ★ **Swelling** (in the back, abdomen, peri-anel area(abscess))
 - > Abscess (associated with fever, redness, swelling , tender of the skin)
 - > Mass

* when you have a mass ask all mass questions as in adults(SOCRATES)*

Could be: lymph node, Tumor (not tender) , Cyst, hemangioma (colored mass), or Hernia (it's the only mass that comes and goes> either in the umbilical or inguinal)

- ★ **Color changes**
 - Inflammation (abscess, cellulitis)
 - Rash
 - Vascular malformation
 - **Jandince**
 - **Cyanosis** (Low oxygen saturation)



Related symptoms (by parents)

★ Mental changes

Responsiveness : Normally babies are active, play can cry ,so when they have a disease such as obstruction which presents by vomiting that leads to dehydration → less responsive , sleepy and poor or not interested in feeding

Poor or not interesting in feeding Indicates: **sepsis, shock, CNS trauma, metabolic (O2, Glu, urea)**

Abdominal problems (Combination of symptoms)

- Vomiting
- Constipated / diarrhea
- Poor feeding
- Abdominal distension
- Palpable mass (felt by parents)
- Very dark or very pale colored stool

History (general skills)

- ❖ A good history = a good logical story
- ❖ Known major Predisposing factors → Describe the current problem
→ Other risk factors → Symptoms of other possible complications
- ❖ Due to the relative difficulties in taking a reliable history a performing an accurate physical exam → we tend to depend more on investigations in diagnosing the underlying problems in infants

Physical Exam

1-Vital signs

Fever (by temperature) ,RR, BP, HR, and O2 Saturation.

2-Consciousness (crying)

Crying baby → not very sick (not critical)

Unusually calm baby who doesn't respond normally → sick

3-Exam while crying

- Can't hear the chest well
Focus on inhalation
- Can't examine abdomen well
Examine while taking breath
Keep hand on abdomen
- Can't concentrate
Parent are stressed → less time



Note : Babies have higher HR, RR and lower BP



4- Otherwise similar to adult.

Thank you

“Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time.”

Thomas A. Edison