**ALMustansiriyah University/College of Medicine**



**4th stage**

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**FEEDING PROBLEMS DURING THE 1st**

**YEAR OF LIFE**

**Underfeeding**

Underfeeding is suggested by:

\* restlessness and crying.

\* failure to gain weight adequately.

Result from:

failure to take a sufficient quantity of food even when offered

In these cases

\* the frequency of feedings,

\* the mechanics of feeding,

\* the size of the holes in the nipple of feeding bottle,

\* the adequacy of eructation of air,

\* the possibility of abnormal mother-infant “bonding.

\* possible systemic disease in the infant

should be considered

Clinical manifestation:

The **extent and duration** of underfeeding determine the clinical manifestations:

\* Constipation, failure to sleep, irritability, excessive crying is to be expected.

\* Weight gain may be slow, or there may be an actual loss of weight.

In the latter case:

\* skin becomes dry and wrinkled.

\* subcutaneous tissue disappears.

\* the infant assumes the appearance of an “old man.

\* Deficiencies of vitamins A, B, C, and D as well as of iron and protein may be responsible for the characteristics of clinical Manifestations.

Treatment of underfeeding include:

\*increasing nutrient intake

\*correcting any deficiencies of vitamins and/or minerals

\*instructing the caregiver in the art and practice of infant feeding

\*If an underlying systemic disease, child abuse or neglect, or a psychological problem is responsible, specific management of that disorder is necessary.

**OVERFEEDING**

As a rule, postprandial discomfort from excessive intake limits the amount of food an infant voluntarily ingests, but there are exceptions.

If intake is excessive, regurgitation and vomiting are the most frequent symptoms.

Diets that are too high in fat delay gastric emptying, cause abdominal distention and discomfort, and may cause excessive weight gain.

Diets that are too high in carbohydrate are likely to cause undue fermentation in the intestine, resulting in distention and flatulence as well as more rapid weight gain than desirable.

REGURGITATION AND VOMITING

Vomiting, is the more complete emptying of the stomach, often occurring sometime after feeding

Regurgitation refers to the return of small amounts of swallowed food during or shortly after eating.

regurgitation is a natural occurrence, especially during the 1st several months of life.

reduced to a negligible amount by:

\* adequate eructation of swallowed air during and after eating, by gentle handling,

\*avoiding emotional conflicts,

\*placing the infant on the right side for a short time immediately after eating.

Vomiting is one of the most common symptoms in infancy and may be associated with a variety of disturbances both trivial and serious. Its cause should always be investigated.

Vomiting: Define: violent expulsion of gastric and sometimes intestinal contents.

\*\*vomiting caused by obstruction of the GIT is probably mediated by intestinal visceral afferent nerves stimulating the vomiting

If obstruction occur below the second part of the duodenum, vomitus is usually bile stained.

With repeated vomiting in the absence of obstructed duodenal content are refluxed in to the stomach and emesis may become bile stained center.

GIT

Chalasia

A chalasia

Hiatal hernia

Peptic esophagitis

F.B

Intussusceptions

Pyloric stenosis

Gluten enteropathy

Diaphragmatic hernia

Food allergy

Hirsch sprung disease

Appendicitis

Gastroenteritis

Hepatitis

Volvulus

Duodenal ulcer

Malrotation

Duplication

EXTRA GIT:

Sepsis Pneumonia

Otitis media UTI

Meningitis Brain tumor

Adrenal insufficiency Inborn error

Laboratory evaluation:

Careful history

Physical examination

Endoscope

Contrast radiography

Brain MRI

Metabolic study (lactate, organic acid, ammonia).

**Common IN infants**

GE

Esophageal reflux

Over feeding

Anatomical obstruction

syndrome

Systemic infection Medication

Pertussis syndrome Reflux

**Common in child**

GE

Systemic infection

Toxic ingestion

Pertussis

Medication

Reflux

Treatment: Hydration

**LOOSE OR DIARRHEAL STOOLS**

The stool of the breast-fed infant is naturally softer than that of the formula-fed infant.

From about the 4th to the 6th day of life, the stools of the breast-fed infant go through a transitional stage of being loose, greenish-yellow in color and containing mucus to the typical “milk stool”.

Subsequently, the use of laxatives or the ingestion of certain foods by the mother may be temporarily responsible for a breast-fed infant's loose stools.

Excessive intake of breast milk may also increase the frequency and water content of the stool.

Actual diarrhea from overfeeding, however, is unusual; thus, diarrhea should be considered infectious until proven otherwise.

Although the stools of formula-fed infants tend to be firmer than those of breast-fed infants, loose stools also may result from artificial feeding. Overfeeding may cause loose, frequent stools, particularly during the 1st 2 wk. or so of life. Later on, formulas that are too concentrated or too high in sugar content, especially in lactose, may result in loose, frequent stools.

**Treatment**

Many diarrheal disturbances in formula-fed infants result from contaminants that would not disturb an older child.

Mild diarrheal disturbances caused by overfeeding respond quickly to a temporary decrease or cessation of feeding.

Withholding all solid food as well as 1 or several feedings and substituting boiled water or a balanced electrolyte solution is usually all that is required

**COLIC**

Colic is a symptom complex of paroxysmal abdominal pain, presumably of intestinal origin, and severe crying. It usually occurs in infants younger than 3 mo of age

**The clinical manifestations** are characteristic. The attack usually begins suddenly, with a loud, sometimes continuous cry.

The paroxysms may persist for several hours. The infant's face may be flushed, or there may be circumoral pallor. The abdomen is usually distended and tense. The legs may be extended for short periods, but are usually drawn up on the abdomen. The feet are often cold, and the hands are usually clenched. The attack may not terminate until the infant is completely exhausted. Sometimes, the passage of feces or flatus appears to provide relief.

**The etiology**

usually is not apparent, the attacks seem to be associated

\*with hunger or with swallowed air that has passed into the intestine.

\*Overfeeding may cause discomfort and distention,

\* some foods, especially those with high carbohydrate content, may result in excessive intestinal fermentation.

\*Crying with intestinal discomfort occurs in infants with intestinal allergy, but colic is not limited to this group.

Colic may mimic intestinal obstruction or peritoneal infection. Attacks commonly occur in the late afternoon or early evening, suggesting that events in the household routine may be involved.

Worry, fear, anger, or excitement may cause vomiting in an older child and may cause colic in an infant, but no single factor consistently accounts for colic and no treatment consistently provides satisfactory relief.

Colic often is diagnosed using Wessel's rule of threes—crying for more than 3 hours per day, at least 3 days per week, for more than 3 weeks.

The limitations of this definition include the lack of specificity of the word crying (e.g., does this include fussing?) and the necessity to wait 3 weeks to make a diagnosis in an infant who has excessive crying. Colicky crying is often described as paroxysmal and may be characterized by facial grimacing, leg flexion, and passing flatus.

**Ddx of colic**

The differential diagnosis for colic is broad and includes any condition that can cause pain or discomfort in the infant, , as well as conditions associated with nonpainful distress, such as fatigue or sensory overload. Cow's milk protein intolerance, gastroesophageal reflux disease (GERD), maternal substance use including nicotine, and anomalous left coronary artery all have been reported as causes of persistent crying.

In addition, situations associated with poor infant regulation, including fatigue, hunger, parental anxiety, and chaotic environmental conditions, may increase the risk of excessive crying.

In most cases, the cause of crying in infants is unexplained. If the condition began before 3 weeks' corrected age, the crying has a diurnal pattern consistent with colic (afternoon and evening clustering), the infant is otherwise developing and thriving, and no organic cause is found, a diagnosis of colic may be made.

**Management**

Careful physical examination is important to eliminate the possibility of intussusception, strangulated hernia, or other serious causes of abdominal pain.

Holding the infant upright or prone across the lap or on a hot water bottle or heating pad occasionally helps. Passage of flatus or fecal material spontaneously or with expulsion of a suppository or enema sometimes affords relief. Carminatives before feedings are ineffective in preventing the attacks.

The management of colic begins with education and demystification. When the family and the physician are reassured that the infant is healthy, education about the normal pattern of infant crying is appropriate.

Anticipatory guidance should also be provided regarding atypical crying that warrants further medical attention.

Learning about the temporal pattern of colic can be reassuring; the mean crying duration begins to decrease at 6 weeks of age and decreases by half by 12 weeks of age.

Colic frequently resolves by 3 months of age. Approximately 15% of infants with colic continue to have excessive crying after this age.

Although it is not serious, colic can be particularly disturbing for the parents as well as the infant. Thus, a supportive and sympathetic physician can be particularly helpful, even if attacks do not resolve immediately.

The fact that the condition rarely persists beyond 3 mo. of age should be reassuring

Techniques for calming infants “5 Ss”: Swaddling, Side or Stomach holding, Soothing noises (such as shushing, singing, or white noise), Swinging or slow rhythmic movement (such as rocking, walking, or riding in a car), and Sucking on a pacifier.

Giving caregivers permission to allow the infant to rest or leave the infant alone in a safe place (such as a crib) when soothing strategies are not working may alleviate overstimulation in some infants; this also relieves families of guilt and allows them a wider range of responses to infant crying.

It is important to encourage parents to seek help and support from others when they are becoming overwhelmed and to advise against harmful methods to soothe an infant (such as placing the infant on a vibrating clothes dryer). Parents should be specifically educated about the dangers of shaking babies.

Medications, including phenobarbital, diphenhydramine, alcohol, simethicone, dicyclomine, and lactase, have not been shown to be of benefit and may cause serious side effects; they are, therefore, not recommended. Some early studies have suggested that probiotics may be useful, but results have been conflicting, and further research is needed.

Alternative treatments such as chamomile, fennel, vervain, licorice, and balm-mint teas have not been approved for use in infants and can cause serious side effects such as|( hyponatremia and anemia|).

**CONSTIPATION**

Constipation is practically unknown in breast-fed infants receiving an adequate amount of milk and is rare in formula-fed infants receiving an adequate intake

The consistency of the stool, not its frequency, is the basis for diagnosis. Most infants have 1 or more stools daily, but some occasionally have a stool of normal consistency at intervals of up to 36–48 hr.

Whenever constipation or obstipation is present from birth or shortly after birth, a rectal examination should be performed.Tight or spastic anal sphincters may occasionally be responsible for obstipation, and finger dilation is frequently corrective. Anal fissures or cracks may also cause constipation. If irritation is alleviated, healing usually occurs quickly.

Aganglionic megacolon may be manifested by constipation in early infancy; the absence of stool in the rectum on digital examination suggests this possibility, but further diagnostic work-up is indicated.

Constipation may be caused by an insufficient amount of food or fluid. In some cases, it may result from diets that are too high in protein or deficient in bulk.

Simply increasing the amount of fluid or sugar in the formula may be corrective during the 1st few months of life.

After this age, better results are obtained by adding or increasing the intakes of cereal, vegetables, and fruits. Prune juice (½–1 oz) may be helpful, but adding foods with some bulk is usually more effective.

Milk of magnesia may be given in doses of 1–2 tsp, but should be reserved for unresponsive or severe constipation. Enemas and suppositories should never be more than temporary measures