SUMMARY

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Gastrointestinal problems of the newborn produce a wide range of symptoms and signs and constitute a relative high incidence of morbidity and mortality of the attendances at emergency departments and hospital admissions as regard to neonatal surgical problems.

In this study, gastro intestinal problems are discussed in sequence starting from the mouth with its various problems passing through different abnormalities in immunological system, mouth, tongue esophagus, stomach intestines and ending finally into anal problems.

Immunology of gastrointestinal tract

The normal neonate is richly endowed with B-cells precurser and T-lymphoites long before birth. Although antigen reactive Ig A B-cells are present in the mucosal associated lymphoid tissue prior to the newborn period, their differentiation into plasma cells and synthesis of Ig A is characteristically observed to fourteen days after birth. Disorders of immunological system were discussed in details.

Disorders of the mouth, mucus membrane and tongue

1. Cleft lip and palate there are three groups :- pre-alveolar, post-alveolar and alveolar.

2. Thrush (oral condidiasis): Candida albicans is a common saprophytic fungus from candida vaginalis at the time of birth or from contaminated feeding bottles and teats; it is relatively uncommon in fully breast-fed infants.

3. Cancrum oris it is rare except in severe malnutrition and debilitating illness.

4. Macroglossia : normal sized songue may appear to enlarged, because of a relatively small oral cavity i.e. mongolism, hypothrodism, Beckwith's syndroms and glycogen storage diseas. Rhabdomyosarcoma of the tongue is rare but highly malignant it occur in early infancy.

5. Ankyloglossia (tongue tie).

6. Fissured or scrotal tongue. This condition is congenital and often familial.

7. Median Rhomboid glossitis, due to localized congenital absence of filiform papillae.

Problems of the esophagus :

Congenital malformations of the oesophagus include :

A) Absence

B) Atresia

1- With tracheo-oesophageal fistula.

2- Without fistula.

These malformations results from failure of the oesophagus and trachea to differentiate completely and the incidence is 3 per 10000 live births.

C) Stenosis due to :

- Fibrous stricture
- Web at lower end.

D) Duplication of the esophagus and bronchial cysts.

Acquired Lesion

A) Gastro-esophageal acid reflux with hiatus hernia:- It is common happening in the infants as a result the sphincter is more vulnerable to increase in intra-abdominal pressure, basal sphincteric pressure is frequently low during the first four to six weeks of life and in case episodes of transient in appropriate gastro-esophageal sphincter relaxation are cmmon. But Hiatal hernia divided into 1)Sliding H.H. the most common which is usually congenital. There is an associated with other congenital malformations and evidence of genitic factors.

B) Oesophageal erosions

It is most commonly associated with hyaline membrane

disease but was also noted in stillbirths.

C) Rupture of the oesophagus.

Abnormalities in neuromuscular control:

A) Crico-pharyngeal inco-ordination of infant is usually evident soon after birth.

B) Achalasia : Oesophageal achalasia is a disease of unknown cause by absence of peristalsis in the body of the oesophagus and by failure of the lower oesophageal sphincter to relax in normal way in response to swallowing.

C) Familial Dysautonomia :-

In addition to pharyngeal inco-ordination, weak peristaltic action that delayed oesophageal empyting in the supine position.

Compression of the oesophagus by Neighbouring structures:

Other mediastinal masses, cystic or solid, may produce narrowing or dislocation of the oesophagus.

Problems of the stomach:

A) Hypoplasia of the stomach and microgastria occurs in unusual instances due to faulty separation of primitive forgut.

B) Volvulus of the stomach

Hare happening,

C) Gastric Duplications:-

It is spherical or tubular, contiguous or distant, their lumens communicating or not with nearby gastrointestinal tract.

D) Atresia of pylorus: The diagnosis can be made only after exploration.

Delay in Gastric Emptying:

Delay in gastric emptying manifests itself by vomiting and begin after the first fluids have been taken or may be delayed until the end of the first week which is usually intermittent by follow every feeding. It may be forceful but is seldom projectile.

Hypertrophic pyloric stenosis

The incidence of pyloric stenosis ranges 1/300 to 1/1000 between one over three hundred to one over thousand live births, male infants are affected about four times as frequently as female. It is familial tendency, with a 7% incidence of pyloric stenosis in children of affected baby parents.

Pylorospasm

It is transitory condition but less than ten days.

Peptic ulcer:

It is not common in infancy, but may be more found after death than have been suspected in vivo.

Concordance in monozygotic twins is less than 100%, but consistently exceeds that in dizygotic twins, and it is true for the ulcer site.

The diagnosis on neonatal period is recognized by its complications, haemorrhage and perforation.

Gastric perforation.

This due to the complications of peptic ulcer, birth truma, ulceration caused by indwelling catheters. Some have been thought to follow rapid overdistention with gas in the course of positive pressure resuscitation, or due to over distention caused by obstruction distal to the stomach.

Problems of the intestine

Vomiting and abdominal distention are strongly suggestive of intestinal obstruction. Failure to pass meconium is a dependable sign, the normal newborn will pass a meconium stool within 12 hours and almost never fails to do so by 24 hours. If he does not, obstruction must be suspected.

The intestinal obstruction has been discussed and the obstruction complete or partial is not unusual in the neonatal period. Indeed, the bowel obstructs with supervising frequent even during the period of gestation.

Among the varieties of obstruction, atresias (Congenital intestinal obstruction) are the most common, (50% of obstructions occur in the ileum, 25% are in the duodenum and the most of the remainder are in the jejunum, the colon is rarely affected).
Multiple atresias are fairly common.

Errors in rotation and meconium ileus are the next most common causes. Aganglionosis, annular pancrease, intessusception, incarcerated hernias, and a variety of other miscellanous disorders are met, but rarely.

Errors in rotation which are not responsible for obstruction and depends upon one of two factors:

Non-rotated midgut and malrotation.

Meconium ileus considered the major cause of obstruction. Which is the earliest manifestation of the syndrome of cystic fibrosis.

Intraluminal cysts are an infrequent cause of intrinsic obstruction in the newborn. They may be of two varieties, duplications of the bowel or retention cysts.

Congenital hernias may become incarcerated in the neonatal period exactly as in later life. These hernias may be inguinal, diaphragmatic, or internal. Rarely an umbilical hernia becomes the site of obstruction.

Annular pancrease may produce partial or complete

obstruction at the second portion of the duodenum and may be impossible differentiate from duodenal web or obstruction at this site due to malrotation.

Intussusception is rare but for from unknown in the first month of life.

Neurogenic obstructions:

Due to absence of ganglion cells of myentric plexus in some portions of large bowel in several cases of megacolon (Hirschsprung's disease).

Acquired intestinal obstruction:

1) Necrotizing enterocolitis has become a major cause of morbidity and morality among newborns during the past quarter century. It is now generally acknowledged to be the most frequent preoperative diagnosis of infants going to surgery from neonatal intensive care unite.

2) Intussusception:

It is the invagination of one loop of bowel into a loop distal to it. Intussusception usually originate in the ileum, although arise from the jejunum or the colon and their danger lies only partially in obstruction they produce. It is rare in newborns.

Congenital deformities of the anus and rectum were discussed under three main groups each containing several subgroups, included stenosis of the anus, ectopic anus, covered anus in the female, incomplete rupture of anal membrane, persistence of anal membrane and imperforated anus and a rectum ends as blind pouch a variable distance from the perineum.

Fistulas are associated in a high percentage of cases (55 to 82% of all reported series).