Disorders And Health Problems Of A Child

A) Infancy :-

(1) FAILURE TO THRIVE (FTT)

Failure to thrive is a term used to describe inadequate growth or the inability to maintain growth in childhood. In failure to thrive the rate of growth is less than 20g/day from birth to 3 months of age and less than than 15 g/day from 3 months to 6 months of age.

→ Classification

Failure to thrive has been classified as:

* Organic
* Inorganic
* Mixed

- Organic FTT occurs when there is underlying medical cause like premature birth, maternal smoking, alcohol, use of illicit drugs during pregnancy, poor absorption of food etc.
- Inorganic FTT occurs due to causes other than medical cause like poor feeding skills on the part of the parent, difficult parent-child interactions, family dysfunction, such as abuse or divorce, lack of parenting preparation etc

- Mixed FTT has both organic causes and can't be described alone.

→ Causes.

* Inadequate caloric intake
  - Incorrect formula preparation
  - Neglect
  - Poverty
  - Non availability of food
  - Mechanical problems with sucking, swallowing and feeding.
* Inadequate absorption
  - Vitamin deficiencies
  - Hepatic diseases
* Increased caloric requirement
  - Congenital heart disease
  - Chronic or recurrent infection
  - Chronic respiratory disease
* Excessive loss of calories
  - Persistent vomiting
  - Gastrointestinal obstruction
  - Diabetes mellitus
  - Inborn errors of metabolism
* Altered growth potential or regulation
  - Chromosomal abnormalities
  - Endocrinopathies

→ Clinical Features

- Height, weight and head circumference do not match standard growth charts.
- Physical skills such as rolling over, sitting, standing & walking decreased.
- Mental & social skills decreased.
- Secondary sexual characteristics delayed in adolescents.
- Constipation
- Excessive crying
- Excessive sleepiness
- Irritability
- Minimal smiling
- Avoidance of eye contact

→ Diagnostic evaluation.

* History taking
  - Prenatal history
  - Medical history of child
  - Nutritional history
* Examination & Tests.
  - Physical examination
  - CBC
  - A growth chart outlining all types of growth
  - Hormone studies, including thyroid function tests
  - X-rays to determine bone age.

→ Management

- Correction of any underlying cause.
- Improvement in care-giver skills
- Regular & effective follow up.
- Treatment may also involve improving the family relationships & living conditions
- Feeding interval should not be greater than 4 hours & a maximum time allowed for sucking should be 20 minutes.
- For older & young children meals should be last for 30 minutes, solid foods should be offered before liquid, environmental distraction should be minimized.

* Nursing management

- Provide balanced diet or optimum nutrition
- A consistent, warm, caring environment.
- Parental support and education.
- Provide sensory stimulation. Attempt to cuddle the child and talk to him/her in a warm, soothing tone and allow for play activities appropriate for the child's age.
- Providing family teaching. while caring for the child, point out to the caregiver the child's development & responsiveness, noting and praising any positive parenting behaviors the caregiver displays

(2) DIARRHOEA

Diarrhoea is an increased frequency with liquidity of the faecal discharges.

→ Causes.

Dietary:

1. Overfeeding indigestion
2. Imbalanced diet
3. Deficiency of disaccharides

Infective:

1. Bacterial: E-coli, Shigella, salmonella
2. Viral - Enterovirus
3. Fungal - Candida albicans

Parenteral

Parenteral is caused due to infection outside the gastrointestinal tract such as UTI, Otitis media etc.

→ Predisposing factors

1. Infants are more susceptible
2. Low socioeconomic status
3. Unhygienic feeding habits
4. Repeated infections lower the body resistance.

→ Clinical features.

* Clinical manifestations depend on the age of the children, nature of the case, resistance of the children, health of the children and severity of the diarrhoea. Of the diarrhoea

is accompanied by vomiting, the fluid and electrolyte disturbances deteriorate the condition.

* There may be a fever ranging from low grade to high grade.
* Anorexia or vomiting
* Stools are loose & liquid in consistency, & may contain mucus, pus or blood. It may be greenish or yellow in colour.
* There may be behavior change such as irritability and restlessness.
* Children may look pale & become weak.
* The respiration may become rapid & sleep.

→ Complications

- Dehydration
- Abdominal distention
- Acute renal failure
- Malnutrition

→ Investigations

- History of loose motions
- Stool examination
- Blood urea nitrogen level (Normal range 6-24 mg/dl)
- Serum pH (N.R - 3.4 to 4.5 mg/dl).

→ Treatment

Supportive care

1. Fluid & electrolyte balance should be maintained

The amount & type of fluid depends on the severity of diarrhoea.

a. In mild diarrhoea with loose stools, small amount (about 300 ml) of ORS may be given every hour.

b. In moderate diarrhoea with loose stools & 10% weight loss with dehydration, clear fluid intake should be encouraged. The amount of ORS is increased upto 200 ml/kg/day.

Composition of ORS

Sodium Chloride	3.5 g
Sodium bicarbonate	2.5 g
Potassium Chloride	1.5 g
Glucose	20 g
Water	1000 ml

c. In severe diarrhoea with more than 10% weight loss IV fluids are necessary. The fluids may be administered at 225 ml/kg/day.

2. Specific antibiotics may be prescribed to treat E. coli, Shigella & Salmonella.

3. Adsorbants such as Kaolin & pectin may decrease the frequency of evacuation but may not reduce the fluid loss but mask the volume loss.

Nursing management

- Children should be isolated to prevent the spread of infection. The excreta should be disinfected & disposed. The contamination should be prevented.
- If the children have no vomiting & are conscious, they should be encouraged to take oral fluids coconut water, skimmed milk, weak tea & apple juice.
- Children should be observed for the signs of complications by monitoring vital signs, skin changes & behavior changes.
- Care of the skin at the perineum & buttocks is important because the stools have chemicals that affect the skin around the anal region causing irritation, redness. The diaper should be changed immediately after each soiling.
- Dry, clean & comfortable linen should be provided.
- General hygiene care should be provided
- Nutritional status should be monitored. During diarrhoea if children are on IV fluids where nutritional balance cannot be met, they may develop malnutrition. Therefore as soon as vomiting stops, oral feeding should be started which can be easily digestible such as soft cooked rice, banana, curds & buttermilk.