Unraveling the mystery of growth faltering and lung infections

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Identification & Admission Data

Patient Name	Age/Sex	Date of Admission
Mast. Avyansh	7 months / Male	29 Aug 2025

Chief Complaints

- [ ] Failure to gain weight × 3 months
- [ ] Cough ×1 month
- [ ] Fever × 2–3 days
- [ ] Decreased oral intake × 2–3 days
- [ ] Fast breathing × 2 days

History of Present Illness

This **7-month-old male child** was **apparently well till 3 months of age [4.2 kg recorded]**. After that, parents noticed that he was **not gaining weight adequately despite adequate feeding.** So in view of not gaining weight **top feeds started at 4 months of age**, and the mother described his **stools as oily and greasy.**

About **15 days before admission**, he developed **dry cough**, followed by **high-grade intermittent fever** and **reduced oral intake.** For the **last two days**, he had **fast breathing and chest retractions**.

History of Present Illness

There was **no history of cyanosis, noisy breathing, rash, or contact with tuberculosis no history of suck rest suck cycle**.

In view of persistent respiratory distress, he was brought to Neoclinic Hospital for further management.

Investigations prior to admission (29.08.25):

CBC

Hb-9.1 g/dL, TLC-18,800 /µL (L=60%), Platelet-2.46 lakh/µL

LFT

SGOT/SGPT-141.5 / 70 IU/L, Albumin-2 g/dL

Inflammatory Markers

ESR 34 mm/hr, CRP 2.24 mg/L

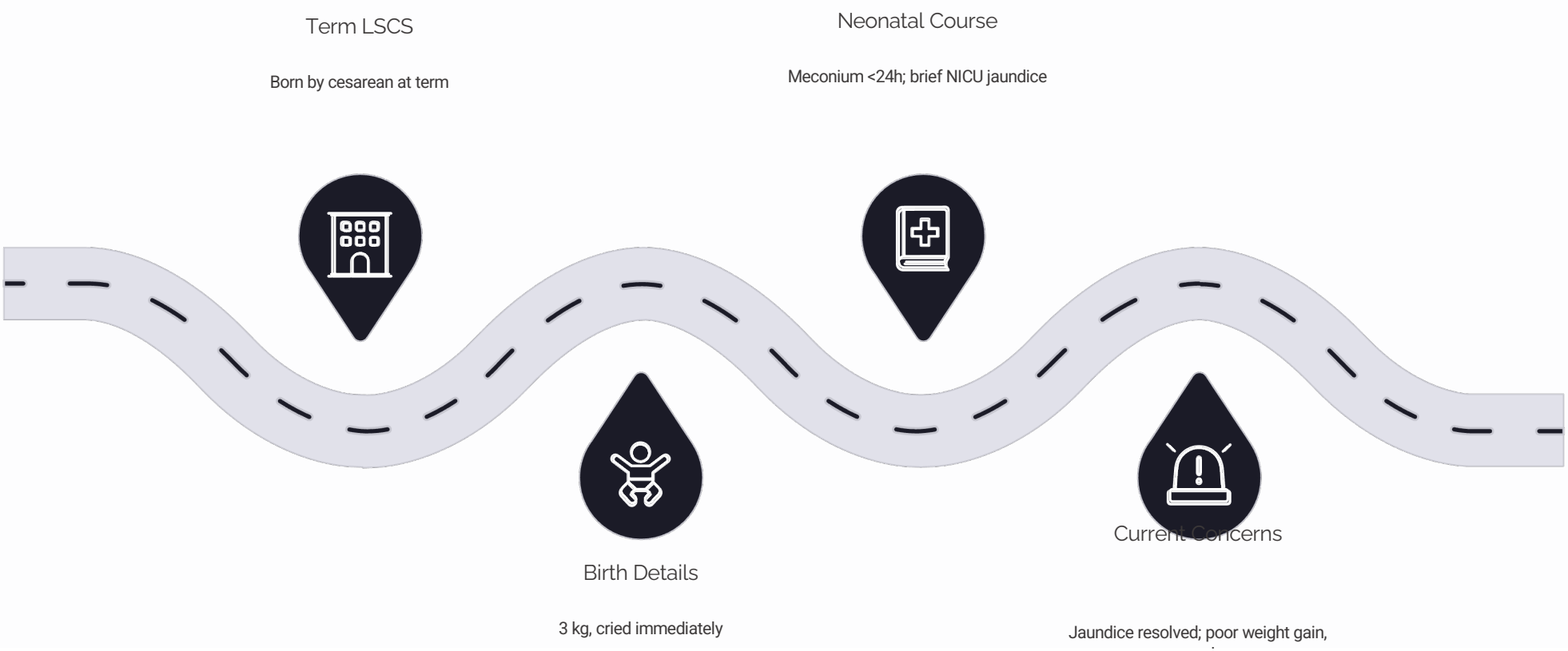
Serum Electrolytes

Sr. Na 138 mmol/L, Sr. K 4.0 mmol/L, Sr. Ca 8.9 mg/dL

Past & Birth History

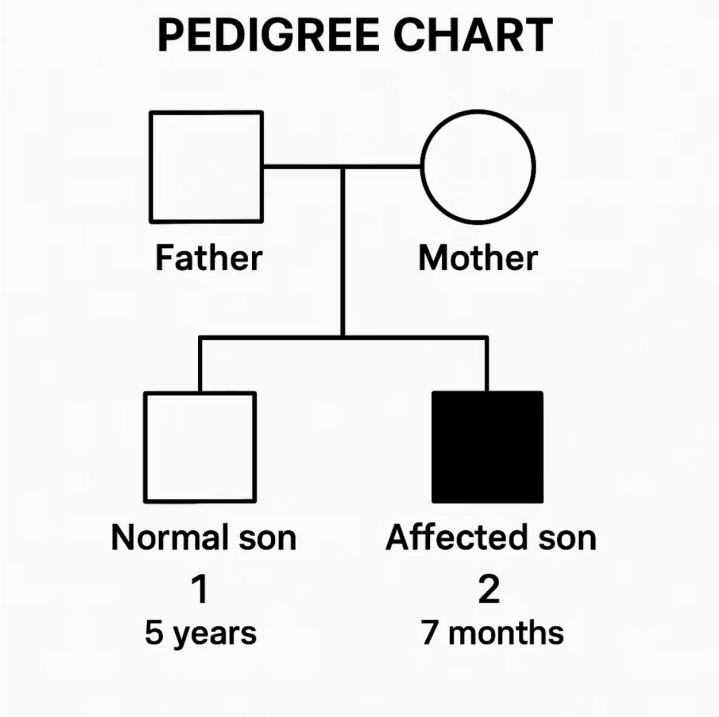
The child was born at **term by LSCS** with a **birth weight of 3 kg**. **He cried immediately after birth**, meconium passed within 24 hour after birth, required a **brief NICU observation for neonatal jaundice**, **which resolved**. There was **no history of birth asphyxia or sepsis.**

He remained well for the first three months, after which parents noticed **poor weight gain** and **intermittent cough**. There was **no history of recurrent hospitalizations, cyanosis, or contact with tuberculosis.**



Family History

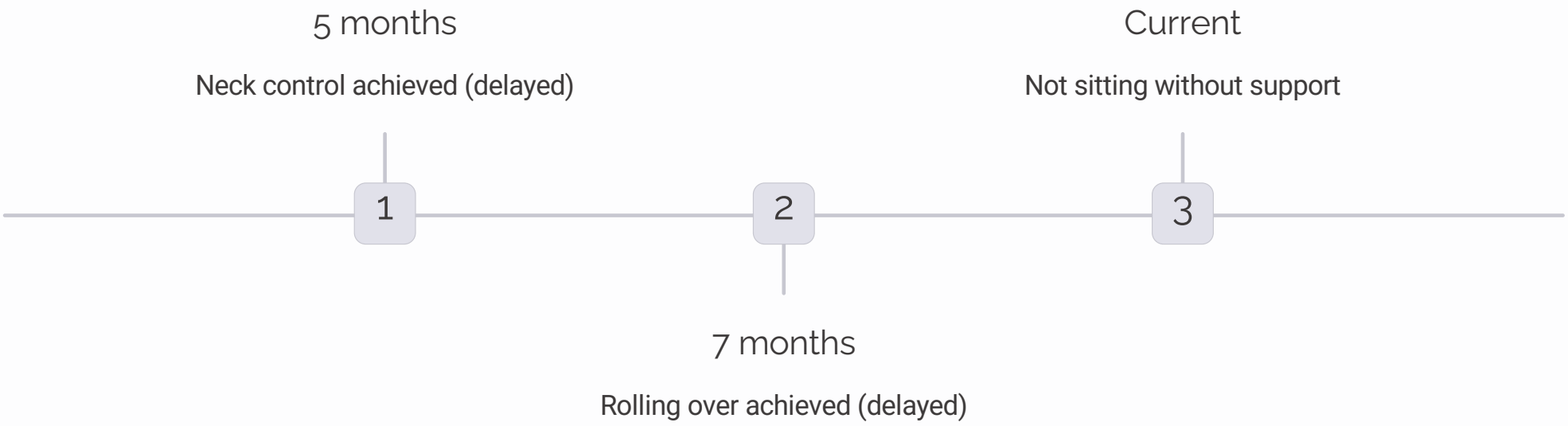
- Non-consanguineous marriage.
- He has an elder brother (5year age)
- No similar illness in family



Developmental History

According to the mother, the child **achieved neck control around 5 months of age,** and **rolling over at about 7 months**, which is delayed for age. He has **not yet achieved sitting without support.**

His **fine motor milestones** are also slightly delayed — he is able to **hold objects briefly but does not yet transfer them from one hand to another.**



Developmental History

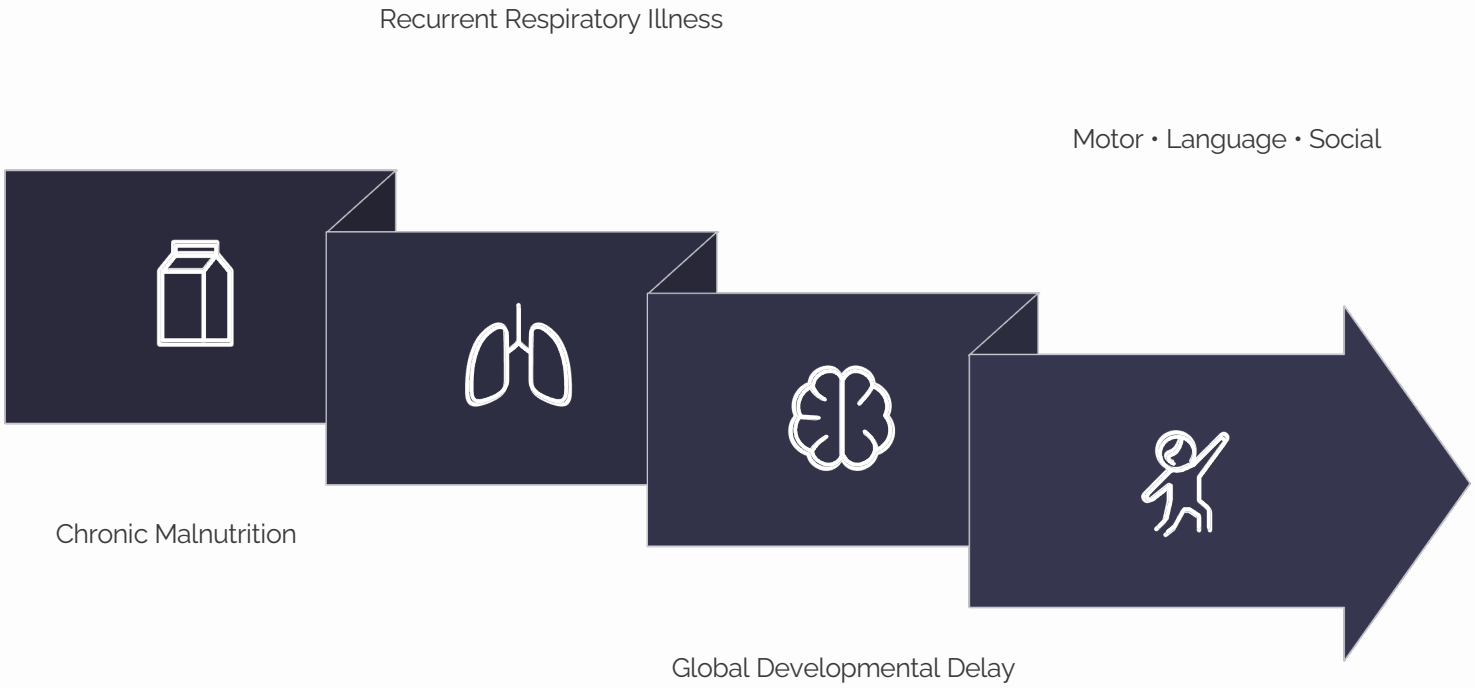
In the **language domain,** the child **responds to his mother's voice and coos occasionally,** but has **not yet started babbling.**

Socially, he **smiles responsively** and recognizes his primary caregivers.

There is no history suggestive of **regression of milestones**, seizures, or abnormal movements.

Developmental History

The overall impression is of a **global developmental delay, predominantly due to chronic malnutrition and recurrent respiratory illness**, rather than primary neurological disease.



Dietary History

01

Exclusive breastfeeding till 4½ months

adequate frequency and urine output.

02

Top feeds (formula feed) started early

due to poor weight gain → irregular feeding pattern.

03

Complementary feeds introduced late (~6 months)

and were nutritionally inadequate – mainly diluted milk, rice water, biscuits → low-calorie, low-protein diet.

Dietary History

Appetite poor, with **vomiting and bulky, oily stools → suggestive of fat malabsorption.**

No history of food intolerance or swallowing difficulty.

Key Finding: Oily, bulky stools suggest fat malabsorption - important diagnostic clue

Vaccination History

Appropriate for age.

Anthropometry

4.2kg	63cm	40cm	<11.5cm
Weight	Length	Head Circumference	Mid-Upper Arm Circumference (MUAC)
< 3rd percentile (−3 SD) Severe underweight	< 3rd percentile Stunted	< 3rd percentile Microcephaly / poor growth	Severe malnutrition

General Examination

Child's condition: Ill-looking, irritable, active but undernourished.

Vital signs:

Temperature	Heart Rate	Respiratory Rate
98.6 °F (afebrile)	168/min **(tachycardia)**	60/min **(tachypnea)**

SpO_2	CRT
92% on room air → 98% with nasal prongs	<3 seconds

General Physical Findings

- **Build & Nutrition:** Markedly wasted and undernourished
- **Hydration**: Mildly dehydrated
- **Pallor**: Present
- **Icterus / Cyanosis / Clubbing / Edema / Lymphadenopathy**: Absent
- **Dysmorphic features:** None

General Physical Findings

Skin / Hair

normal hair and skin

Respiratory effort

Subcostal and intercostal retractions present

Cry

Weak but responsive

Activity

Reduced

Systemic Examination

Respiratory System:

1.Inspection:

- Chest wall moving symmetrically, but with **subcostal and intercostal retractions.**
- No chest deformity or visible scars.
- Respiratory rate: 60/min **(tachypnea)**.

Systemic Examination

2.Palpation:

- Trachea midline, chest expansion equal bilaterally.
- Tactile vocal fremitus – equal on both sides.

2.Percussion: Resonant note on both sides.

Systemic Examination

4.Auscultation:

- Air entry bilaterally present but **reduced at bases.**
- **Bilateral fine crepitations** heard, no wheeze.

Systemic Examination

Cardiovascular System:

- Apex beat: Normal position, no shift.
- Pulses: Well felt and equal in all limbs.
- Heart sounds: S1 and S2 normal, no murmur.
- Capillary refill time: <3 seconds.

Systemic Examination

Central Nervous System:

Level of consciousness

Alert, irritable but interactive.

Tone

Mildly decreased (hypotonia due to malnutrition).

Power

Normal for age.

Reflexes

Deep tendon reflexes present and normal.

Cranial nerves

Grossly intact.

Systemic Examination

Abdomen:

Inspection

Abdomen mildly distended, no visible veins or scars.

Palpation

Soft, non-tender, no hepatosplenomegaly.

Percussion

Normal tympanic note.

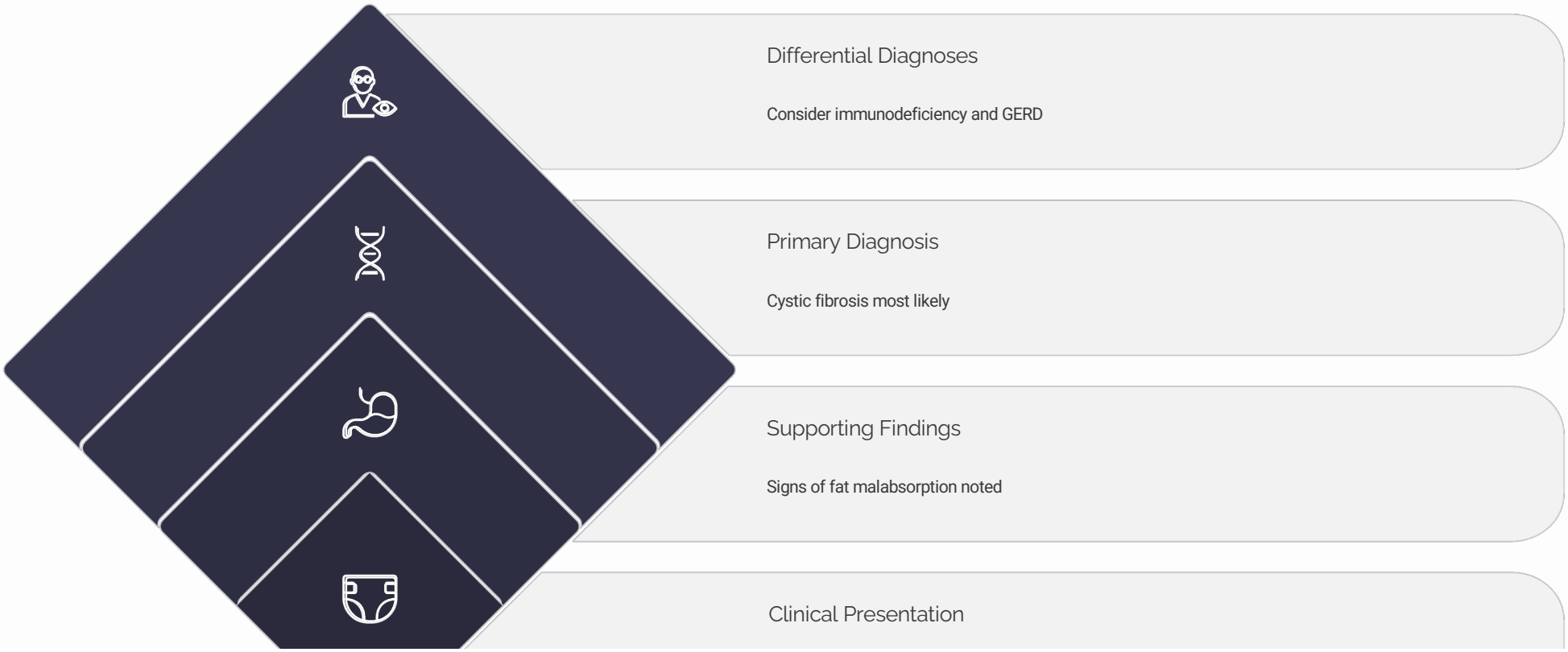
Auscultation

Bowel sounds present and normal.

Final Interpretation

based on the clinical picture, this 7-month-old child has failure to thrive with bronchopneumonia and probable fat malabsorption.

The leading possibility is cystic fibrosis, but differentials such as, immunodeficiency, and GERD are also being considered.



Course During Hospital Stay

1. Admission & Initial Stabilization

- Admitted in HDU with respiratory distress.
- Started on O_2 via nasal prongs.
- IV fluids and IV antibiotics (Ceftriaxone, Amikacin).
- Frequent nebulization and supportive care.

2. Nutrition Support

- NG feeding started with high-calorie top feed due to poor weight gain.

Course During Hospital Stay

3. Investigations & Monitoring

- Baseline blood work and vitals monitoring.
- Persistent respiratory distress → shifted to PICU → started on HHFNC support.
- Blood: Hb 9, WBC 26160 (N 54/L 42), CRP 14 mg/L, RFT and LFT normal.
- Low albumin- 1.95
- Chest X Ray -right upper lung hazziness, left upper and middle zone infiltration +
- Gene Xpert for TB negative.

4. Etiological Diagnosis

- Oily, greasy stool noted.
- Fecal elastase = 0.8 µg/g → Severe pancreatic insufficiency.

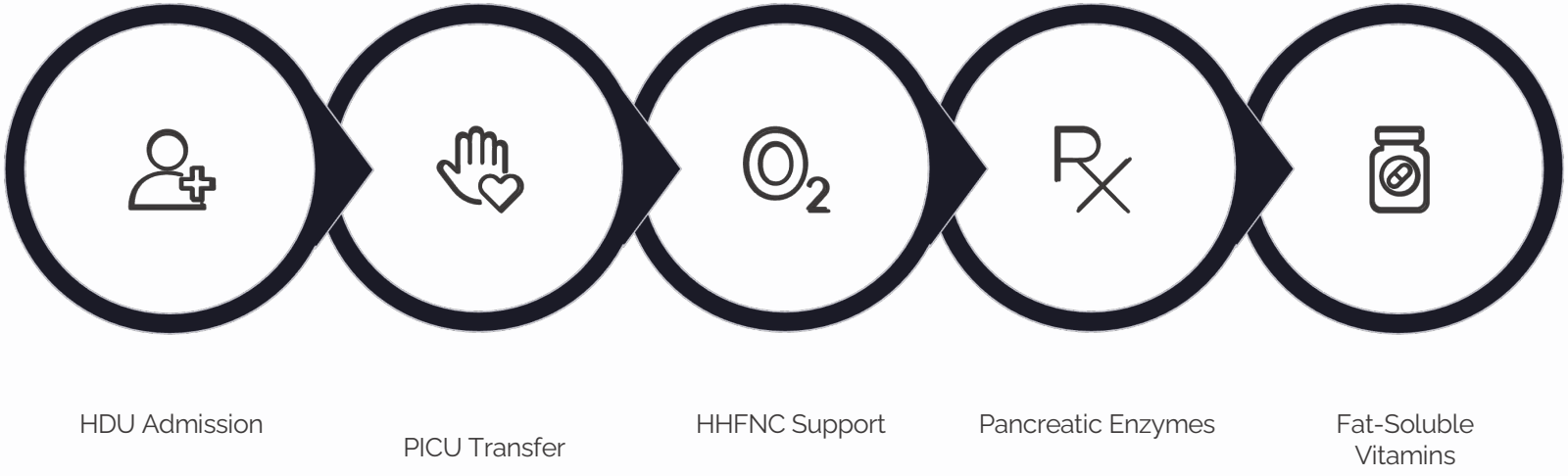
Course During Hospital Stay

5. Management

- Pancreatic enzyme supplementation (Creon).
- Fat soluble vitamins (A, D, E, K).
- Gradual weaning off HHFNC by Day 9 → shifted back to nasal prong.

6. Follow-up Investigations

- Repeat CBC: Hb 7.5 g/dL → PRBC transfusion.
- CRP negative. Cough decreased.



Condition on Discharge

Clinical Status

Afebrile, hemodynamically stable.

O_2 requirement

Nasal prong 0.5 L/min.

Feeding

NG feeding 70 ml/3 hrly. Accepting feed well, good urine output.

Medications advised on discharge:

A to Z drops, Calshine P, PCM drops, Atarax syrup, Creon, Nanovac A & E, antiflu, levolin neb.

Thank you