A case of child with hepato-splenomegaly

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4th year
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Preminary Details

- Name: MK
- Age: 2 years, DOB: 11th November 2021
- Sex: Male
- Address: Gorepalya
- Informant: Mother, Reliable
- DOA: 2nd November 2023
- DOE: 8th November 2023

Chief Complaints

- Decreased activity since 1 month
- Distension of abdomen since 1 month
- Fever since 15 days

History of Presenting Illness

- The child was apparently normal one month ago when he became lethargic with reduced activity, insidious in onset, gradually progressive, associated with reduced appetite and irritability and increased tiredness while playing.
- Mother had noticed that the child had become pale since one month.
- The mother noted that her child had abdominal distension, insidious in onset, progressive over one month, not associated with abdominal pain, vomiting or altered bowel habits
- The child also developed fever 15 days ago that insidious in onset, non progressive, intermittent in nature, more in the morning and evening, low grade, not associated with rigors, relieved with medication

- No h/o yellowish discolouration of skin or eyes
- No h/o chest pain, breathlessness
- No h/o swelling of feet
- No h/o loss of consciousness
- No h/o reduced urine output
- Noh/o blood in vomit, blood in stools
- No h/o pale stools, dark urine
- No h/o skin bleeds, gum bleeds
- No h/o passage of worms in stool
- No h/o any drug intake, radiation, blood transfusions
- No h/o weight loss, night sweats, bone pains
- No h/o consumption of inedible substances

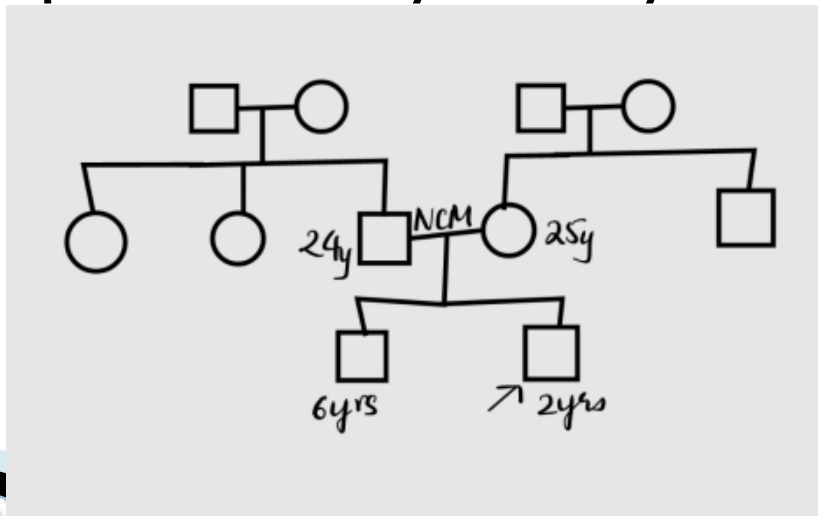
- No h/o rash on the body, itching
- No h/o cold, cough, hurried breathing
- No h/o increased frequency of micturition, excessive crying during micturition

Past history

- No h/o past hospitalisations
- No h/o similar complaints in the past
- No h/o any medication intake
- No h/o any blood transfusions
- No h/o any chronic disease
- No h/o tuberculosis, asthma, epilepsy

Family history

- H/o typhoid in elder brother 1 month ago, he was hospitalised for 3 days
- No h/o anemia, jaundice, bleeding episodes, gall stones in any family members
- No h/o blood transfusion in family members
- No h/o splenectomy in any family members



Birth history

- Antenatal:
  - Registered case in government hospital, completed all ANC visits, all scans were done and normal, IFA and calcium tablets taken, inj Td taken, no h/o GDM, PIH, thyroid disorders or anemia in pregnancy
- Natal:
  - LSCS at 9 months of Gestational age due to previous LSCS
  - Birth weight: 2.2kg
  - Baby said to have cried at birth
  - No NICU admission
  - Baby immuinsed at birth
- Post Natal:
  - Exclusively breast fed upto 3 months of age, supplemented with cow's milk at 3 months
  - No h/o neonatal jaundice, phototherapy, exchange transfusion
  - incompletely immunised up to 1.5 months

Immunisation History

- Birth: BCG, Hep B, OPV-0
- 6 Weeks: OPV-1, Pentavalent-1, Rota-1, fIPV-1, PCV-1
- 10 Weeks: OPV-2, Pentavalent-2, Rota-2,
- 14 weeks: OPV-3, Pentavalent-3, Rota-3, fIPV-2, PCV-2
- 9 months: MR-1, PCV Booster: Not taken
- Optional Vaccines: Not taken
- Incompletely immunised as per NIS

Development History

. Gross Motor:	Fine motor
Neck holding: 3.5months	Bidextrous reach: 4 months
Roll over: 5 months	Unidextrous reach: 6 months
Sit with support: 6.5 months	Immature pincer grasp: 9 months
Sit without support: 8 months	Mature pincer grasp: 12 months
Stand with support: 9 months	Tower of 2 blocks: 15 months
Walk without support: 15 months	Tower of 3 blocks: 18 months
Run: 18 months	Tower of 6 blocks: 24 months
Walks upstairs: 24 months	

Attained all milestones as per age

Social	Language
Social smile: 2 months	Alert to sound: 1 month
Recognises mother: 3 months	Coos: 2 months
Stranger anxiety: 6 months	Laughs: 4 months
Waves bye: 9 months	Monosyllables: 6 months
Comes when called: 12 months	Bisyllables: 9 months
Jargon: 15 months	1-2 meaningful words: 12 months
Imitates parents: 18 months	8-10 words: 18 months
Asks for food: 24 months	2-3 word sentences: 2 years

Diet history

	Observed	Expected	Remarks
Calories	1260 kcal	1100	Surplus: 160 kcal
Protein	18g	22.8g	Deficit:4.8g

Early weaning at 3 months of age with cow's milk
Child consumes a predominantly vegetarian diet
Diet contains less micronutrient rich foods like fruits and vegetables

Socioeconomic History

	Education	Occupation	Income
Mother	B com	Homemaker	-
Father	5th standard (2)	Chef (6)	15,000 (PCI= 7500:4)

Belong to lower middle class according to modified Kuppuswamy scale

Summary

- A two year old male toddler born to a non-consanguinous couple, incompletely immunised, belonging to lower middle class socioeconomic status with normal development, consuming diet with deficit of protein and micronutrients presented with c/o reduced activity and abdominal distension for one month and fever for 15 days.

General Examination

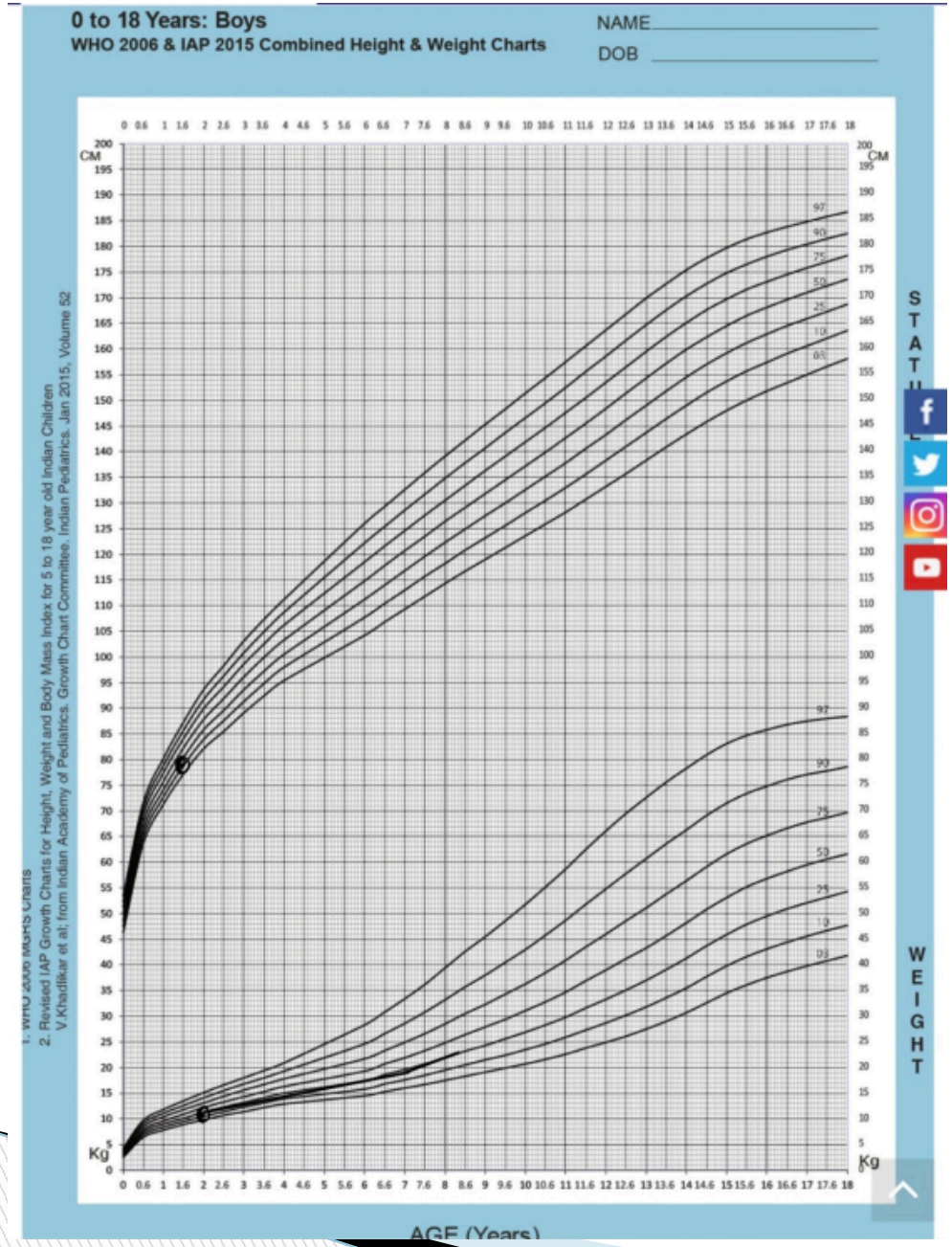
- A 2 year old male conscious and active examined in sitting and supine position with mother's consent
- Vitals:
- Pulse rate: 94 bpm, normal in rhythm, volume character, no delays, peripheral pulses felt
- BP: 90/56mm Hg, right arm
- RR: 24 cpm
- Temperature: 99F
- Pallor: present
- Cervical lymphadenopathy present
- No signs of icterus, clubbing, cyanois, pedal edema

Head to toe examination

- Head: normal, AF open
- Hair: normal
- **Eyes: Pallor +++**
- Nose: Normal, no bleeding
- Oral cavity: pallor present, no white patches
- **Tongue: Pale**
- **Angular stomatitis present**
- Neck: normal
- Chest: Normal, symmetrical
- **Abdomen: distended**
- B/L small cervical lymph nodes palpable
- **Hands and palms: pale (Palmar creases seen)**
- Skin: no hyperpigmentation
- **Nails: Platynychia**
- Genitalia: normal
- No bony swellings, deformities

Anthropometry

	Observed	Expected	Remarks
Weight	11 kg	12 kg	25th centile
Height	78cm	89 cm	10th centile
HC	48 cm	48cm	Normal
CC	54cm	CC>HC	Normal
MAC	15.5 cm	>12.5cm	Normal



Child belongs to 25th centile weight for age and 10th centile height for age

Systemic examination

Per Abdomen examination

Inspection:

- Abdomen is uniformly distended
- Umbilicus is central and everted
- All quadrants move corresponding to respiration
- No engorged veins, scars, sinuses

Palpation:

- No local rise of temperature
- No tenderness, guarding or rigidity
- Liver is palpable 5cm below right costal margin. It is non tender, firm, smooth surface, margins are well felt and regular
- Spleen is palpable 4 cm below left costal margin towards right iliac fossa, firm in consistency, smooth surface, non tender.

Percussion:

- Liver span: 12 cm
- Tympanic note heard over abdomen
- No shifting dullness, fluid thrill

Auscultation: Bowel sounds are audible

Cardiovascular System

Inspection

- Chest shape and symmetry: normal, symmetrical
- Precordium is normal no precoridal bulge
- Apical impulse visualised in left 4th ICS
- No scars, pulsations or distended veins

Palpation

- Inspectory findings confirmed
- Apical impulse felt at left 4th ICS medial to MCL
- No pulsations or thrills felt over the chest wall

Percussion

- Not percussed

Ausculation

S1 S2 heard, no murmurs

Respiratory System:

Inspection

- URTI- Nose, nostrils, nasal septum, mouth, tongue, tonsil, pharyngeal wall normal
- Chest- Normal, symmetrical, moves equally with respiration
- Trachea- central
- No use of accessory muscles of respiration

Palpation

- Trachea is central
- Vocal fremitus felt equally on all lung fields

Percussion

- Resonant note felt in all lung fields

Auscultation

- Bilateral equal air entry
- Normal vesicular breath sounds heard in all lung fields

Central Nervous System

- Higher mental functions are normal and child is alert and conscious
- Cranial nerves are intact
- Motor system: Bulk, tone, power and reflexes are normal
- Sensory system is normal
- No signs of cerebellar dysfunction
- No signs of meningeal irritation

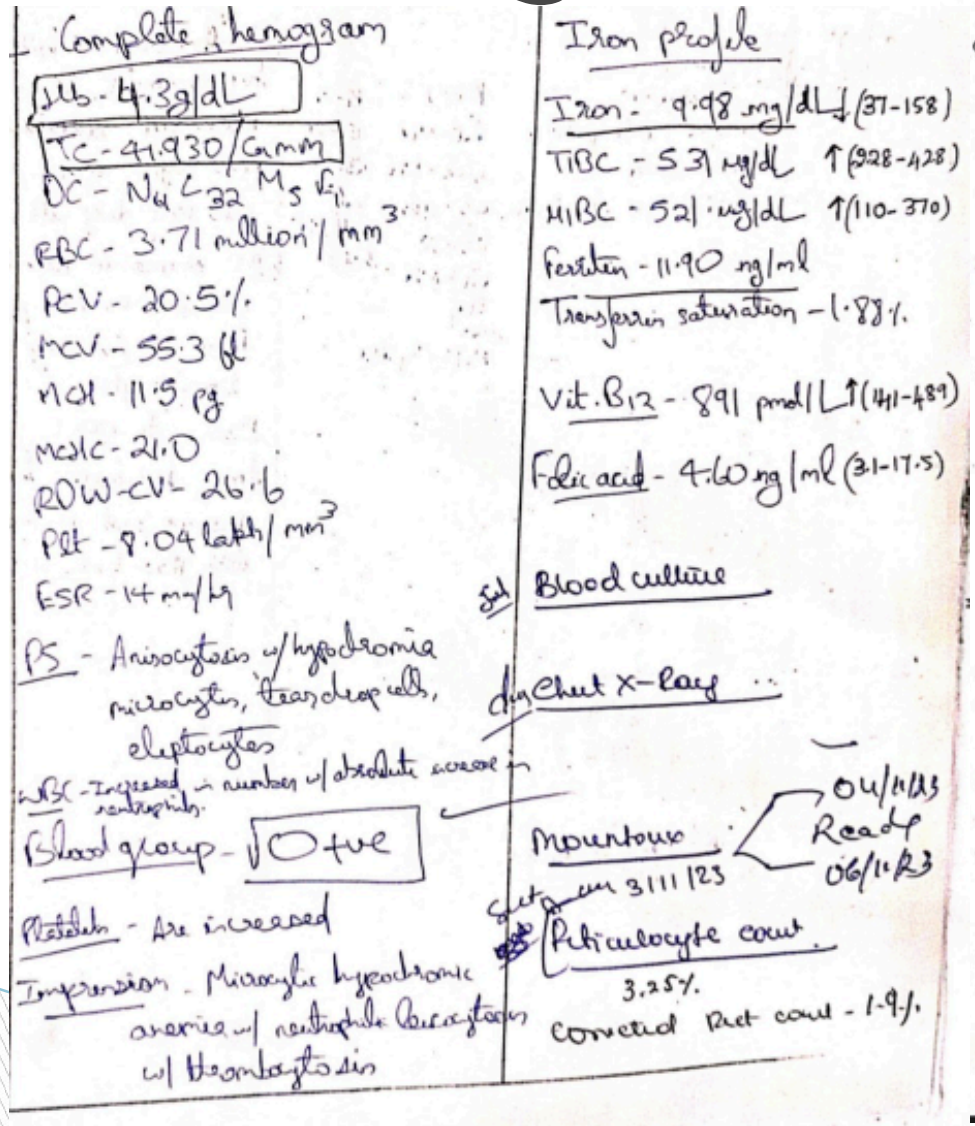
Summary

- A two year old male toddler born to a non consanguinous couple, incompletely immunised, belonging to lower middle class socioeconomic status with normal development, consuming predominantly vegetarian diet with deficit of protein and micronutrients presented with c/o reduced activity, abdominal distension and fever.
- On general survey,child was pale with features of angular stomatis, platynychia and abdominal distension.
- Anthropometry showed no signs of PEM
- On per abdomen examination, child has hepatomegaly 4cm below right costal margin and splenomegaly 5 cm below left costal margin, non tender, firm, smooth.

Differential Diagnosis

- Iron Deficiency Anemia
- Thalassemia Intermedia
- Malaria
- Heridatory spherocytosis

Investigations



Complete Hemogram

Hb - 4.3 g/dL

TC - 41,930/Cmm

DC - N64 L32 M5 Ei

RBC - 3.71 million/mm3

PCV - 20.5%

MCV - 55.3 fl

MCH - 11.5 pg

MCHC - 21.0

RDW-CV - 26.6

Plt - 9.04 lakh/mm3

ESR - 14 mm/hr

PS - Anisocytosis w/ hypochromia microcytes, tear drop cells, elliptocytes

WBC - Increased in number w/ absolute increase in neutrophils

Blood group - O +ve

Platelets - Are increased

Impression - Microcytic hypochromic anemia w/ neutrophilic leucocytosis w/ thrombocytosis

Iron profile

Iron - 9.98 mg/dL ↓ (37-158)

TIBC - 531 mg/dL ↑ (228-428)

UIBC - 521 mg/dL ↑ (110-370)

Ferritin - 11.90 ng/ml

Transferrin saturation - 1.88%

Vit. B12 - 891 pmol/L ↑ (141-489)

Folic acid - 4.60 ng/ml (3.1-17.5)

Sent Blood culture

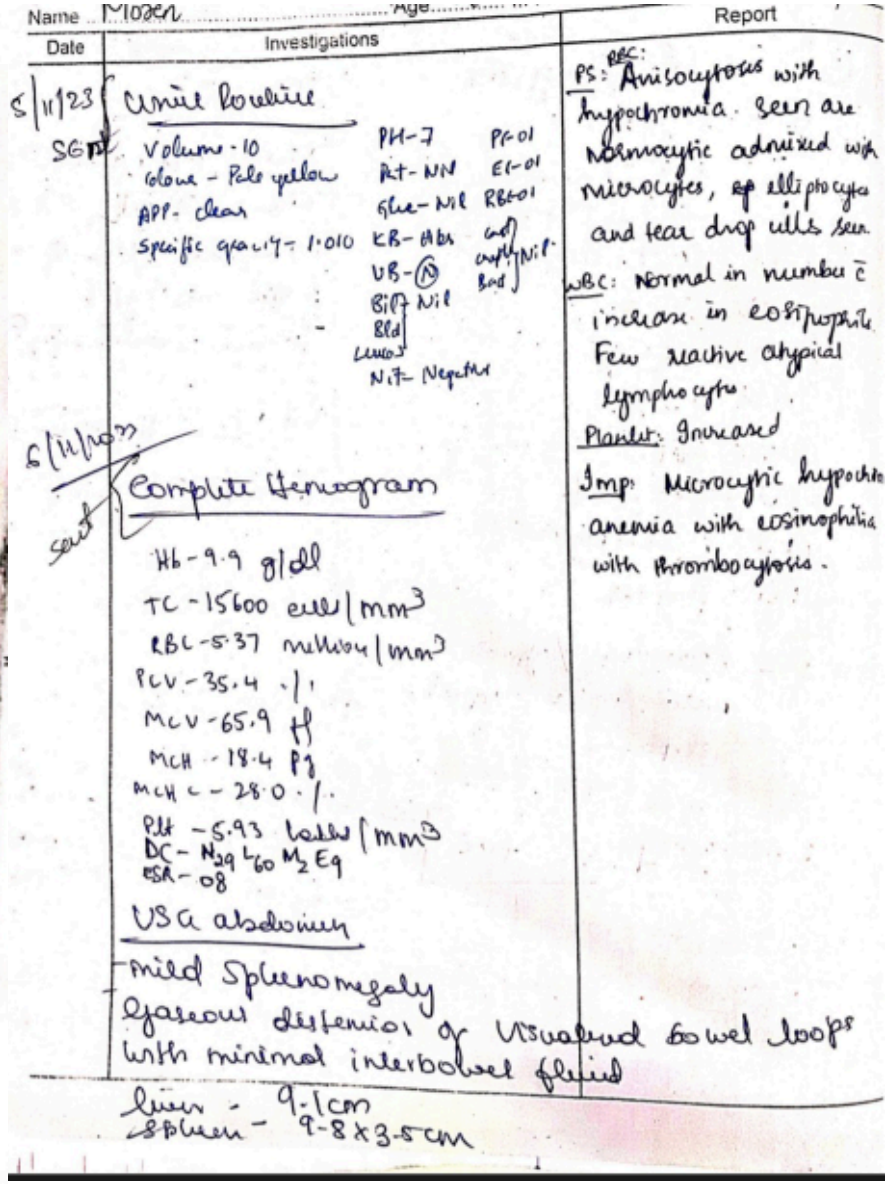
Chest X-Ray

Mantoux 04/11/23 Read 06/11/23

Sent on 31/11/23 Reticulocyte count

3.25%

Corrected Ret count - 1.9%



Name Mozen Age

Date	Investigations	Report
5/11/23 Sent	Urine Routine: Volume - 10, Colour - Pale yellow, APP - clear, Specific gravity - 1.010, PH - 7, Alt - NIL, Glue - Nil, KB - Abs, UB - Abs, Bilf Nil, Blood, Urobil, Nit - Negative; PC 01, EC 01, RBC 01, Cast, Crystal, Bact, Nil	PS: RBC: Anisocytosis with hypochromia. Seen are Normocytic admixed with microcytes, ep elliptocytes and tear drop cells seen. WBC: Normal in number c increase in eosinophils Few reactive atypical lymphocytes Platelet: Increased Imp: Microcytic hypochro anemia with eosinophilia with thrombocytosis.
6/11/23 Sent	Complete Hemogram: Hb - 9.9 g/dl, TC - 15600 cell/mm3, RBC - 5.37 million/mm3, PCV - 35.4 %, MCV - 65.9 fl, MCH - 18.4 pg, MCHC - 28.0 %, Plt - 5.93 lakh/mm3, DC - N39 L60 M2 E9, ESR - 08	
	USG abdomen: mild Splenomegaly, gaseous distension of visualised bowel loops with minimal interbowel fluid	
	liver - 9.1 cm, spleen - 9.8 x 3.5 cm	

Probable Diagnosis

- Child with iron deficiency anemia, not in failure, no signs of malnutrition.

Thank You