How to take a case in Pediatrics?

- Dr. Rahul Bevara

Introduction

- Master Anundan, 6 years old (DOB-9 april 2010), born out of a non-consanguineous marriage hailing from Payyannur,Kerala was brought to KMC Hospital Attavar with chief complaints of
  - Facial puffiness since 4 years

- Informant – mother , reliability is good

History of Presenting Illness

- Patient was apparently asymptomatic until the age of 2 years when his mother noticed facial puffiness.

- It was insidious in onset and gradually progressed to abdominal distension and then to swelling of lower limbs

- It was also associated with red coloured urine and decresed urine output

- The child was admitted in the ICU for 1 week and was treated with steroids for 3 weeks following which the symptoms subsided.

- The parents were adviced to give the child a low sodium diet on discharge.

- The child was asymptomatic until last september 2015 when he had another episode of facial puffiness and generalised edema for which he was again brought to the hospital.

- He has been on steroids and calcium supplements since then

- Currently the child has frothy urine
- He complains of early fatiguability on walking a short distance

- No h/o sore throat
- No h/o convulsions
- No h/o recurrent infections
- No h/o bleeding tendency
- No h/o arthralgia

Birth History

- Antenatal History
  - Booked case
  - Regular ANCs done, Iron and Folic acid tablets taken
  - Regular USG done
  - No h/o TORCH infections
- Natal History
  - Full term, normal vaginal delivery at a hospital.
  - Child cried immediately
  - Breastfed within half an hour
  - Birth weight is 2.8kg
- Post Natal History
  - Uneventful

Developmental History

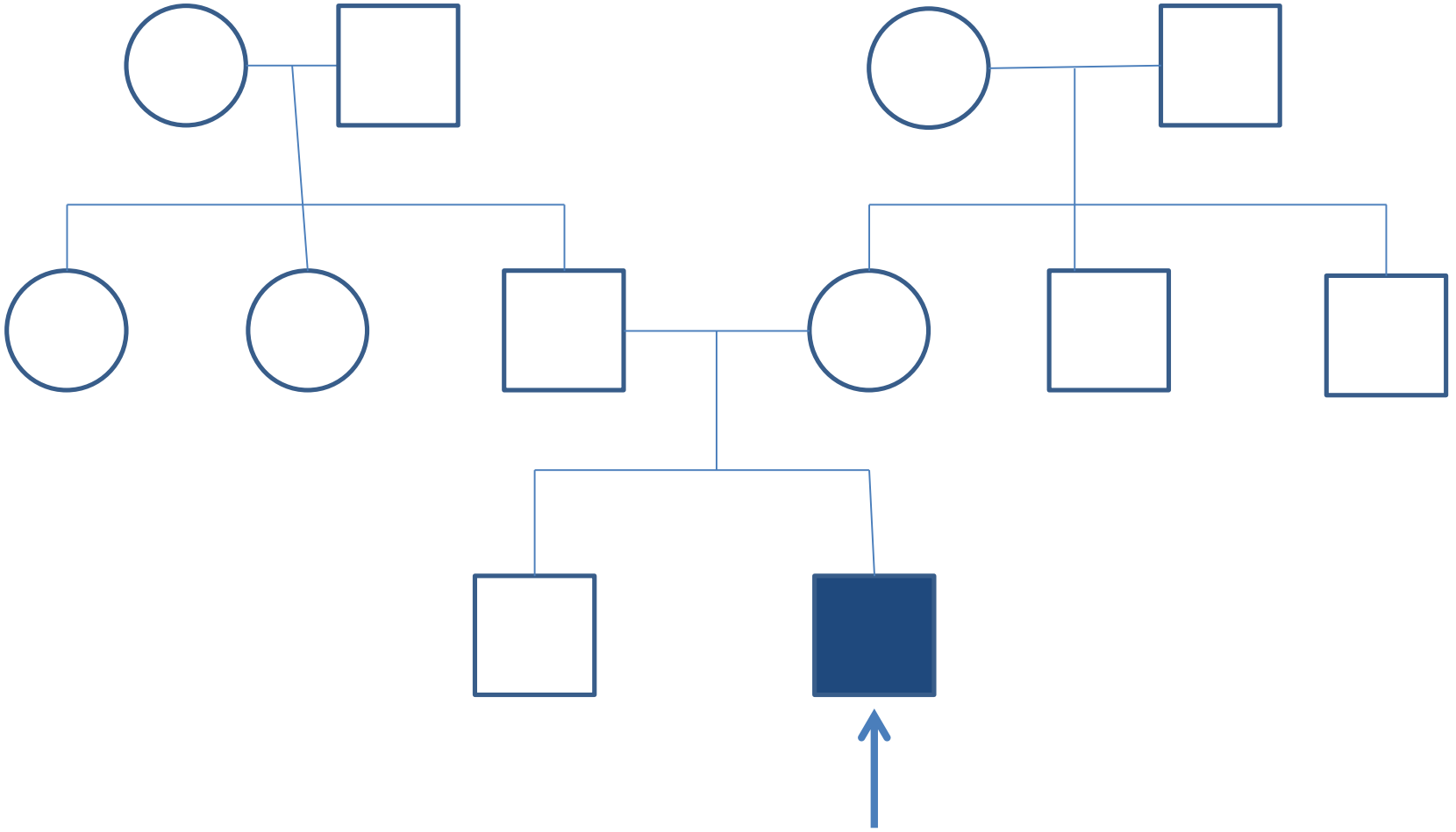
Milestones	Expected	Observed	Inference
Gross Motor Skips with both feet Jumps off three steps	5 years	5 years	Normal
Fine Motor Can copy diamond	6 – 7 years	5 years	Normal
Language Can speak sentences of more than 5 words Grammatical speech	5 years 6 years	5 years 6 years	 Normal
Social and adaptive Interested in sports Good in academics	5 – 6 years	5 years	Normal

Immunisation History

- Immunised as per age except the DPT 2nd booster

Family History

- No similar complaints in the family
- He has an elder brother, ten years old, who is normal



Diet History

Food item	Quantity	Calories (Kcal)	Proteins (grams)
Breakfast			
Idli	3	320	7.5
Sambar	1 cup	136	6.5
Lunch			
Rice	1 cup	176	3.4
Fish curry	1 servings	245	23.4
Snacks			
Tea	1 cup	100	1.6
Biscuit	5	58	7
Dinner			
Rice	1 cup	176	3.4
Sambar	1 cup	136	6.5
Beetroot Curry	1 serving	95	4
Total		1442	63.3
RDA		1506	24.7
Deficit		64	

Personal History

- The child sleeps well. Urine output is 100 ml per voiding. 5-6 times.

Summary

Six year old male child had chief complaint of facial puffiness since 4 years which began at 2 years of age and progressed to generalized oedema. It was associated with oliguria and haematuria. Patient gives h/o 1 week ICU admission. Since then there have been 3 similar episodes with facial puffiness progressing to generalised oedema and currently he has frothy urine and easily fatiguability. He has been treated using steroids for 4 years and calcium supplements added since 6 months, has been advised salt restriction, and his symptoms have subsided.

General Physical Examination

- The patient is conscious ,cooperative and well oriented to time, place and person.

- Pallor is marked, facial puffiness is present. No icterus, cyanosis, clubbing or lymphadenopathy.

- Vitals

Vitals	Observed	Expected	Inference
Respiratory rate	16 breaths/min	15-20 breaths/min	Normal
Pulse	70 beats/min	80-110 beats/min	Normal
Blood Pressure Systolic pressure Diastolic pressure	 104 mmHg 62 mmHg	 70-100 mmHg 40-70mmHg	Normal

- Afebrile at the time of examination
- **Anthropometry**

Parameter	Observed	Expected	Inference
Weight	19 kg	20 kg	
Height	118 cm	113 cm	Normal
Head circumference	50 cm	50- 51 cm	Normal
Chest circumference	60 cm		
US: LS ratio	58cm:60cm = 0.96: 1	1.1 : 1	?
Mid arm circumference Right arm Left arm	 17 cm 17 cm	 16-17 cm 16-17 cm	 Normal Normal
Arm Span	120cm	?	?

Head to Toe examination

Head : Normal

Scalp hair : Normal

Face : Puffiness present

Eyes : Normal . No periorbital puffiness

Ears : Normal

Nose : Normal

Oral Cavity : Teeth , tongue ,palate are normal

Neck : Normal

Chest : Normal shape

SYSTEMIC EXAMINATION

ABDOMINAL EXAMINATION

1.INSPECTION

Shape-Minimally Distended

Flanks are not full

Umbilicus central and inverted

All quadrants move equally with respiration

No visible pulsations

Skin over the abdomen is normal

No dilated veins, scars and swellings

Hernial orifices are normal

2. PALPATION

No local rise of temperature and tenderness

No guarding and rigidity

No organomegaly

No renal angle tenderness

Abdominal girth at umbilicus- 65 cm

3. PERCUSSION

Liver dullness in right 5^{th} intercostal space

Shifting dullness- Present

4. AUSCULTATION

Bowel sounds heard

1.RESPIRATORY SYSTEM

Normal vesicular breath sounds heard in all lung areas.

No added sounds.

All lung areas are resonant.

2.CARDIOVASCULAR SYSTEM

S1,S2 heard.

No murmurs

3.CENTRAL NERVOUS SYSTEM

No focal neurological deficits.

INVESTIGATIONS

- URINE EXAMINATION

  -Macroscopic and Microscopic examination

  Hyaline casts, granular casts,RBCs,pus cells

  -Proteins

  24-hr urinary protein dipstick

  Spot protein-creatinine ratio

- BLOOD EXAMINATION

  - Blood count, Hb%
  -Total and differential count
  -Peripheral smear
  -Serum proteins(total, A:G ratio,IgG,IgM)
  -Lipid profile(serum cholestrol,VLDL,LDL,HDL)
  -Serum complement levels
  -Serum protein electrophoresis

FOR AETIOLOGICAL FACTORS

- Hepatitis B surface antigen(HBsAg)
- ASO titres
- Antinuclear antibodies
- Mantoux test
- Coombs test

FOR COMPLICATIONS

- Serum calcium
- Urine culture and sensitivity
- X-Ray chest
- Ultrasonogram of abdomen
- Renal biopsy

TREATMENT

- SALT RESTRICTION

  -No added salt(less than 500mg/day)

- FLUID RESTRICTION

  -Total fluid intake=urine output+insensible fluid loss(30ml/kg)

- DIET

  -Protein(1.5-2g/kg/day)-Avoid high protein intake.

  -Fat intake should be avoided

- DRUGS

  - Steroids

    Prednisolone-2mg/kg till urine albumin is nil.1.5mg/kg for 4 weeks,then tapered slowly.

ADVICE

- Monitoring

  -Weight

  -Urine output

  -Urine albumin chart

  -Blood pressure

  -Abdominal girth

Summary:

6 year old male child with facial puffiness, frothy urine, easy fatiguability , with past h/o of oliguria and haematuria . Normal growth and development. On examination, marked pallor, abdominal distension and shifting dullness were present. He is being treated with Calcium supplements and steroids.

Differential Diagnosis

- Nephrotic Syndrome
- Nephritic Syndrome