

OSCE

2 manned + 1 unmanned:

A. Procedure station [1 1/2 M] B. Counselling station [1 1/2 M] C. Newborn. [2 mark]
(Questions)

- Introduction
- Consent / Rapport
- Ask baby's age and name.

1. Midarm circumference

- Rapport, consent
- Expose left hand, hang it loosely by side
- palpate acromion
- palpate olecranon
- Take midpoint of upper arm
- Measure mid upper arm circumference.
- Inference.
- Thank you.

>13.5cm : Normal
12.5 - 13.5cm : Moderate PEM
<11.5cm : Severe PEM

2. Measure Head circumference

- Rapport, Consent
- Explain procedure
- Stand on R side of patient
- Inspect the skull abnormalities
- Measure Head circumference using a tape
- Occipital protuberance / supraorbital condyl ridge
- Take reading, Thank the patient

Macrocephaly : >2SD
Microcephaly : <-3SD

1SD = 1.25cm / 2.5%

Birth 34.35cm
3 months : 40cm
6 months : 43cm
1 yr : 46cm

3. Measure Height

- Rapport, consent
- Explain
- Right side of patient
- Make the child stand against wall
- Feet parallel, back of heel, buttocks, shoulder and occiput touches the Rod.

4. Examination of CN III, IV, VI

- Rapport consent
- Ask for diplopia
- Look for ptosis and nystagmus
- Look for eye ground
- Eye ball movement in all directions
- pupil: size, shape
- Light reflex: DLR, ICR
- Accommodation reflex
- Interpretation

6. Locate Apex

- Rapport consent
- Explain procedure
- Stand at (R) side
- Adequate exposure
- Examine: Supine
Sitting
Left lateral position
- Palms — ulnar border — fingers
- Middle finger line count space
- PALPATE TRACHEA MUST
- Scoliosis: look for thoracic spine
- Where is apex, direction of apex
- Thank the patient

7. Palpation of liver

- Rapport, Consent
- Stand on (R) side
- exposure of abdomen
- From (R) iliac fossa with hands parallel to costal margin
- Palpate lower border of liver
- Palpate for surface and contour
- Locate MCC
- Measure liver size

5. Examination of Facial nerve

- Rapport consent
- Facial asymmetry?
- Ask the patient to raise eyebrows
- Close eyes lightly against exam
- Show teeth and smile
- Puff out cheeks, gently tip
- Testing for taste on ant $\frac{2}{3}$ of tongue

7. Knee Jerk

- Rapport Consent
- Adequate exposure
- Patient in supine position
- Stand at Right side
- Proper technique
- Strike at patellar tendon
- Look for contraction of quadriceps
- Do it on opposite side
- Grade

8. Ankle Jerk

- Rapport, Consent
- Adequate exposure
- Proper position of patient
- Dorsiflex the ankle and strike on Achilles tendon
- Look for contraction of calf muscle
- Do it on other side
- Grading

- Percuss the upper border of liver.
- Measure the liver span.

COUNSELLING STATION

(i) Breast Feeding

* Introduction

* Rapport and Consent

* Exclusive Breast Feeding :? 6 months

Continue breast

* When did the breast feeding start? : Immediately

feeding for 2 years

* Probable feeds given?

* Breast feeding on demand. [Whenever baby is hungry]

Positioning

- Mother sit comfortably on a chair, Baby's buttocks on mother's palm

Baby's back on mother's forearm, head on mother's elbow

- With other hand middle and index finger, guide nipple into baby's mouth.

- 10 - 15 mins feeding required

Foremilk : Rich in sugar —

hindmilk : Rich in Fat —

- Adequacy of milk?

(i) Baby goes off to sleep after feeding for few hours

(ii) Baby passes urine 6-7 times per day

(iii) Baby pass stools also

(iv) Adequate weight gain 30 gms per day

(v) Let down reflex; dropping of milk from other breast

Advantages of breast feeding

* Breast milk will increase brain growth. [Toufene, Immunomodulators like secretory.]

* Factors to prevent diarrhea due to E.coli.

It also contains very long chain FA

* Breast milk is rich in lactalbumin

Cows milk rich in haetoglobulin (which cause milk allergy)

* Whey : Caseine is 60:40 in $\rightarrow$ BREAST MILK $\rightarrow$ whey $\uparrow$
Cows milk 20:80 Caseine $\uparrow$ (help in clot formation)

* Bifidus factor in breast milk $\rightarrow$ prevent E. coli diarrhea

* Spacing of child births, Prevent CA Breast

Contraindications

1. Congenital lactose intolerance
2. Mother taking Antipsychotics

Infection / HIV / COVID $\rightarrow$ No contraindications

II Adult mother for Complementary Feeding:

1. Rapport Consent
2. Continue Breast Feeding along with complementary feeding

3. By 6 months

- Child have proper head control
- Chewing $\oplus$
- Gut enzymes help in digesting foreign food
- Calorie gap exist, compensate the calorie gap start complementary feeding
- Never use the word Weaning

100ml Breast milk
= 67-70 cal
1.1 gm protein

Cows milk (100ml)
= 3gm protein
67 cal

4. Type of Food: Ragi (Rich in calorie, protein, minerals)

* Soaked for 12 hours

* പൊടിയാക്കുക

* നെയ്യേറിയത് നെയ്യ്.

* മരച്ചീനി ചേർക്കുക, Roasting

* പൊടിയാക്കുക

* Serving 100g (Remove the husk: which is indigestible)
Causing diarrhea.

* keep the powder in Airtight container,

This is AMYLASE RICH FOOD (ARF)

Calo value ↑, Rich in micronutrient ↑, Easily digestible.

ശരീരം ചെറുത്ത് കൊടുക്കുക : ശരീരം ചെറുത്ത് കൊടുക്കുക

ശരീരം ചെറുത്ത് കൊടുക്കുക

1. Cows's milk → Nope
→ If given → give it undiluted.

When Baby suck → Prolactin released Best place to suck

Breast milk secretion ↑ in Night, as prolactin is released more at night

Expressed milk should be kept on Steel Vessel (Glass more)

Not on Glass Vessel

Up to one year → No Cows milk, Egg albumin

Non veg given after 9 months

No Tea / Black Tea

III. SIMPLE FEBRILE SEIZURE

- Report / consent

- Explain what is Simple Febrile Seizure? [Ref] Chance for epilepsy is less than 1%

- Chance for recurrence ⊕

- Treatment of acute episode

- ചെറിയ ടിസന്നോം.

- ന്യൂന നെച്ചിട്ട് ചികിത്സിക്കുക

- ഓക്സിജൻ നിർദ്ദേശം പ്രകാരം അഡ്മിൻ നൽകുക. [Suppository or per rectal route]

- prevention of further attacks

* Intermittent prophylaxis

* Control fever

മരുന്നുകൾ

- Prognosis
- ദീർഘം കുറയ്ക്കുമോ?
- പ്രതിരോധശേഷി ഉയർത്തുക (explain the difference b/w simple febrile and other)
- പ്രതിരോധ ശക്തിയെ വർദ്ധിപ്പിക്കുക.. ന്യൂനതയെക്കുറിച്ച്.
- മരുന്നുകൾ നൽകണം?

IV Asthma

- * Rapport / Consent
- * Episodic nature of Asthma : Chronic problem but controllable, can lead a normal life, Avoid triggers.
- * Maintain Asthma diary
- * Management of Acute exacerbations at home.
- * Preventive medication.
- * Inhalers
- * ട്രിഗ്ഗറുകൾ തടയ്ക്കി വെച്ച് നിർമ്മാണം



V Diarrhea.

- * Rapport / Consent
- * Say about disease, water loss, electrolyte loss, → Dehydration.
- * Breast feeding should be continued
- * Give ORS using home available fluids or ORS
- * Don't give glucose → Osmotic diarrhea
- * Explain Danger Signs
- * No antibiotics
- * Prevention of diarrhea : proper hygiene
- * Vaccination : Rotavirus

Should not be given in later life. can cause Intussusception by hypertrophy of peyer's patches (Only upto 18 months)

Instruments

I. Ampu-Bag : Bag, Valves, mask
It is a self inflating bag
400-500ml capacity $\rightarrow$ Infants

250ml $\rightarrow$ preterm babies

1-1.5L $\rightarrow$ Older children and adult

Mask $\left\{ \begin{array}{l} \rightarrow \text{Round} \\ \rightarrow \text{Anatomical} \end{array} \right.$

Masks are reusable.

: Bag and mask ventilation

Uses : CPAP in Resuscitation

: Respiratory Failure : Assisted ventilation

Value (i) Fish mouth valve
[one way valve]

(ii) Pop off valve
[safety valve to relieve pressure]

(iii) Expiratory valve.

Inlet

(i) AIR $\rightarrow$ 21% O_2

(ii) $O_2 \rightarrow$ 30-40% O_2

To increase the percentage of O_2 : Attach a reservoir bag

The O_2 saturation became 80-90%

We can't give Continuous Oxygen supply, Only positive pressure possible.

Method : Newborn : 40-60 bpm [Breath-2-3]

: Paediatric : 20-30 bpm

: Adult : 12-20 bpm.

In CPR : Paediatric : 15 Chest compression + 2 Ventilations.

Newborn : 3 : 1 [

ECCLAM Technique (Method)

- Imp:
- Look for adequate chest rise
 - Improvement in HR and saturations
 - Do ventilation correcting step.

MR (Mask readjustment)

R [Reposition airway]

S [Suction]

O [Open the mouth]

P [Pressure effects]

A [Alternative airway] $\Rightarrow$ Endotracheal Intubation.

II. LARYNGOSCOPE

* Handle

* Blade: Miller's straight blade
Macintosh's Curved blade.

Miller 0 $\rightarrow$ Infant

Miller 1 $\rightarrow$ Preterm

Miller 2 $\rightarrow$ Baby children

Curved blade: Bigger children and Adults

Indication: ET intubation

Hold from (L) Hand, ET tube placed through (R) Hand

III. Endotracheal Tube $\rightarrow$ Cuffed ET tube $\rightarrow$ Uncuffed ET tube

• Single use

• Size: 2.5 - 3 - 3.5 - 4 - 4.5 - ...
 ↓ ↓
 Preterm Term

Adult: 7, 8, 9 } Internal diameter

• Size = $\frac{\text{Age}}{4} + 4$

Vocal cord is glistening while
dark in color

Facts: Connector / Adapter: Connected to a ventilator or
an Ambu bag

Tube: measurements written,
: End is bevelled edge with small hole (Murphy's Eye)

Look for vocal cord glide

Internal diameter $\times 3$ = Length of insertion

Cuffed ET Tube: prevents aspiration and displacement

IV Space + Mask for MDI

- * For coordination and respiration impaired small children/Infants
- * Space allows deposition of medicine in LRT

Inhalational steroid

- Beclomethasone
- Budesonide

Ask the child to have normal respiration



Press MDI



Take Breaths 10 times

(1 puff = 100 µg)

(Shake the MDI 5 times before use)

~~Older~~ children: Avoid mask and connect the spacer to mouth

- * Inside the spacer, there is a coating (so don't wash the spacer with soap)

Only use running-tap water and air dry it.

These coating prevents the medicine from deposition

Replace the spacer Once a year.

- * For prevention, Ask the child to use a mouthwash after using steroid to prevent development of Oral candidiasis.

V. Nebuliser Mask

VISION 100

VI. Guedels Airway / oropharyngeal airway

Indication: Unconscious patient, who is unable to maintain the airway
(Seizures, tongue cause obstruction, push the tongue)

Different size available (colour coded)

Insert the device Upside down

Absolute C/I: patient conscious / semi-conscious with GAG reflex

Study: How to measure the size?

VII. Lumbar puncture needle

Indications (A) Diagnostic: Meningitis, Encephalitis, subarachnoid haemorrhage
CNS malignancy, Leukemia.

(B) Syndrome, Multiple sclerosis,

(B) Therapeutic: Intrathecal Antibiotics

Intrathecal

eg: Methotrexate (in Anticancer)

Site: L₃-L₄ [Iliac crest → L₄ vertebrae]

One space above it.

Locally anesthetic lignocaine used before to reduce the pain

Complications: post LP headache

Contraindications: chance of cerebral herniation in raised ICP

: Coagulopathy

: Cardio respiratory problems.

↓
Papilloedema

↑ BP

Bradycardia

END

CN palsy, pseudobulbar palsy.

CSF

- Total count

- DE

- Biochemistry (proteins, sugar)

- Microbiology (culture, staining)

VIII. Bone marrow Aspiration Needle / sickle's Needle

Parts: Skillet, Guard

Indications: Evaluation of malignancy, Pancytopenia, PO unknown aegro,

Evaluate Aplastic anemia, Megaloblastic anemia.

Method: - Proximal tibia (Tibial tuberosity)

- Iliac crest (older children) (Identify PSIS)

Child is Prone / left lateral position; Anesthetise the child 30 mins before.

(Clean & Drape)

Insert the needle by screwing movement, when it reaches the

Site, we get a give away feeling.

Remove the skillet, Attach a 20cc / 10cc syringe and Aspirate the marrow

Complication: Bleeding, Pain

Retroperitoneal Hematoma.

Damage to neighbouring structures (if wrong place)

C/I: Osteogenesis imperfecta / Bone defects.

Therapeutic indication: Introsseous Fluid in Shock, Demerol
Tibial tuberosity

IX. IV 3 way Set

One route: IV fluid

One route: Medication

Outlet

X. Auto disposable syringe

Indication: Vaccination.

XI. Nasogastric Tube

Indication: Diagnosis: Aspiration and gastric biopsy in poisoning

Tracheo esophageal fistula (Foaming from mouth @)
(Coiling seen on X-ray)

Therapeutic: NG feeds,

•

Decompression of stomach following CPAP.

Size: From corner of mouth → Tragus } This much length
Tragus → Xiphisternum } should be inserted.

Patient in Supine position, 45°, Lubricate, Insert via nose → Occlude
push it downwards, Ask the child to swallow

Confirm position by aspiration of fluid (using syringe)

or 'look for' gurgling sound or X-ray

Complication: Bleeding, Tube goes into trachea

C/I: Head trauma, Bleeding difficulty

XII. IV canula.

24 g : Yellow
26 g : purple
28 g : Blue } → newborn Paediatric.

14 : Red
16 : grey
17 : white
18 : green
20 : Pink
22 : Blue
24 : yellow

X-Ray in Paediatrics

1. View : AP, lateral
2. Positioning :
3. Exposure : underexposed / overexposed
4. Soft tissue.
5. Bony skeleton
6. Lung shadows

Hydropneumothorax
pneumothorax
Pleural effusion
(Costal Scurv)
Consolidation
- pneumonia

VIEW : PA View : X-ray from behind, what is closer to film appear more clear

AP view : Vertebrae are more prominent (especially ICU)

^{also} lateral decubitus view

Inspiratory film : 10 Ribs at level of diaphragm (10 posterior ribs)

Expiratory film : 8th Ribs at level of diaphragm : Apparent cardiomegaly present

Exposure → Adequate
→ Overexposed
→ Underexposed

Check for Rotation → Clavicle equidistant?
→ Esquidistant from either Sternoclavicular joint?

Bony case : Symmetrical
Scoliosis
Overcrowding
Cervical ribs.
Obvert or Bifid

Lungs : Divide into 3 Zone 0-2 ribs.
2-4
4-lower
- Reducible
- Consolidation

Heart and mediastinum

- Right border
- Left border

Diaphragm

- Elevated
- Flat
- Depressed
- Gas under diaphragm (pneumoperitoneum)

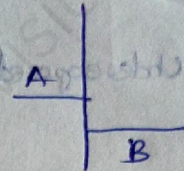
Silhouette sign:

eg: If R border of heart is obliterated, there is pathology to middle lobe

Mediastinum

Measure cardiac size from 2 side

$$\text{Add Both} = A + B$$



Check costophrenic / costophrenic angle: If obliterated $\rightarrow$ pleural effusion.

Enlarged hilum

- Atelectasis
- Tumor
- Vascular
- Sarcoidosis

If Air Bronchogram

Seen

$\downarrow$
pneumonia / consolidation

X-Ray: Consolidation study causing all
pneumothorax
Hydropneumothorax
Pleural effusion
Lung collapse
Cardiomegaly

To distinguish
pleural effusion }
Consolidation
 $\downarrow$

Do USG

I 28 yrs old primigravida brought a baby with RDS

- Diagnosis: Hyaline membrane disease

- 2 investigations: SpO_2 , Shake test

- 2 treatment: ET intubation, surfactant, Baby may be put on ventilator

II FTM, born to multigravida, developed RDS

I.D/O's: Meconium aspiration, Tracheocephalic fistula

Congenital diaphragmatic hernia,

Congenital anomaly of T.B tree

Confirm: CXRay, CBC, Routine

III - Term baby - primigravida, who developed RDS

Q/E: Baby tachypnoeic, RDS + Scaphoid abdomen.

a. Diagnosis: Diaphragmatic hernia,

b. Confirm: CXRay,

c. One procedure contraindicated: Bag and mask ventilation.

IMP

IV Baby was born to a multigravida mother, who did not cry after birth

How will you Resuscitate

(i) Position the baby

(ii) Suction from the mouth, then nose,

(iii) Stimulate (legs)

(iv) Bag and mask ventilation (30 sec)

(v) Look at HR

(vi) If HR % >60 <100 $\rightarrow$ Again Bag and mask

VII. Also ET intubation

↓
Wait for 30 sec

IV: If HR < 60 → Give chest compressions

⑥ 3 day old boy: Jaundice, Icterus - Abdomen

(i) Diagnosis: Physiological jaundice

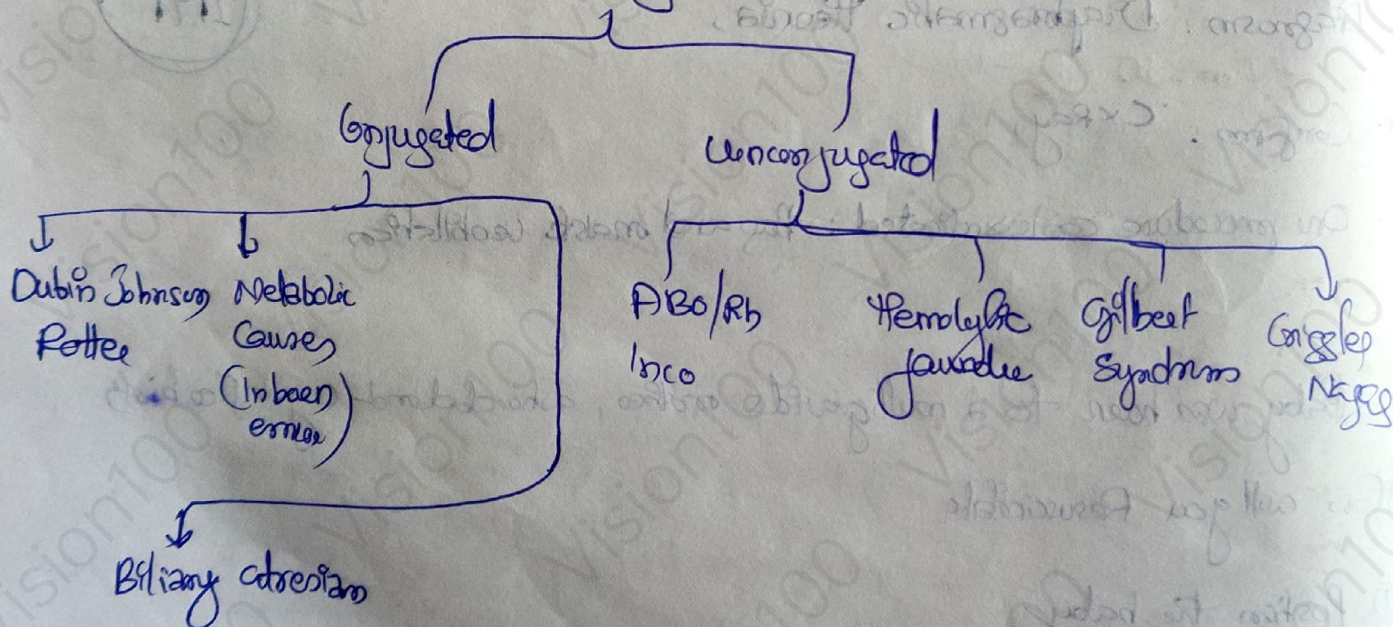
(ii) Krammel's Rule: Draw

(iii) ~~photo~~ treatment: (i) phototherapy
(ii) Transfusion

Pathological jaundice
< 24 hrs

⑥ Newborn developed jaundice at 20th hour, O/E icterus upto sole

(i) Diagnosis: Pathological jaundice



7. 5 Day old boy (Lethargy, Not feeding well) → Sepsis.

O/E: Baby sick, Abdomen distended ⊕, Icterus ⊕

- Diagnosis: Sepsis.

- Investigations: (i) Sepsis screening: Routine, Perphen smear
CSF
Urinalysis ESR
(Immature to 10k/
Neutrophil adm)

Treatment: IV antibiotics

8. 5 day old, Icterus, Umbilical hernia ⊕

- Congenital hypothyroidism

- Thyroxine:

9. 1 week old baby, brought from home, bleeding from umbilical stem

Di: Early haemorrhagic disease of Newborns

Treatment: Vitamin K

10. Full term baby, born to primigravida, develops subtle seizures/apnoea after birth O/E: Baby pale

Apnoea + pale → Seizures

± IC haemorrhage

± Confirm: Neurosonogram.