OSCE WEEK 2

Q1: This is a 11 year old child who presents to you at the Casualty.

a) Describe what you see.(2mrks)

b) Perform an Eye Exam on this Child(8 mrks)

c) On further evaluation, the above presentation was acute on onset and progression(2 week history). List the most likely causes of this presentation.(5mrks)

d) Outline the priority investigations you would carry out. (3mrks)

Question 1.

a) - Unilateral Left eye proptosis/exophthalmos.
- Dystopia.
- facial asymetry.
- Lid Hyperemia.
- Lid Edema.

b)

EYE EXAM. Date.....

General Condition of Patient.
- Ill general condition, resp distress, nutrition, wasting, dehydrated, Irritability, restless.
- JACCLOWD.
- Vitals.

Examination of Eye:
General inspection: facial & Eye assymetry, position and movements of eye, general appearance of each eye; visual aids, strabismus, squinting, (ptosis, proptosis) orbital swellings, masses, scars, redness, hyperemia, discharge hyphema, hypopion, scarring.

Local Inspection: compare both eyes simultaneously.

① Eye Brows – Normal position.
– Symmetry on both eyes.

② Eye lids & Eyelashes (matted
- lid edema; Periorbital Edema
- lid hyperemia / Blepharitis
- palpebral fissures, medial & lateral canthus, limbus
- lid retraction, ptosis, lid lag.
- Ectropion
- Entropion.
- late blinking, stellwag sign.
- lagophthalmos.
- Skin tumors (Basal cell Ca & SQ cell Ca upper lower eyelids.
- Xanthelasma – fat deposits in long-standing Hypercholesterolemia

③ Lacrimal gland
- Inflammation – acute v/s chronic dacrioadenitis
- Masses / Tumors –
- Excessive watering (Epiphora).
- Dry eye – Schirmers test.
- Size & position of Puncta.

④ Cornea – ulceration
– scarring
– Clear or Hazy
– Hazy; Opacities
– dryness
– Keratopathy.

⑤ Conjuctiva – Chemosis – Diffuse or localized.
– Injection – Diffuse or localized.

⑥ Sclera – anterior segment – hyphema, epiestra

⑦ Iris –

⑧ Pupils – Pupillary reflex – Direct + Consensual.
– RAPD (Rapid afferent Pupillary Defect)
– Size of pupil; anisocoria (fixed dilated pupil)
– Swinging light reflex

⑨ Uveal tract ⇒ Iris, choroid & ciliary body.

⑩ Lens ⇒ ~~Slight~~ Slit lamp exam.

⑪ ~~post seg~~ ⇒ Fundoscopy. – Sequence of Opthalmoscope exam
⇒ Vitreous humor ⇒ vitreal hemorrhage
⇒ Retina ⇒
⇒ Optic Disk.
⇒ Macula
⇒ Optic Nerve.

~~Palpation~~ ⑫ Visual Acquity, visual field, Colour vision & Accomodation

⑬ Orbit. – Palpation, eye movt exam, Optic Nerve, Trigeminal Nerve for sensation.

① Proptosis – anterior displacement of eyeball from the orbit/socket.
– axial or Non-axial. ⇒ Dystopia, exotropia,
– unilateral or Bilateral (exophthalmos.)
– Enophthalmos.

(a) measuring proptosis – Hertel Exophthalmometry. *
: Behind patient / above the ~~head~~ head.

(b) Pulsatile : Bruit on auscultation at lateral wall of orbit.
: AV malformations

(c) Increases with Valsalva maneuvre. – Venous abnormality. , inflammatory , Hyperemic? , Regl Lmg

(d) Cause : mass/growth ⇒ Describe. [Site, Size, Shape, Surface, Skin around, Margins, mobility, Consistency, colour, Tenderness,]

(e) Retropulsion test : differentiate btw n soft & hard masses.

⑦ Orbital Trauma:
✓ Blunt vs Penetrating – Globe Injury < perforating – both entry & exit in structure / penetrating – Entry only; No exit.
✓ Blowout orbital floor #; prolapse of orbital contents.
✓ Restricted ocular eye movement.
✓ Optic & trigeminal Nerve assessment.
✓ Palpation.

(c) Causes of unilateral Proptosis in a child.

(1) Rapidly Progressing.

O - orbital Cellulitis
R - Rhabdomyosarcoma
R - Retinoblastoma / Retrobulbar Hemorrage.
O - Orbital Lymphoma
M - Mets
O - Orbital Retinoblastoma.
S - Sarcoma - Ewing's / osteo
I - Idiopathic (Non-specific infiltrative disease)
L - Leukemia.

(2) Slow Progressing.

- ✓ Optic Nerve Glioma
- ✓ Schwannoma / fibromas
- ✓ Orbital Varices.
- ✓ Fibrous dysplasia
- ✓ Capillary hemangiomas.
- ✓ Lymphangiomas.
- ✓

(d) Priority Invx

- ✓ Orbital u/s.
- ✓ CT scan head.
- ✓ Biopsy.
- ✓ MRI.

Q2:

a) Spot Diagnosis?

b) List the various ocular manifestions/signs associated with this presentation.

c) List the risk factors associated with the development of above condition?

Q2: Answer:

a) Opthalmia Neonatorum.
↳ Neonatal Conjuctivitis.

b) ↳ Bilateral purulent conjuctivitis/Discharge
↳ Corneal ulceration/scarring.
↳ Conjuctival chemosis.
↳ Corneal Perforation.
↳ Endophthalmitis.
↳ ~~Epistaxis~~ Epiphora.
↳ Lid hyperemia.
↳ Lid Edema.
↳ Conjuctival Injection.
↳ Crusting.

c) ↳ maternal birth canal infx with STIs.
↳ PROM.
↳ Low Birth Weight.
↳ Prolonged Labour.
↳ Prematurity / Preterm.

Q1.

a) Interpret the Xray.
b) Describe the clinical presentation of this fracture.
c) Classify the fracture.
d) What is the definitive management?

- 1.a) Biodata
- b)Quality of xray(2 joints, 2views, 2 opinions, 2 limbs, 2 occasions, 2 evaluations.)
- c) Continuity of bone(proximal femur #)
- d) Pattern of fracture(Comminuted, wedge shaped)
- e) Mechanism of Injury(Twisting,compression, bending, tension, High energy, Low energy, direct injury, Indirect injury)

- Clinical presentation.
- Pain, swelling, limb shortening, open/ closed injury.+ FADIR.

- Winquist and Hansen classification is used for comminuted
- fractures.
- Displacements In Fracture Shaft Femur.
- **Proximal Third Fracture**
- • Proximal fragment flexes, abducts and externally rotates
- because of gluteus medius and iliopsoas
- • Distal fragment is adducted (adductor longus, minimus,
- magnus and pectineus).
- **Middle Third Fracture**
- • Proximal fragments abducts relatively less because of balancing
- effect of gluteus medius and adductors; but flexion and external
- rotation by iliopsoas persists.
- • Distal fragment is adducted.
- **Distal Third Fracture**
- • Proximal Fragment adducts (because adductor over power
- gluteus medius because of long lever arm). Distal fragment is
- hyperextended by gastrocnemius.
- **• "Lower limb injures associated with maximum shortening are**
- **posterior dislocation of hip > fracture shaft femur > Fracture**
- **subtrochanteric femur > Intertrochanteric fracture > Fracture**
- **Neck Femur".**

Definitive management.

a)Traction.

Skeletalvtraction(russels). Perkins . Once fracture is sticky , discontinue traction and allow ptnt weight bearing in cast or function bracing or plaster spica.

b) ORIF. (plating, Knail, Interlocking Nail)

c) EXOFIX. (Severe open #, Multiple Injuries, Severe bone loss)

Name the fixation technique shown. Give 2 shortcomings of this technique.

- Bridge plate technique.
- It does not resist bending force. Unstable.
- It is very invasive.

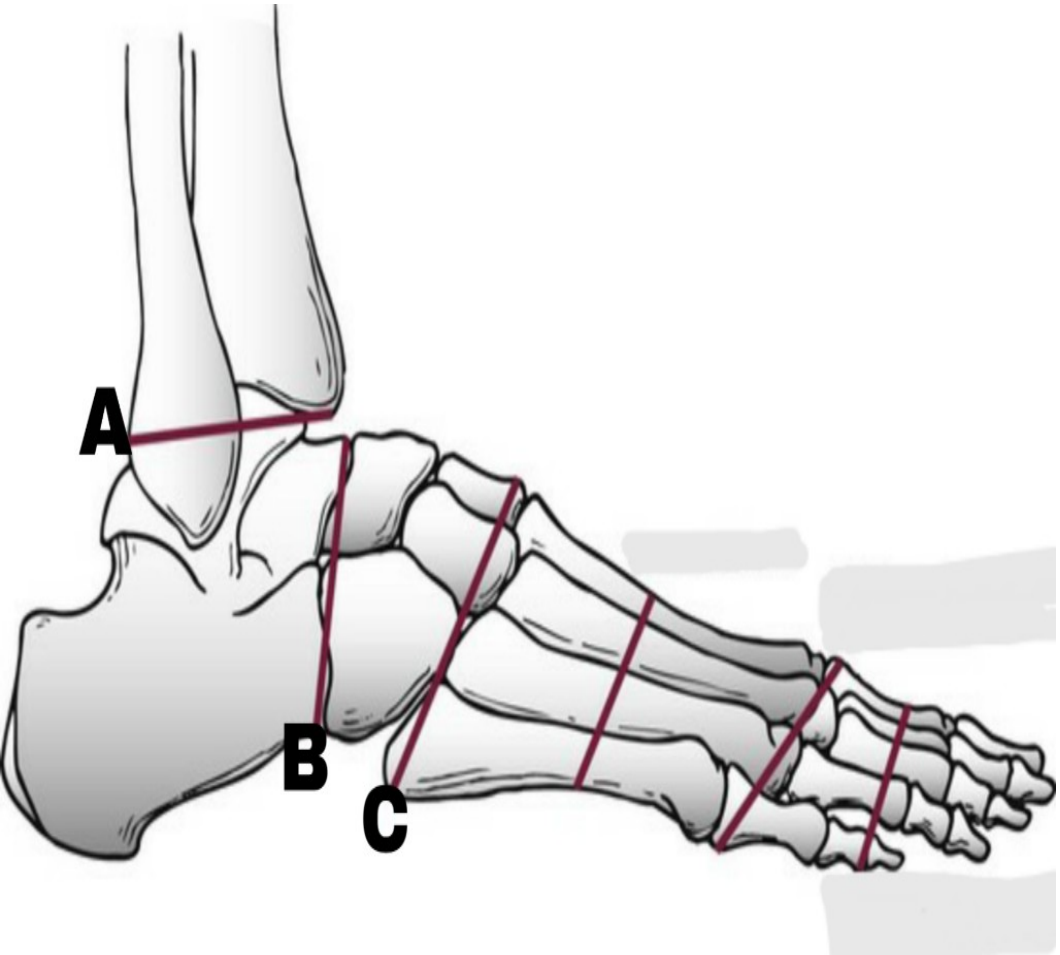
a). Name the technique shown.

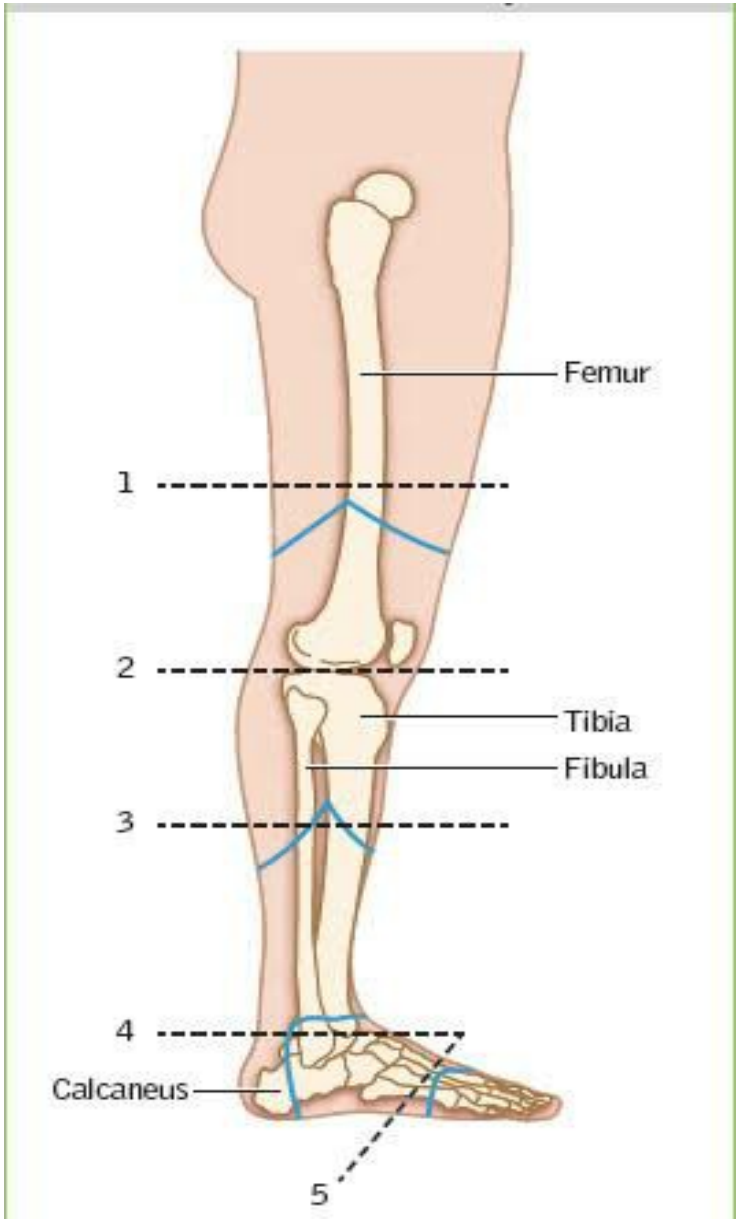
b) Give one indication.

- Gallows traction.

- Fracture shaft femur in children above 5 yrs.

Name the amputations at the levels shown.





- A Symes
- B Chowparts
- C Lishfranc.
- 2 Knee disarticulation

a) List the parameters in MESS score.
b) 3 indications and 3 complications of amputations
c) List 6 surgical principles considered during amputation.

- a) Shock, Age,Limb Ischemia, Skeletal and soft tissue injury.
- b) Dead or dying limb, Damned Nuisance, Dangerous limb.
- c) Pain(phantom limb), Psychological, Stump infections, others.
- Surgical Principles.
- 1. Design flaps
- 2. Ligate vessels
- 3.Retract and cut nerves. Cushion under muscle or fat.
- 4.Myoplasty. Myodesis.
- 5. Cut bone.
- 6. Suture skin flaps together.

- Perform a shoulder examination.

Introduction

- Wash hands
- Introduce self
- Explain examination
- Take consent.

Exposure and position.

Ask for any pain.

Look:

Look around the bed for aids & adaptations

Inspect:

a) Anterior:
   - Scars
   - Assymetry of shoulder
   - Scoliosis
   - Swellings
   - Muscle wasting

b) Lateral → Scars

c) Posterior
   - Assymetry / deformity
   - Scars
   - Assess trapezius bulk.
   - Para vertebral muscles

Feel:

- Temperature of shoulders
- Palpate Component of the Shoulder girdle
  - Sterno-clavicular joint
  - Clavicle
  - Acromioclavicular joint
  - Coracoid process
  - Head of humerus
  - Spine of scapular

Move:

- Put hands behind your head (External rotation & abduction)
- Put your hands as far up your back as possible (Internal rotation)
- Flexion (forward & upwards) of arms Normal 150-180°
- Extension (Behind and straight) Normal 40°
- Abduction (Normal → 180°
- Adduction
- External rotation (Hold elbows on trunk's flexed at 90° → Move forearms outward (50-90°)
- Internal rotation
- Palpate the interior border of the scapula.
- DO PASSIVE MOVEMENTS AS ABOVE

SPECIAL TESTS.

1. Supraspinatus assessment → Function of supraspinatus
   (Empty can test)
   - Arm abducted 90°
   - Internally rotate the
   - thumb
   - Push down on the arm as patient resist

2. The painful arc
   (Impingement syndrome)
   - Passive abduction of the arm to its maximum point of abduction → Then lower the arm slowly back to neutral position. pain (60–120°)

3. External rotation against resistance
   (Assesses function of infraspinatus.
   Elbow flexed at 90°
   Slight abduction →
   external rotation.

4. External rotation in abduction
   (Function of teres minor)
   - 90° abduction, bend the elbow 90° → Actively externally rotate the shoulder to max.

5. Internal rotation against resistance
   (Gerber lift off test)
   - Subscapularis ∴ function)
   Dorsum of hand on lower back → tries to press it back pts to lift it away from the back

To complete examination
- Thank patient
- wash hands
- Summerize findings

Ⓓ Ⓐ Anterior & posterior Drawer test
Ⓒ Apprehension test
Ⓒ Inferior instability test (Sulcus test)

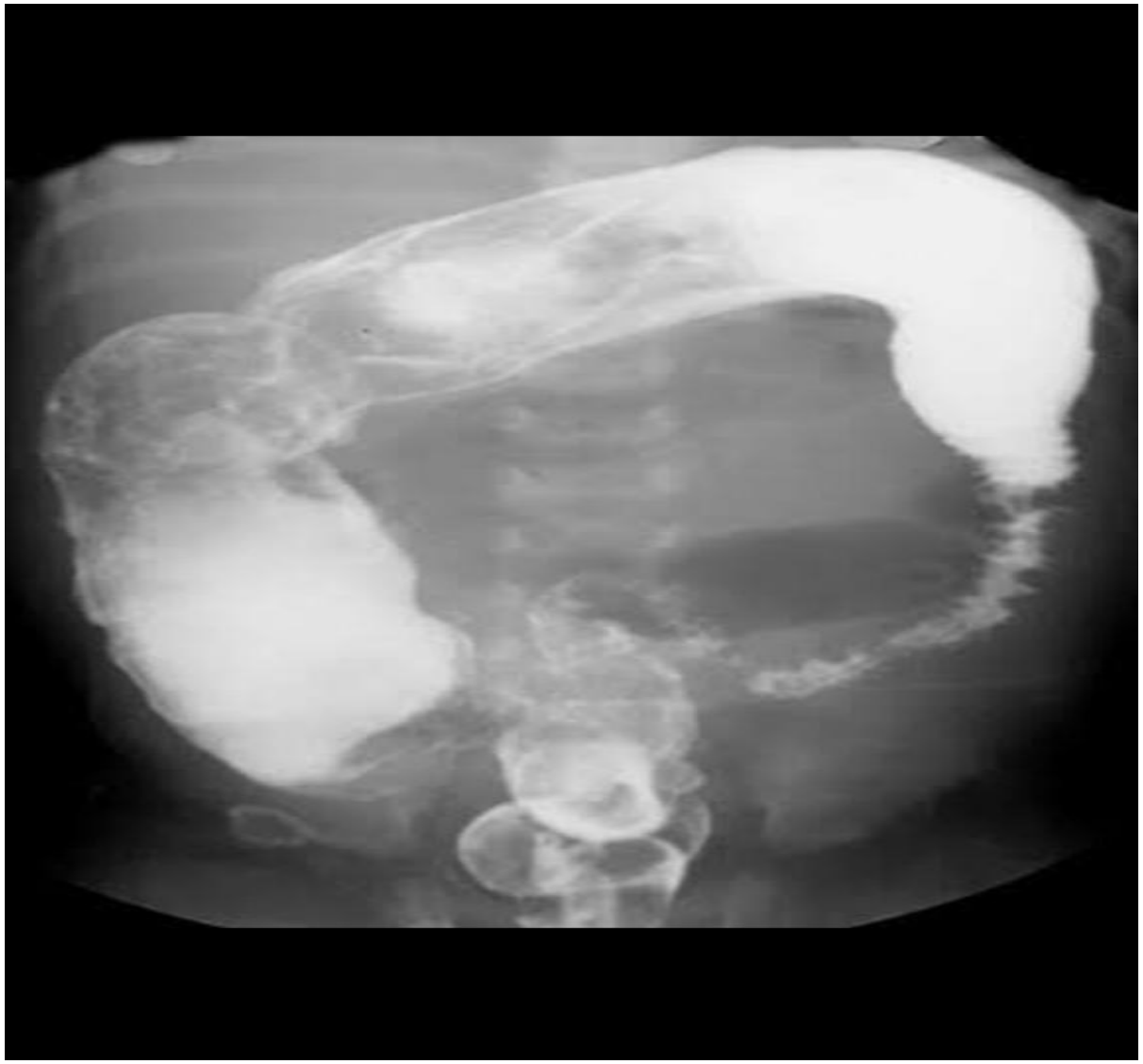
16+13

-
- QUESTIONS
- Interpret the above radiograph.
- Describe how you will manage this patient.
- What are the possible complications.
-
- ANSWERS
- QSN 1- POSTERIOR DISLOCATION OF THE LEFT HIP
- Post dislocation MC 90%
- Presentation- FADIR+ SHORTENING and femoral head can be palpated posteriorly(gluteal).
- Vascular sign of Narath is positive.
- NB. First interpret b4 stating the pathology.
-

- QSN 2
- The proper treatment of a dislocation or fracture-dislocation
- of the hip depends primarily on the type of injury, but regardless
- of the type of dislocation, some general guidelines apply: (1)
- long-term results are directly related to the severity of the initial
- trauma; (2) reduction, open or closed, should be performed within
- 12 hours; and (3) only one or two attempts at closed reduction
- should be made; if these fail, open reduction is indicated to prevent
- further damage to the femoral head.
-
- REDUCTION.
- Open under GA, one assistant needed.
- Closed reduction; 3 assistants
- Closed reduction Manoeuvres
- 1.Stimpsons gravity method
- 2.Allis maneuvre
- 3.Bigelows maneuvre
- 4. East Baltimore maneuver
- NB. Familiarise yourselt with one maneuver.

- POST REDUCTION MANAGEMENT
- Depends on severity.
- At leasts 2wks of traction. The mobilise on crutches but NO weight bearing till 6wks or 12wks if associated with acetabular fracture.
- CT scan is the best invex to judge dislocations.
- Confirm with imaging (xray) immediately after reduction.

- QSN 3
- Early complications
- Sciatic nerve injury, vascular injury(sup gluteal artery) and associated # femoral shaft.
-
- LATE COMPLICATIONS
- Avascular necrosis, myositis ossificans, OA and unreduced dislocation.
-



- Diagnosis and 3 findings.

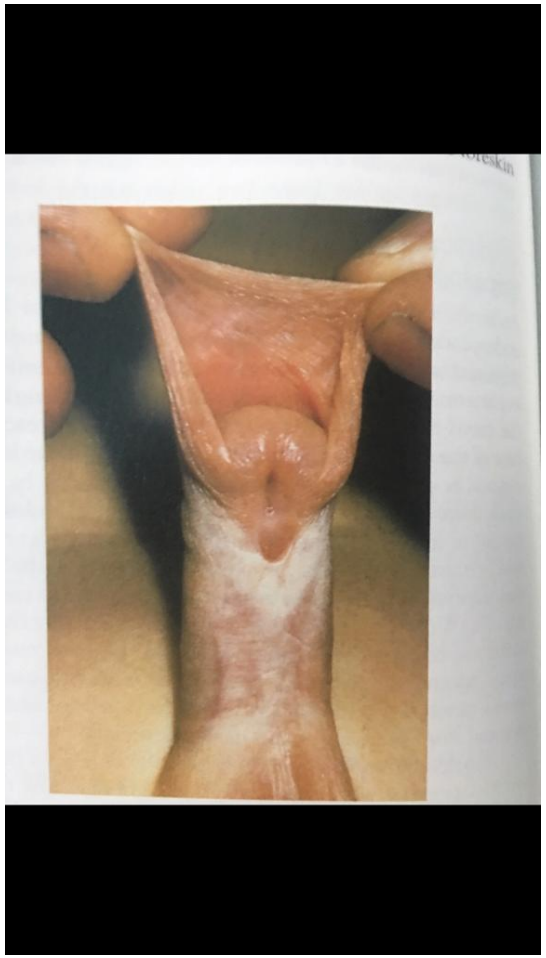
Hirschprungs disease (aganglionic megacolon). Proximal dilatation, distal constriction, funnel shaped narrowing tranzition zone.

Signs and symptoms: abdominal distension, Pain, vomiting, constipation, empty rectal vault on DRE with spurt of flatus and stool upon withdrawal..

Histopathological findings: Aganglionic segment, Hypertrophied nerve bundles.

- Inguinoscrotal Swelling.
- DDX: Indirect inguinal hernia, Infantile hydrocele, Varicocele, testicular tumor, undescended testes, Epididymoochitis.

Phimosis.



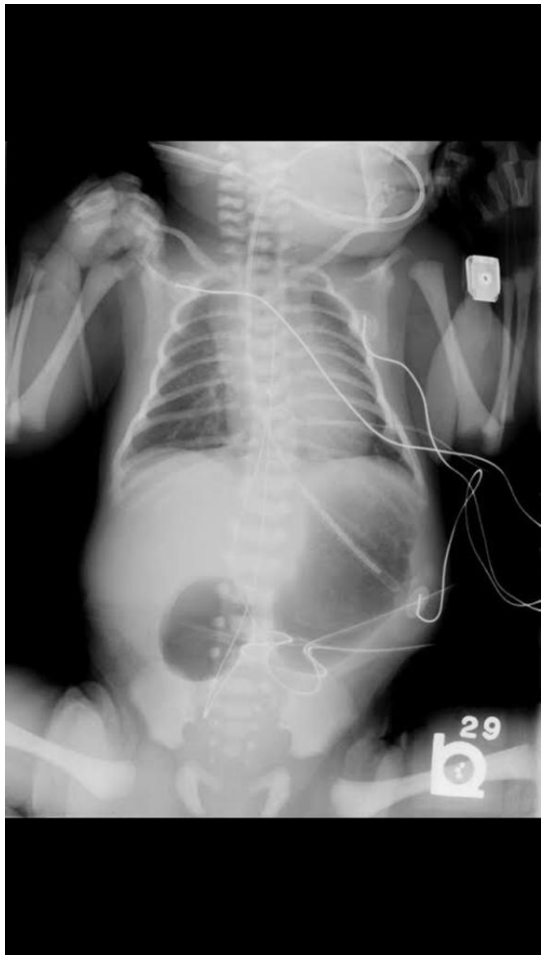
- Hypospadias.

- Unilateral left sided cleft lip and palate.

- Imperforate anus.

Figure 2: Reconstructed penis with good size, conical shaped glans

- Hypospadias.



- Double bubble sign.
- Duodenal atresia.

- Meckels Diverticulum.
- Complications: Ulcerations, Bleeding, Perforation, Diverticulitis.

a) Muscle Relaxants uses :-

✓ Relaxation of vocal cords & allow passage of endotracheal tube

✓ Relaxation of abdominal & diaphragm muscles - Always have patients Resp assisted or controlled.

b) Classification :-

(i) Non-Depolarising (Competitive) Muscle Relaxants

✓ Compete with Acetylcholine for receptor sites @ the NMJ.

✓ Action Reversed by Acetycholinesterase eg Neostigmine

eg Competitive :- (Generally Slower than Suxamethonium).

(1) Aminosteroid Group → Pancurium, Rocuronium, Vecuronium

(2) Benzylisoquinolinium → Atracurium, Cistacurium, Gallamine,

(ii) Depolarizing - Succinylcholine

✓ Rapid onset of action → Tracheal intubation

MOA :-

(a) Phase 1 block (Depolarizing) →

(b) Phase 2 block (Desensitizing)

S/E : Life threatening Malignant hyperthermia,

Antidote → DANTROLENE.

Local Anaesthetics:-

(a) Esters :- ✓ Tetracaine
✓ Chloroprocaine
✓ Cocaine
✓ Procaine

(b) Amino Amindes :- ✓ Lidocaine ✓ Ropivacain
✓ Dibucaine ✓ Mepivacai
✓ Bupivacaine

Local Anesthetic Technique

(i) Infiltration Anesthesia

(ii) Regional Anesthesia ✓ IVRA / Bier Block ✓ Epidural
✓ Intrathecal / Spinal

(iii) Truncal blocks - Transversus Abdominis plane block

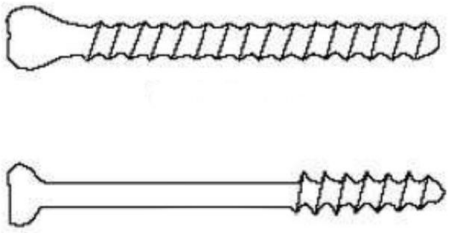
(iv) Peripheral Nerve Block - ✓ Plexus - Brachial, Lumbar
✓ Individual or group of Nerves

(v) Surface / Topical Anesthesia - EMLA cream

Adjuvants in LA

✓ Adrenaline
✓ Bicarbonates - ionized form maintained
✓ Glucose
✓ Opioids, Clonidine, Ketamine

- Cortical
- Cancellous.



Austin mOOre implant.Fenestrated(With two holes). Non fenestrated(Thompson)

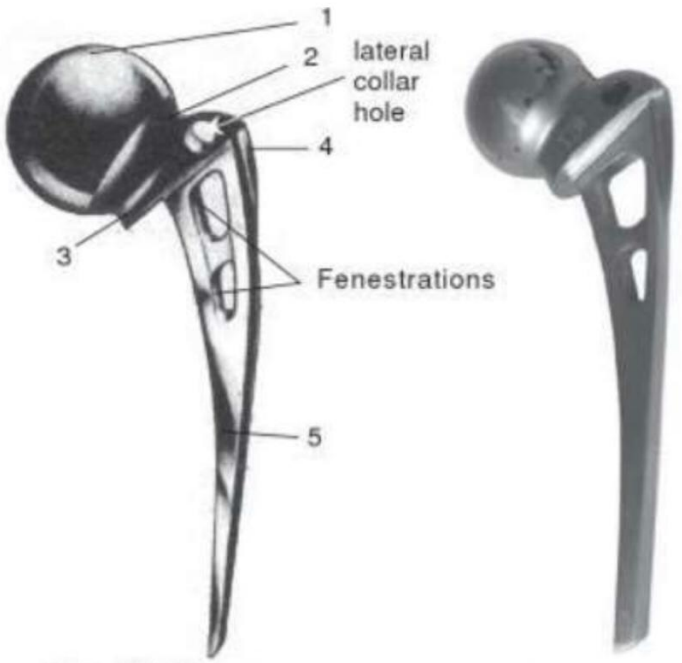
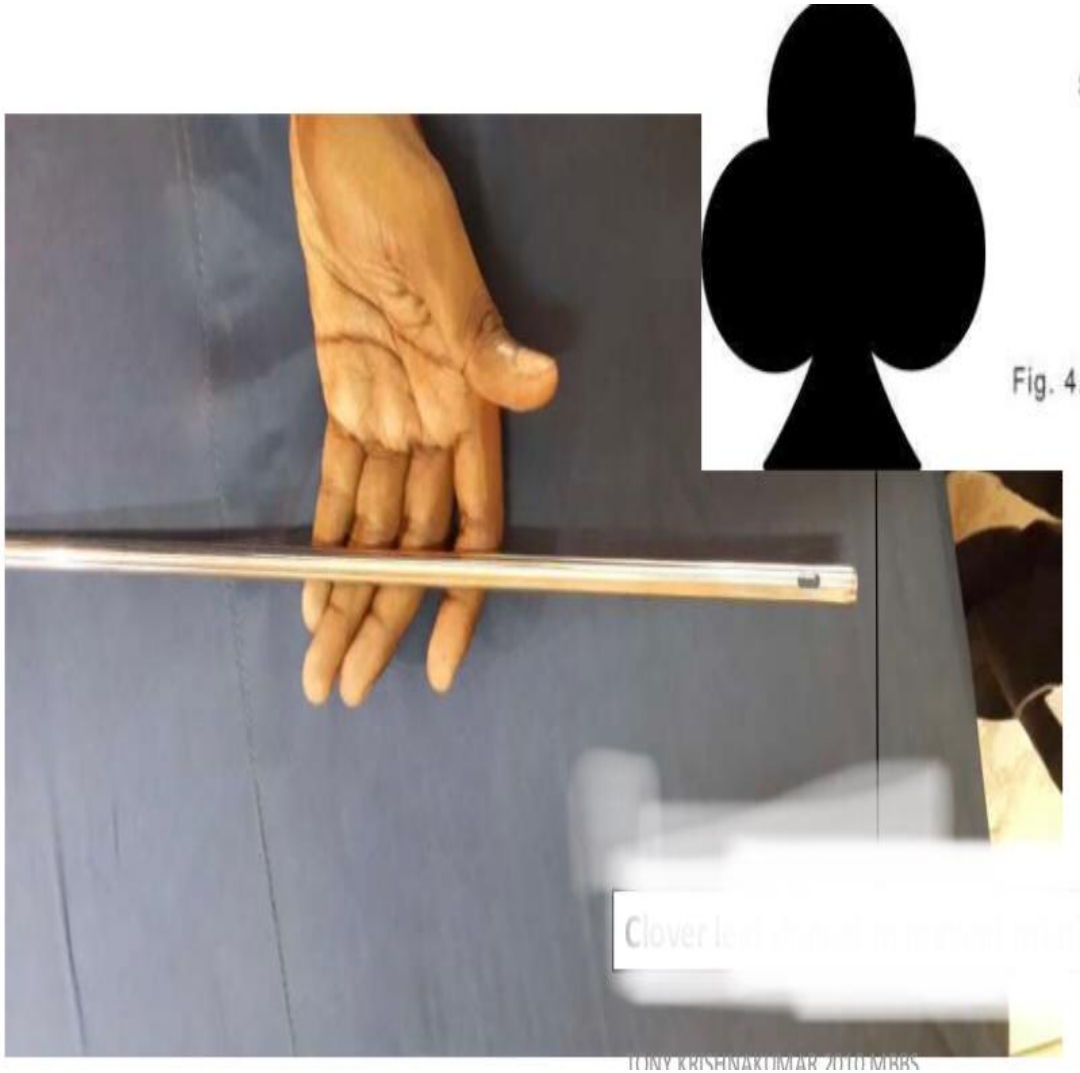


Fig. 4.2.15 : A

Intramedullary Kuntschner Nail. Clover leaf/club shaped cross section.



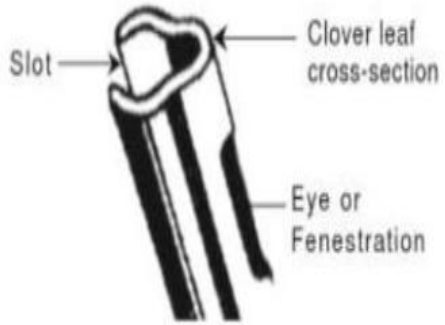
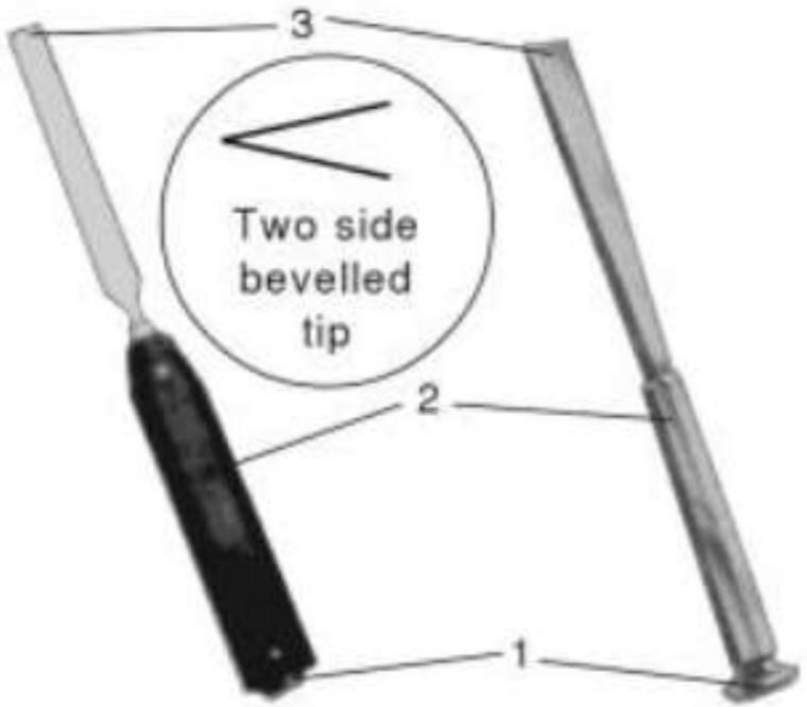


Fig. 4.2.18 : Blunt hollow end with clover leaf cross-section and eye.

Traction pins .

Deinham is threaded at the centre. Steinmann is a smooth rod with one blunt end and one end pointed

Osteotome(Bevelled on both sides at the tip.)
Chisel(bevelled on one side at the tip.)
Function: Break bone during Osteotomy.



Checklist	P	MP	F
HELP			
H: 'Hello' (introduction and gains consent)			
E: Exposure (ideally waist downwards)			
L: Lighting			
P: Positions correctly (initially standing, then lying supine), asks if the patient is in any pain			
Washes hands			
Inspects from end of bed for any relevant paraphernalia			
Requests CHAPERONE			
Asks patient to stand			
Inspection:			

• Inspects patient with them in a standing position:
  • Scars
  • Swellings
  • Lumps			

• Inspects scrotum			
• Inspects groin			
• Inspects abdomen			
• Asks patient to cough to exaggerate the hernia, observing for any impulse around groin and scrotum			
Palpation:			

• Identifies relevant anatomical landmarks:
  • Pubic tubercle
  • Anterior superior iliac spine
  • Mid-inguinal point
  • External (superficial) ring
  • Internal (deep) ring			

• Attempts to palpate external ring through scrotum (or states intent to do so)			
• Identifies any swelling/lump			

• Examines swelling/lump thoroughly:
  • 4 Ss
  • 4 Cs
  • 4 Ts			

• Attempts to get 'above' swelling			
• Attempts to manually reduce the hernia			
• Asks patient to cough to exaggerate the hernia and feel a 'cough impulse'			

• Uses finger to obstruct internal ring (at the mid-inguinal point) and asks patient to cough
  • Direct hernia appears
  • Indirect hernia does not appear			

Auscultates swelling for bowel sounds			
Examines both sides for comparison			
Tells examiner he or she would like to complete the examination by examining the scrotum			
Thanks patient			
Offers to help patient get dressed			
Washes hands			
Presents findings			
Offers appropriate differential diagnosis			
Suggests appropriate further investigations and management			
OVERALL IMPRESSION:			


JAZAK ALLAH
KHAIR
THANK YOU