

LUMBAR PUNCTURE

Introductions

Other names Spinal puncture, Rachiocentesis, spinal tap, Ventricular puncture, Cisternal puncture, and Cerebrospinal fluid culture

Lumbar puncture (spinal tap) is performed in your back, in the lumbar puncture, a needle is inserted between two lumbar bones (vertebrae) to remove a sample of cerebrospinal fluid- the fluid that surrounds your brain and spinal cord to protect them from injury.

Indications

Diagnostic

- Meningitis (bacterial, fungal, tuberculosis, viral, carcinomatosis, lymphomatosis or aseptic)
- Early subarachnoid hemorrhage
- Pseudotumor cerebri
- Multiple sclerosis
- Guillain –Barre syndrome
- Possible lupus cerebritis, cns Vasculitis, Acute demyelinating disorders

Therapeutic

- Spinal anesthesia
- Treatment of pseudotumor cerebri
- Intrathecal administration of chemotherapy
- Intrathecal administration of antibiotics
- Injection of contrast media for myelography or cisternography

Equipments

- Sterile gloves & gown
- 1% lidocaine solution
- 22G or 25G needle
- 5ml disposable syringe
- Povidine- iodine prep
- Sterile drape
- Spinal needle with stylet
22G, 35 inch spinal needle for adults

22G, 25 inch spinal needle for children
22G, 15 inch spinal needle for infants and newborns

- Manometer with 3 way stopcock
- 4 labeled sterile specimen containers
- Sterile bandage

Procedure

1. First the patient is usually placed in a left (or right) lateral position with their back bent in full flexion up to their chest or sitting up position
2. Draw an imaginary line between the top of the iliac crests. This intersects the spine at approximately **the L3-4** intersect (Mark this if necessary)
3. Wash hands and aseptically put on sterile gloves
4. Prepare the skin with povidone- iodine or chlorhexidine and set up sterile drapes
5. Allow adequate time for the skin preparation to dry
6. Take the tops off the tubes, ensuring that they remain sterile
7. Infiltrate the skin with 1% lignocaine using a 22G needle
8. Withdraw stylet and check for fluid return
9. Attach end of stopcock with manometer to read the opening pressure (opening pressure can only be checked in lateral decubitus position)
10. Collect 1-2 ml of CSF in each of the four labeled sterile tubes
11. Replace the stylet and withdraw the spinal needle.
12. Clean off povidone – iodine prep solution
13. Apply a sterile band air over the puncture site

Complications

- Post LP headache
- Infection
- Bleeding
- Cerebral herniation
- Minor neurologic symptoms such as radicular pain or numbness
- Late onset of epidermoid tumors of the sac
- Back pain

Contraindications

- Possible raised intracranial pressure
- Thrombocytopenia or other bleeding diathesis(including ongoing anticoagulant therapy)
- Suspected spinal epidural abscess
- Brain abscess

SIGNATORIES

Name of staff (MO/NO/CO/COI/MIDWIFE/ ETC)

Name:

sign.....

Date:

Department in charge

Name:.....

sign.....

Date:

Nursing Officer in charge

Name:.....

sign.....

Date:

Hospital Administrator

Name:.....

sign.....

Date: