

PRE-PROCEDURE BRIEFING: LUMBAR PUNCTURE

Indications:

- Headache, need to exclude subarachnoid hemorrhage.
- A small percentage of patients (approx. 5%) with subarachnoid hemorrhage have a negative head CT.

Contraindications: (supratentorial mass-effect, coagulopathy, thrombocytopenia, overlying cellulitis)

- None.

Approach: (Lateral decubitus vs upright)

- Lateral decubitus due to favorable body habitus
- L3-4 interspace / Iliac crests.

Equipment:

- Mayo stand
- Povidone Iodine solution
- Extra gauze
- Lumbar puncture kit
- Extra spinal needle
- 2% lidocaine, 5 cc syringe, and #27 or #30 needle

How will discomfort be minimized:

- Local anesthesia with 2% lidocaine.
- Family member will be present.
- Ativan if needed.

Critical steps of the procedure:

- Obtain informed consent
- Assemble equipment
- Position patient
- Identify / mark landmarks
- Sterile prep / drape – allow iodine solution to dry
- Infiltrate local anesthetic
- Insert needle with trajectory toward umbilicus
- Feel for “pop”
- Withdraw stylette to check for csf flow
- Reposition needle as needed
- Turn needle 90 degrees
- Measure opening pressure using manometer
- Obtain csf samples
- Reinsert stylette
- Withdraw needle
- Wash lumbar region to remove sterile prep solution

Potential Complications:

- Pain
- Post-LP headache
- CSF leak requiring Blood patch
- Nerve root pain (transient) or injury
- Bleeding (rare) including hematoma
- Infection (exceedingly rare)

Post-Procedure care:

- Supine position (not supported by literature)
- IV fluids
- Analgesia as needed
- Detailed discharge instructions