

PROCEDURE FOR: Lumbar Puncture: Assisting With

SUPPORTIVE DATA: Lumbar punctures are performed for the following reasons:

1. To measure CSF pressure
2. To obtain CSF for visualization and laboratory analysis
3. To perform tests that could indicate partial or complete block in CSF circulation as a result of a spinal cord or disc lesion
4. To inject air, oxygen or radiopaque substances for x-ray visualization
5. To remove blood and purulent material from the sub-arachnoid space
6. To administer medications
7. To induce spinal anesthesia
8. To drain CSF for the reduction of intracranial pressure in very select cases

EQUIPMENT: Disposable Lumbar Puncture Tray  
Sterile Gloves  
Sterile Gauze Pads  
Providone-Iodine Solution  
Xylocaine 1%  
Band-Aid  
Light Source  
Additional red top tubes

PROCEDURE:

<u>ACTION</u>	<u>POINTS OF EMPHASIS</u>
1. Position patient in a lateral recumbent position with back at edge of bed. Flex the back; flex neck forward on chest; place small pillow under head. Patient may also be asked to sit on edge of bed leaning over bedside table.	1. This keeps the plane of the patient's back perpendicular to the surface on which he is lying. This position widens the interspinous spaces and promotes easier entry into the subarachnoid space.
2. Help patient to maintain desired position during procedure by providing support behind head and knees, and keeping the upper shoulder from falling forward. Stand on the side of the bed the patient is facing.	2. Support helps to prevent sudden movements and resultant trauma.
3. Physician will prepare skin site with Providone-Iodine solution followed by alcohol.	3. This helps to prevent infection. Alcohol removes the Providone-Iodine to avoid introducing it into the subarachnoid space.
4. Physician will provide local anesthesia with the Xylocaine 1%.	

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ACTION

POINTS OF EMPHASIS

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| <p>5. Monitor patient's status during needle insertion and throughout the procedure.</p> <p>6. Help patient to straighten legs slowly after spinal needle is in appropriate position.</p> <p>7. Instruct patient to breathe normally and to avoid straining.</p> <p>8. Physician will attach manometer to spinal needle and read the opening pressure.</p> <p>9. Physician may perform Quickenstedt Test by compressing both jugular veins for 10 seconds. Normally there is a rapid rise in pressure in response to compression, and a rapid return to normal when compression is released.</p> <p>10. Physician will collect fluid specimens in three test tubes and additional red top tubes.</p> <p>11. Label each tube with the number in which it was obtained, and the patient's name and medical record #.</p> <p>12. Apply a Band-Aid to the puncture site after needle is withdrawn.</p> | <p>5. The patient will feel pressure as the spinal needle is inserted and a stab of pain as the dura is penetrated. Pain radiating down the leg occurs if a spinal nerve root is irritated by the needle. Persistent pain or other sensations may require repositioning of the needle.</p> <p>6. This prevents a false increase in intraspinal pressure due to muscle tension and abdominal compression.</p> <p>9. This aids in determining the patency of the CSF pathway. No measurable rise or a slow rise is indicative of complete or partial subarachnoid block respectively. Breath-holding or straining causes failure of pressure to drop.</p> <p>11. The sequence in which the specimens are obtained is essential for interpretation of laboratory results.</p> |
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APPROVAL: Intensive Care Unit Standards Committee  
Medical-Surgical Standards Review  
Nursing Standards Committee

EFFECTIVE DATE: 1/88

REVISION DATES: 1/93, 5/94, 1/95, 11/97, 11/03, 10/05