

Ommaya Reservoir Access for Sampling and Drug Administration

PURPOSE:

Consistent guidelines for access, injection of medications, and withdrawing cerebral spinal fluid (CSF) from the Ommaya reservoir will prevent infection or adverse outcomes. Ommaya reservoirs may be located in scalp, abdomen or lumbar region.

RESPONSIBILITY:

Registered Nurses

POLICY:

1. Nurses and MDs with specialized training may access, inject medications, or withdraw CSF samples from the Ommaya reservoir.
2. All medications will be preservative-free.
3. If administering chemotherapy, follow chemotherapy precautions per policy and procedure.
4. No alcohol or alcohol containing products should ever be used for site preparation of an Ommaya Reservoir.
5. Narcotic administration: unless specific physician's orders are obtained in light of a patient's DNR status, all patients receiving any narcotics into the CSF must have vascular access maintained peripherally or centrally and orders for naloxone administration must be on the chart and naloxone maintained at the bedside for immediate administration in the event of life-threatening respiratory depression. Policies and procedures relevant to narcotic administration via other kinds of spinal access devices will apply.

DEFINITION:

Specialized training: Nurses who have demonstrated competency in the use of the Ommaya reservoir by observing a credentialed RN/MD X2, then two observed accesses by a credentialed RN/MD. Chemotherapy will be administered through the Ommaya only by outpatient chemotherapy credentialed nurses or physicians.

PROCESS:

1. Assemble supplies:
 - 25 gauge scalp vein needle
 - 2-10 ml syringes (if drawing CSF for lab studies)
 - Syringe containing preservative-free medication to be injected
 - Syringe with 2 cc preservative-free normal saline (from Pharmacy)
 - Central line dressing kit or sterile supplies
 - Personal protective equipment (if administering chemotherapy)
 - Two pair of sterile gloves
 - Mask for nurse

2. Position patient with head elevated 20-60° based on position of comfort for patient. Assess site, clip hair as needed.

3. Open central line dressing kit or sterile supplies. Establish sterile field.

4. Put on mask.

5. Drop onto sterile field:
 - 25 gauge scalp vein needle
 - Empty 10 ml syringe(s)
 - Medication (if ordered)
 - Syringe with preservative-free saline
 - Sterile 2 x 2s

6. Don gloves.

7. Maintaining sterile technique, prepare skin over Ommaya reservoir. Swab to cleanse skin over reservoir with povidone-iodine using a circular motion from inner to outer aspect, extending beyond the injection site. Repeat with two additional swabs. Allow to dry two minutes, then remove excess povidone-iodine with dry sterile gauze.

8. Attach empty 10 ml syringe to scalp vein needle.

9. If dome appears flat, pump reservoir 4-6 times.

10. Insert 25 g scalp vein needle through middle of dome, at an angle perpendicular to the dome. Gently advance needle until the tip of the needle meets the backstop of the reservoir. (Alternate insertion sites in dome.)

11. a) If lab studies on CSF needed, withdraw 2 cc CSF, clamp tubing, and discard CSF; then withdraw 1-4 cc, depending on studies. (Call lab to verify required amounts of CSF for studies.) Send CSF to lab in capped syringe (with no needle attached) in a biohazard bag. If no medication to be given, proceed to #12.
 b) If no lab studies, attach empty syringe and aspirate 2 cc of CSF to check placement of needle. (If CSF is cloudy or blood-tinged, save sample and proceed to #12, notify MD, and obtain orders, as appropriate, for lab studies.
 c) If fluid clear, discard and attach medication syringe. Inject medication slowly (3-5 minutes) into reservoir, proceed to #12.
12. Pinch tubing, detach syringe and attach syringe with 2 cc preservative-free normal saline. Slowly flush butterfly and reservoir. (Reservoir capacity = 1.5 ml.)
13. Remove scalp vein needle from reservoir.
14. Place sterile 2 x 2 dressing over reservoir and pump dome 5-10 times.
15. Maintain pressure at injection site 3-5 minutes.
16. May discharge patient 15-30 minutes after procedure completed if nausea, headache, or hypotension do not occur.

REFERENCE MATERIALS:

1. Intravenous Therapy Clinical Principles and Practice by Intravenous Nurses Society
2. Access Device Guidelines by Oncology Nursing Society