NPEOC: Osmotic Opening Of The Blood Brain Barrier / Intra-arterial Chemotherapy

Effective Date: November 01, 2007
No: HC-PCS-AAC-S001

NURSING PRACTICE EXPECTATIONS OF CARE:
(formerly 01soc)

PRE-PROCEDURE STANDARD

STANDARD 1:
Assessment and Diagnosis - The nurse collects relevant health data and analyzes the data to determine diagnoses.

Assessment:
1. Begin Standard of Care: Acute Care Adult, Chemotherapy
2. Assess patient within 4 hours upon arrival to the unit per Adult Inpatient Standard of Care and as follows:
   1. Complete baseline neurological exam per Adult Acute Care Flowsheet and include the following assessments:
      - Orientation to person, place, and time.
      - Pupils: PERRL - pupils equal, round, reactive to light.
      - Vision: Previous history of blurred vision or diplopia. Assess extraocular movements
      - Facial symmetry: Frown and smile.
   2. Communication skills, fund of knowledge
   3. Seizure history:
      - Presence of aura, frequency, LOC, incontinence.
      - Anticonvulsants.

   Note: Initiate Seizure Standard of Care if patient has a positive history of seizures.
4. Diagnosis of brain tumor:
   - Date of diagnosis.
   - Presenting symptoms at time of diagnosis.
   - Previous treatment

   Note: Read physician/nurse practitioner progress notes to find out number of treatment and details of patient's history. Review admitting orders and note specific referrals. Most patients will have an order for a physical therapy evaluation before treatment.

Labs/Diagnostics:
1. Review admitting orders for ordered labs and diagnostic tests to be completed on admission.

   Note: All patients receiving their first treatment will start a 24-hour urine collection for creatinine clearance and quantitative protein on admission.

   Note: Many patients will enter via PAT clinic and will have their portacath accessed, labs drawn, and some diagnostic tests completed.

STANDARD 2:
Outcome Identification - The nurse identifies individualized expected outcomes for the patient.

Expected Outcomes:
1. Patient and family demonstrate understanding of blood brain barrier treatment and activity to occur during hospital stay.

2. Patient and family demonstrate understanding of discharge medications and are able to administer subcutaneous injections competently.

3. Patient and family demonstrate understanding of chemotherapy treatment, identifies side effects, and is knowledgeable about home care following blood brain barrier disruption with chemotherapy.

STANDARD 3:

*Develop and Implement Plan of Care - The nurse develops and implements a plan of care to assist the patient in achieving expected outcomes.*

**Procedures/Treatments:**

2. Follow shift specific preparation instructions (see Attachment 1: Blood Brain Barrier Disruption: Nursing Shift Responsibilities).

**Nutrition/IVs:**

1. Refer to admitting orders for specific diet.
2. NPO after midnight.
3. Check admitting orders for IV solution to be started and specific time IV fluids are to be initiated.

   Note: Initiation time of IV fluids vary for different patients.

**Medications:**

1. Verify medications patient takes at home and what medications have already been on admit day.
2. All medications to be held after midnight unless specifically stated to give after midnight on admitting orders.
3. Check with Blood Brain Barrier team before premedicating patients for procedure with medications indicated on orders.
4. Refer to Attachment 2: Blood Brain Barrier Disruption Medications for details on medications and chemotherapy for Blood Brain Barrier Disruption patients.

   Note: Do not give any AM insulin to Blood Brain Barrier Disruption patients without first checking with the team.

**Teaching/Discharge Planning:**

1. Teach patient or caregiver how to administer a subcutaneous injection if not already known for Neupogen injections that will be administered after discharge.
2. Coordinate discharge pharmacy arrangements with patient and care management.
3. Review blood brain barrier procedure with patient and family.
4. Review risks and precautions associated with arterial lines/infusions.

STANDARD 4:

*Evaluation - The nurse evaluates the patient's progress toward attaining expected outcomes and revises the plan of care accordingly.*

POST-PROCEDURE STANDARD

STANDARD 1:

*Assessment and Diagnosis - The nurse collects relevant health data and analyzes the data to determine diagnoses.*

**Assessment:**

1. Initiate Standard of Nursing Care: Acute Care Post-op and Adult Critical Care Flowsheet.
2. Assess patient within 15 minutes of arrival to the unit according to Post-op Standard of Care and follows:
   A. Complete neurological exam per orders and include assessment of:
   B. Cognition: Fund of knowledge, thought processes, memory
   C. Increased intra cranial pressure: Hypertension, widening pulse pressure, bradycardia, decreased
D. LOC, pupillary abnormalities, headache, hemiparesis
E. Cardiac assessment

3. Reassess:
   A. Neuro status hourly as stated above
   B. Cardiac status every 4 hours
   C. Other assessments per Post-op Standard of Care and as ordered.

4. Initiate seizure standard of care if patient experienced a seizure during blood brain barrier disruption.

   Note: Verify fluid balance with PACU nurse upon patient transfer back to unit.

Labs/Diagnostics:
1. Review admitting orders for ordered post-procedure labs and diagnostics.

STANDARD 2:
Outcome Identification - The nurse identifies individualized expected outcomes for the patient.

Expected Outcomes:
1. Patient's fluid balance will remain within ordered parameters.
2. Patient and/or caretaker demonstrate skill in administration of subcutaneous injections
3. Patient and/or caretaker understands purpose and side effects of discharge medications
4. Patient and/or caretaker verbalize understanding of discharge instructions including daily monitoring and follow up lab work.

STANDARD 3:
Develop and implement Plan of Care - The nurse develops and implements a plan of care to assist the patient in achieving expected outcomes.

Procedures/Treatments:
1. Follow shift specific responsibilities (see Attachment 1: Blood Brain Barrier Disruption: Nursing Shift Responsibilities).

Nutrition/IVs:
1. Patient NPO until fully awake and demonstrates ability to swallow. Refer to orders for specific diet.
2. NPO after midnight if scheduled for disruption in AM
3. Check orders for specific IV solution and titration parameters.

Medications:
1. Verify ordered daily medications that need to be administered following disruption.
2. All medications to be held after midnight unless otherwise specified on orders if patient is scheduled for disruption in AM
3. Refer to Attachment 2: Blood Brain Barrier Disruption Medications for details on medications and chemotherapy for Blood Brain Barrier Disruption patients.

   Note: Do not give any AM insulin to Blood Brain Barrier Disruption patients without first checking with team.

Teaching/Discharge Planning:
1. Review subcutaneous injection technique with patient and caregiver
2. Review discharge medications and follow up care following hospitalization
3. Review side effects of chemotherapy and arterial infusions
4. Verify discharge medication arrangement with pharmacy and Care Management

STANDARD 4:
Evaluation - The nurse evaluates the patient’s progress toward attaining expected outcomes and revises the plan of care accordingly.
Bibliography:


Related Forms:

- Inpatient, Adult Acute Care (HC-PCS-AAC-S005)
- Adult Acute Care, Post Op (48soc) - Archived: Refer to CPG
- Adult Acute Care, Chemotherapy (17soc) - Archived: Refer to CPG
- Adult, Seizure Precautions & Monitoring (51soc) - Archived: Refer to CPG

Supersedes:

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