

Medications

Acetaminophen (Tylenol) 500 tablet → 1 tablet every 4 hours PRN; Tube-gastric

Pharmacological class: nonsteroidal anti-inflammatory drug

Therapeutic class: Analgesic, antipyretic, nonopioid analgesic

Use: Patient is using to relieve mild to moderate pain.

Nursing assessment: Assess pain level and assess if a fever is present.

Clonidine HCl (Catapres) 0.1 tablet → 1 tablet twice a day; Tube-gastric

Pharmacological class: Centrally acting alpha agonist

Therapeutic class: Analgesic, antihypertensive, behavior modifier

Use: Patient is taking to manage hypertension.

Nursing assessment: Monitor blood pressure and pulse rate prior to administration.

Oxycodone (Roxicodone) 5 mg immediate release tablet → 1 tablet every 6 hours PRN;

Tube-gastric

Pharmacological class: Opioid

Therapeutic class: Opioid analgesic

Use: Patient is taking to relieve severe pain related to trauma.

Nursing assessment: Prior to administration of oxycodone, assess respirations and assess for previous and current opioid use.

Gabapentin (Neurontin) 300 mg capsule → 1 capsule three times daily; Tube-gastric

Pharmacological class: 1-aminomethyl cyclohexaneacetic acid

Therapeutic class: Anticonvulsant

Use: Patient is taking to relieve nerve pain related to trauma.

Demographics

Pathophysiology

Date of Admission

Admission Diagnosis

Subarachnoid hemorrhage at base of skull

Age: 21

Gender: Female (N)

Race/Ethnicity: W

Allergies: Amoxicillin

Code Status: Full code

Height in cm: 180.

Weight in kg: 107.

Psychosocial Development: Isolation

Cognitive Development: Operational stage

Braden Score: 12

Morse Fall Score: 5

Infection Control: None

Disease process: Patient suffered from a subarachnoid hemorrhage with a basilar skull fracture. After aneurysm rupture, blood enters the subarachnoid space at arterial pressure (Hasegawa et al., 2021). This produces immediate pathophysiological effect and early brain injury. Intracranial pressure begins to rise above 20 mmHg, arterial blood pressure falls reflexively, and cerebral perfusion pressure is reduced (Hasegawa et al., 2021). Subarachnoid hemorrhage mainly results from spontaneous rupture of a saccular aneurysm (Hasegawa et al., 2021).

S/S of disease: Subarachnoid hemorrhage is associated with significant adverse outcomes. Severe headache or syncope can appear due to decreased cerebral blood flow. Following SAH, patients can experience complications such as seizures, herniations, hyponatremia, cardiac anomalies, and respiratory depression (Hasegawa et al., 2021). The patient didn't verbalize any of these symptoms. The patient was only observed vomiting on scene.

Method of Diagnosis: A CT scan is used to check for signs of a brain hemorrhage. The extent of a SAH on an admitting CT is graded according to the Fisher scale (Hasegawa et al., 2021).

Lab Values/Diagnostics

Calcium (8.9-10.6 mg/dL) → 8.7 mg/dL

Low levels of calcium can be due to disturbances such as trauma in patients experiencing hemorrhage (Pagana & Pagana, 2018).

Glucose (74-100 mg/dL) → 103 mg/dL

Medications such as antipsychotics (quetiapine) can cause increased blood glucose levels (Pagana & Pagana, 2018).

WBC (4.00-11.00 10³/uL) → 11.86 10³/uL

Increased levels of white blood cells is related to trauma. A subarachnoid hemorrhage is the result of the trauma causing the increased WBC levels (Pagana & Pagana, 2018).

RBC (4.10-5.70 10⁶/uL) → 3.80 10⁶/uL

The patient's low levels of RBCs is due to hemorrhage (Pagana & Pagana, 2018).

HGB (12.0-18.0 g/dL) → 11.2 g/dL

The patient's low levels of hemoglobin is due to hemorrhage (Pagana & Pagana, 2018).

HCT (37.0-51.0%) → 34.3%

The patient's low levels of hematocrit is due to hemorrhage

Admission History

Patient was struck on foot by a motor vehicle and brought to the ED via ambulance on 09/16/2022. Patient was intubated by EMS on scene. Patient bit down on tube which caused for removal. EMT gave Versed 15 mg en route to the hospital. On arrival, patient was vomiting and given 2g of IV Ancef. Successful

Medical History

Previous Medical History: ADHD, Gender dysphoria in adult, major depression, and social anxiety disorder

Prior Hospitalizations: N/a

Previous Surgical History: Tonsillectomy and Adenoidectomy

Social History: N/a

Active Orders

NPO (exception: ice chips)

NPO due to the client's tracheostomy and dysphagia. G tube is used for food and liquids.

Pneumatic compression stockings

Used to prevent blood clots in the deep veins of the legs.

Indwelling catheter for hourly output of medication

Catheter was implemented due to urinary incontinence.

Strict Input and Output

Monitoring the patient's input and output is crucial in determining fluid balance and to monitor for dehydration.

Neuro checks Q4H

Done because of the patient's diagnosis of subarachnoid hemorrhage and to monitor for neurological changes.

Blood glucose monitoring

Blood glucose monitoring is done due to the patient's frequent high blood glucose levels.

Physical Exam/Assessment

General: Patient appears **confused, lethargic**, calm, and alert. Patient arouses to voice and opens eyes. **Patient is unable to speak**. No visible signs of distress.

Integument: Patient's skin is warm, dry, intact, pink, and without discoloration. Pressure points without redness. Normal skin turgor. **Skin integrity is bruised (ecchymotic) on both legs**.

HEENT: Head/face/eyes/nose are all symmetrical at rest and with movement. Normocephalic and atraumatic. Thyroid is non-palpable and no noted nodules. No edema or discoloration. Septum is midline with no visible bleeding coming out of nostrils. No visible drainage present from eyes, bilateral sclera clear, bilateral cornea clear, and bilateral conjunctiva pink. **Congestion and coughing present**. Lips/oral mucosa pink and **dry**. **Secretions were visibly leaking from mouth**. Dentition is good with no noted abnormalities.

Cardiovascular: Apical/radial pulse regular. Normal heart rate and rhythm. Clear S1 and S2 sounds without murmurs, gallops or rubs. Peripheral pulses 2+ and capillary refill less than 3 seconds. **Edema present in right arm, right wrist, left foot, and right foot**.

Respiratory: Breath sounds are **diminished in the right lung fields** and clear in left lung fields. No accessory muscle use. **Patient is tachypneic**. Expansion is symmetric and no retractions present. **Chest appearance is subcutaneous emphysema**. Nail beds have no discoloration. **Coughing is infrequent; with stimulation. Unable to perform cough and deep breathing. Cough is congested**.

Genitourinary: **Patient has an external catheter (size 14 Fr) and has incontinence**. No pain with urination. **Urine is dark yellow**. Genitals appear normal.

Gastrointestinal: Abdomen rounded, soft, nontender, nondistended, and bowel sounds present in all 4 quadrants. Last bowel movement was 1143. Abdominal sounds are audible and normoactive. No guarding, rigidity, or rebound tenderness. No flank pain. **NG tube (12 Fr) in left nare. Patient also has rectal tube**.

Musculoskeletal: **General mobility is significantly impaired. Weak left and right hand grip strength, moves left leg purposely. Patient's fall score is 50. Assistance needed with ambulation**.

Neurological: **Patient is alert and oriented x1. Patient is experiencing confusion, lethargy, and drowsiness. Patient is unable to speak due to tracheostomy and sedation. Glasgow coma scale score is 11: (E4) spontaneous, (M6) obeys commands, (V1) none**. Moves extremities on command. PERRLA: yes, normal pupil accommodation.

Most recent VS (include date/time and highlight if abnormal):

10/05/2022 at 0503

Temperature: 97.8 F HR: 86 BP: 128/65 SPO2: 97% **(30/30 optiflow)** Respirations: 19

Pain and pain scale used: CPOT (Critical-care pain observation tool) is used. Patient denies pain/discomfort.

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
<p>Risk for infection related to intubation as evidenced by an increased white blood cell count.</p>	<p>Ineffective airway clearance related due increased sputum production as evidenced by ineffective cough.</p>	<p>Risk for falls related to impaired strength and mobility as evidenced by a fall score of 50.</p>
<p>Rationale</p> <p>This nursing diagnosis was chosen because there is risk of infection for patients who have undergone intubation. This patient was intubated twice, which increases the risks for infection.</p>	<p>Rationale</p> <p>This nursing diagnosis was chosen because the patient has an increase in sputum production, along with an infrequent cough that is congested. Patient is unable to do deep breathing exercises or perform coughs on demand to improve breathing.</p>	<p>Rationale</p> <p>This nursing diagnosis was chosen because the patient is at a very high risk for falls. The patient has significantly impaired mobility with a very high fall risk score.</p>
<p>Interventions</p> <p>Intervention 1: Implement precautions to prevent infection.</p> <p>Intervention 2: Promote skin integrity.</p>	<p>Interventions</p> <p>Intervention 1: Elevate head of bed and change position frequently.</p> <p>Intervention 2: Assist and monitor effects of nebulizer treatment.</p>	<p>Interventions</p> <p>Intervention 1: Incorporate appropriate safety measures.</p> <p>Intervention 2: Keep the call button and personal items within reach.</p>
<p>Evaluation of Interventions</p> <p>Infection precautions such as handwashing and limiting visitors has decreased the chances of the patient to develop an infection. Trach care is always done with sterile supplies and using aseptic technique. Promoting skin integrity such as repositioning and keeping the skin clean and dry has also decreased the chances of infection to occur.</p>	<p>Evaluation of Interventions</p> <p>Patient’s breathing is improving with the head of the bed elevated and repositioning every 2 hours. Patient is receiving nebulizer treatment every 2 hours which is helping clear up the patient's secretions. Overall, the interventions have helped the patient’s breathing and improved airway clearance.</p>	<p>Evaluation of Interventions</p> <p>Incorporating safety measures such as 1:1 supervision due to confusion has helped keep the patient safe. Keeping the call button and personal items in reach helps reduce the patient’s desire to get out of bed, which has kept the patient at a lower risk for falling.</p>

References (3) (APA):

Hasegawa, Y., Uchikawa, H., Kajiwara, S., & Morioka, M. (2021). Central sympathetic nerve activation in subarachnoid hemorrhage. *Journal of Neurochemistry*, 160(1), 34-50.

Jones & Bartlett Learning. (2022). *2022 Nurse's drug handbook* (19th ed.). Jones & Bartlett Learning.

Pagana, K. D. & Pagana, T. J. (2018). *Mosby's diagnostic and laboratory test reference* (6th ed.). Mosby.