

N431 Adult Health II Concept Map

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N431: Adult Health II

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Medications

- Atorvastatin** Dosage: 40mg Route: OG Tube, At bedtime **Brand Name:** Atorvalia, Lipitor
Pharmacological Classification: HMG-CoA Reductase Inhibitors (Vallerand, 2023)
Therapeutic Classification: Lipid-Lowering Agents (Vallerand, 2023)
Reasons for taking: Adjunctive management of primary hypercholesterolemia and mixed dyslipidemia (Vallerand, 2023).
Assessment before Administration: Evaluate serum cholesterol and triglyceride levels before initiating, after 2-4 weeks of therapy, and periodically after that. (Vallerand, 2023).
- Hydralazine** Dosage: 10mg Route: OG Tube, PRN **Brand Name:** Aapresoline
Pharmacological Classification: Vasodilators (Vallerand, 2023)
Therapeutic Classification: Antihypertensives (Vallerand, 2023)
Reasons for taking: Moderate to severe hypertension (Vallerand, 2023)
Assessment before Administration: Monitor BP and PR frequently during initial dose adjustment and periodically during therapy. (Vallerand, 2023).
- Potassium Chloride** Dosage: 40mEq Route: OG Tube, Once **Brand Name:** Potassium Chloride
Pharmacological Classification: Mineral and Electrolyte Replacements (Vallerand, 2023)
Therapeutic Classification: Mineral and Electrolyte Replacements (Vallerand, 2023)
Reasons for taking: Treatment of potassium depletion (Vallerand, 2023)
Assessment before Administration: Assess for signs and symptoms of hypokalemia (weakness, fatigue, U wave on ECG, arrhythmias, polyuria, polydipsia) and hyperkalemia (Vallerand, 2023).
- Labetalol** Dosage: 10mg Route: IV, PRN **Brand Name:** Trandate
Pharmacological Classification: Beta Blockers (Vallerand, 2023)
Therapeutic Classification: Antihypertensives (Vallerand, 2023)
Reasons for taking: Hypertension (Vallerand, 2023).
Assessment before Administration: Monitor BP and PR frequently during initial dose adjustment and periodically during therapy. Assess for orthostatic hypotension when assisting the client up from a supine position. (Vallerand, 2023).
- Nicardipine** Dosage: 5-15mg Route: IV, PRN if SBP>160 **Brand Name:** Cardene IV
Pharmacological Classification: Calcium Channel Blockers (Vallerand, 2023)
Therapeutic Classification: Antihypertensives (Vallerand, 2023)
Reasons for taking: Hypertension (Vallerand, 2023).
Assessment before Administration: Monitor BP and PR frequently during initial dose adjustment and periodically during therapy. Monitor ECG periodically during prolonged therapy. (Vallerand, 2023).
- Losartan** Dosage: 50mg Route: OG Tube, Daily **Brand Name:** Cozaar
Pharmacological Classification: Angiotensin II Receptor Antagonists (Vallerand, 2023)
Therapeutic Classification: Antihypertensives (Vallerand, 2023)
Reasons for taking: Hypertension (Vallerand, 2023).
Assessment before Administration: Monitor BP and PR frequently during initial dose adjustment and periodically during therapy. Assess the client for signs of angioedema. (Vallerand, 2023).
- Pantoprazole** Dosage: 40mg Route: OG Tube, Daily **Brand Name:** Protonix
Pharmacological Classification: Proton-Pump Inhibitors (Vallerand, 2023)
Therapeutic Classification: Antilular Agents (Vallerand, 2023)
Reasons for taking: Hypertension (Vallerand, 2023).
Assessment before Administration: Assess the client routinely for epigastric or abdominal pain and for frank or occult blood in stool, emesis, or gastric aspirate. (Vallerand, 2023).
- Propofol** Dosage: 5-50mg/kg/min. Route: IV Continuous **Brand Name:** Diprivan
Pharmacological Classification: General Anesthetics (Vallerand, 2023)
Therapeutic Classification: General Anesthetics (Vallerand, 2023)
Reasons for taking: Sedation of intubated, mechanically ventilated clients in the Intensive Care Units (Vallerand, 2023).
Assessment before Administration: Assess respiratory status, pulse, and BP continuously throughout propofol therapy. Frequently causes apnea lasting >=60 seconds. Maintain a patent airway and adequate ventilation. Propofol should be used only by individuals experienced in endotracheal intubation, and equipment for this procedure should be readily available. (Vallerand, 2023).

Demographic Data

Client Initials: SD
Date of Admission: October 7, 2023, Saturday
Admission Diagnosis/Chief Complaint: DX: Code FAST: CVA- Ischemic Stroke. CC: Drooping on the Left Side of the Face and Weakness on the Left Side of the Body and slurred speech.
Age: 86 years old **DOB:** 08/22/1939
Gender: Female
Race/Ethnicity: African American
Allergies: Azithromycin, Lisinopril, Naproxen, Neomycin
Code Status: Full Code
Height in cm: 1,651 cm (5'5")
Weight in kg: 64.9 kgs (142.78 lbs.)
Psychosocial Developmental Stage: Integrity vs. Despair
Cognitive Developmental Stage: Formal Operational
Braden Score: 14
Morse Fall Score: Not being used at Carle Foundation Hospital
John Hopkin's Fall Score: > 13=High Fall Risk
Infection Control Precautions: Standard Precaution

Pathophysiology

Cerebrovascular Accident (CVA); Left Hemispheric Ischemic Stroke

Disease process: An ischemic stroke is caused by a thrombus or embolus that lodges in a cerebral artery and blocks the blood flow to the brain tissue (Capriotti, 2020). The arterial vessels most commonly involved in ischemic stroke are the internal carotid and middle cerebral arteries (Capriotti, 2020). In the client's case, the risk factor of uncontrolled hypertension could have forced an arteriosclerotic plaque to break and become an embolus.
S/S of disease: The right hemisphere stroke affects the sensory and motor functions of the contralateral left side of the body. Hemiparesis (weakness of extremities on one side of the body), hemiplegia (paralysis; complete loss of function of extremities on one side of the body), loss of sensation in an extremity on one side of the body, slurred speech, and facial droop with weakness, disorientation, confusion, and drowsiness, which can become stupor or coma (Capriotti, 2020). According to the client's family reports, the client manifested all stroke-related symptoms.
Method of Diagnosis: Computed Tomography (CT) Scan, Magnetic Resonance Angiography, Transcranial Doppler, National Institute of Health Stroke Scale (Capriotti, 2020). The client's diagnostic CT Scan with contrast confirmed the Ischemic Stroke.
Treatment of disease: In the client's case, IV Thrombolytics was the Tenecteplase administered within 20 minutes (or 1 hour 30 minutes of symptom onset at 1141) of arrival in the Emergency Department (therapy time within 3-4.5 hours of symptom onset) (Capriotti, 2020). Mechanical Thrombectomy by an Interventional Radiologist (Capriotti, 2020). The client received this treatment 1 hour and 40 minutes upon arrival at the emergency department. An impressive time from studies of within 6 - 24 hours of symptom onset (Capriotti, 2020). The client will also be prescribed clopidogrel (Plavix), an antiplatelet agent that inhibits platelet aggregation by irreversibly inhibiting the binding of ATP to platelet receptors (Vallerand, 2023). In the client's case, a start to anticoagulation therapy which was non-existent prior to the CVA. Rehabilitation with interprofessional healthcare team of physical, occupational, and speech therapists are also crucial in gaining back motor functions to fulfill ADLs. Modifiable risks factors such as diet modification, exercise, lifestyle choices, avoiding polypharmacy, should also be a top priority as to prevent another possible future CVA. Anticoagulants should also be started on the client to prevent embolization.

Lab Values/Diagnostics

Test	Result	Normal
• Calcium	↓ 8.2	8.9 - 10.6mg/dL
The client may have malabsorption of calcium (Pagana et al., 2021).		
• Potassium	↓ 3.3	3.5 - 5.1mmol/L
The client just had an angiography that could cause the body to respond by releasing aldosterone, which increases potassium excretion (Pagana et al., 2021).		
• BUN	↓ 6	10 - 20 mg/dL
The client receives fluids to compensate for the imbalances that stroke could cause, lowering BUN (Pagana et al., 2021).		
• Creatinine	↓ 0.51	0.55 - 1.02 mg/dL
The client's BUN is low, making Creatinine low (Pagana et al., 2021).		
• Chloride	↑ 112	98 - 107 mmol/L
The client is receiving fluids (Pagana et al., 2021).		
• RBC	↓ 2.66	3.5 - 5.2 x10 ⁶ cells/μL
The client received Tenecteplase, a potent anticoagulant that could dilute the blood (Pagana et al., 2021).		
• WBC	↑ 11.94	4 - 11 x10 ⁹ /μL
The client just underwent an angiography which could cause inflammation on the incision site (Pagana et al., 2021).		
• Hemoglobin	↓ 8.4	12 - 18 g/dL
The client received Tenecteplase, a potent anticoagulant that could dilute the blood (Pagana et al., 2021).		
• Hematocrit	↓ 25.9	34 - 47%
The client received Tenecteplase, a potent anticoagulant that could dilute the blood (Pagana et al., 2021).		
• Brain CT scan without Contrast: No Acute Infarction		
The client has to get this test to confirm the diagnosis of Stroke (Pagana et al., 2021).		
• Brain CT scan with Contrast: Atherosclerotic Plaque 106 mL Infarct		
The client has to get this test to confirm the diagnosis of Stroke and further evaluate the location and the size of the infarction in the brain's blood vessels (Pagana et al., 2021).		

Admission History

The client and her family were driving from Chicago planning to visit relatives on October 7, 2023, Saturday. While driving down the highway, around 1141 in the morning, her daughter noticed the client had a left facial droop, having difficulty talking, and slurred speech. They stopped by a gas station and called 911 at 1142. EMTs arrived within 2 minutes after the call. According to the family narrative, the EMTs gave the client unspecified medication after a Systolic Blood Pressure (SBP) of >200. The EMTs decided to bring the client to Carle Foundation Hospital as it is the region's only certified Comprehensive Stroke Center (the highest level given by The Joint Commission and the American Heart Association; American Stroke Association). At 1245, the client arrived at the Emergency Department as a CODE FAST. The client's SBP remains >200. Blood work was drawn and a CT Scan was performed as part of the stroke protocol. At 1309, the client was given Tenecteplase. At 1412, the client was en route to the Interventional Radiology Laboratory for an emergency Thrombectomy by an Interventional Radiologist. The procedure started at 1432. After the procedure, the client was transferred to the Critical Care Unit Carle Tower 7A at 1439 to recuperate.

Medical History

Previous Medical History: The client was diagnosed with anemia, angina, asthma with COPD, CHF, Crohn's Disease, diverticulitis, gastric polyps, skin cancer, hypertension, hyperthyroidism, osteoporosis, palpitations, enteritis, ileus, and osteoarthritis.
Prior Hospitalizations: The client's hospitalizations include 2010 for a small bowel fluoroscopy, 2010 for a Colonoscopy, 2008 for EGD Flex Transoral with Biopsy, and an unspecified date for Colectomy.
Previous Surgical History: 1988: Mohs Surgery; 1968: Hemorrhoid Surgery; 1966: Total Abdominal Hysterectomy and Bilateral Salpingo-Oophorectomy.
Social History: The client's chart indicates that she does not drink alcohol and does not abuse illegal substances. The client's chart indicates that the client was a two-pack-per-day cigarette smoker for 30 years. Records show she mentioned quitting in 1980.

Active Orders

Potassium Chloride 40 mEq, OG Tube, Routine
The client's serum Potassium blood level result (10/9, 0901) of 3.3 mmol/L (normal 3.5 - 5.1 mmol/L) is on the lower side.
PT & OT Stroke Evaluation (Cannot be done as of encounter as the client was just extubated)
The client's care plan after stroke includes the interprofessional healthcare team of physical and occupational therapists to encourage early ambulation to prevent thromboembolism and venous stasis.
Ventilation extubation (Done at 10/9, 1020)
The client can breathe on her own without the help of mechanical ventilation despite having a stroke two days ago.

Physical Exam/Assessment

General: *The client is sedated. The client is groomed and wearing an appropriate hospital gown. The client appears to be in no acute distress as she is sedated.*

Integument: *The hair is evenly distributed. Skin color is usual for ethnicity: dark brown. The client's skin is dry and intact, with no rashes, lesions, or bruising. **The client has a left radial Arterial Line (placed on 10/7), a right antecubital anterior 18G IV (placed on 10/8), a right lower forearm anterior 18G IV (placed on 10/8), a left upper arm anterior 18G IV (placed on 10/8), a right groin arterial incision (placed on 10/8).** The client's skin temperature is warm on the right side of the body and **cold on the left.** The client's skin has normal mobility turgor. The client's capillary refills on the right fingers are <3. **Left capillary refills are >3. Braden score is 14.***

HEENT: *The client's head is symmetrical and round. The hair is curly black with grey and white. The client's neck is symmetrical. The trachea is midline without deviation. The thyroid gland does not deviate, and there are no noted nodules. Bilateral carotid pulses are palpable +2. No lymphadenopathy in the head or neck was noted. **The client's bilateral eyes are closed with eye ointment for protection. PERRLA bilaterally. Other EYE exams could not be performed as the client is sedated.** The client's ears have no lesions, lumps, or deformities bilaterally. **The mouth and teeth of the client cannot be assessed due to the placement of a breathing tube. The nose has a small-bore NG/OG/Feeding on the right nares (placed on 10/8).***

Cardiovascular: *Clear S1 & S2 without murmurs, gallops, or rubs. Peripheral pulses 3+ on the right. **2+ on the left.** Capillary refills on the fingers and toes are <3 on the right and **>3 on the left.** No pitting edema bilaterally.*

Respiratory: *The client is on a mechanical ventilator as a continuous positive airway pressure (CPAP).*

Genitourinary: *The client has a 12French Foley catheter (placed on 10/7). The client's urine output is yellow and clear.*

Gastrointestinal: *The client's bowel sounds are normoactive upon auscultation on all four quadrants. The abdomen is warm, dry, and soft, with no rashes, lesions, lumps, or deformities.*

Musculoskeletal: *The client can barely move the left side. Hand grips, pedal pushes, and pulls on the right side are 5/5. **The left side is weak, with slight movement 1/5. John Hopkins Fall Score is >13 High Fall Risk.***

Neurological: *The client is sedated.*

Most recent VS (include date/time and highlight if abnormal): *10/9, 1020: **BP 209/100; RR 20; PR 103; Temp 37.8.** The client's BP is high because the Respiratory Therapist had just removed the breathing tube from the client's airway. RN could not give treatment intervention before removing the breathing tube because of the risk of hypotension and respiratory distress before and after extubation.*

Pain and pain scale used: *The client was just taken off the sedation.*

<p>Nursing Diagnosis 1 <i>Impaired physical mobility related to the client's left lateral weakness and immobility as evidenced by the primary diagnosis of right hemispheric cerebrovascular accident (ischemic stroke).</i></p>	<p>Nursing Diagnosis 2 <i>Impaired verbal communication related to the client's difficulty expressing thoughts verbally and maintaining communication, as evidenced by the client's primary diagnosis of right hemispheric cerebrovascular accident (ischemic stroke).</i></p>	<p>Nursing Diagnosis 3 <i>Risk for impaired health management related to the client's resistant hypertension as evidenced by cerebrovascular accident (ischemic stroke).</i></p>
<p>Rationale <i>The goal of care for clients with limited physical mobility is to maintain and improve the client's functional abilities through maintaining normal functioning and alignment, reducing spasticity, preventing edema of extremities, and preventing complications of immobility (Vera, 2023a).</i></p>	<p>Rationale <i>The incidence of aphasia in acute stroke clients is about 30% (Vera, 2023a). In the first weeks following onset, more than half of these clients have moderate-to-severe aphasia (Vera, 2023a). The ability to communicate verbally is seriously disrupted, impacting the individual and the family, friends, and the healthcare team taking care of the client (Vera, 2023a).</i></p>	<p>Rationale <i>Nonadherence from therapeutic programs is common in hypertension management (Vera, 2023b). Medication discontinuation is high, and blood pressure control rates are low (Vera, 2023b). Effort is required for lifestyle modifications and medication adherence (Vera, 2023b).</i></p>
<p>Interventions Intervention 1: Assist the client in performing movements or tasks. Begin with tasks that require a small range of movements and encourage control (Gulanick & Myers, 2021). Rationale: Mobility interventions follow a progressive activity pattern for a stroke client (Gulanick & Myers, 2021). Intervention 2: Collaborate with members of the interprofessional health team to evaluate the need for ambulatory aids and home assistance (Gulanick & Myers, 2021). Rationale: A physical therapist can evaluate a client's need for ambulation assistive devices. Obtaining appropriate assistance for the client can ensure a safe and proper progression of activity through the rehabilitation phase of care and discharge planning to an appropriate setting (Gulanick & Myers, 2021).</p>	<p>Interventions Intervention 1: Provide clear, simple directions and incorporate multimodality input, such as music, song, and visual demonstration (Gulanick & Myers, 2021). Rationale: The client with aphasia requires directions to be repeated frequently. Tasks must be explained in simple steps and presented individually (Gulanick & Myers, 2021). Intervention 2: Collaborate with a speech therapist and encourage the client's family to communicate with the client; explain the types of aphasia and methods of communication that can be tried (Gulanick & Myers, 2021). Rationale: A comprehensive interprofessional care plan may be required to improve the client's communication ability. Consistency in the approach by professional caregivers and family members promotes more effective communication for the client (Gulanick & Myers, 2021).</p>	<p>Interventions Intervention 1: Assess for risk factors that may negatively affect adherence to the regimen (Gulanick & Myers, 2021). Rationale: Knowledge of the causative factors provides direction for subsequent interventions. Some factors may include contrary beliefs and values, lack of social support, limited financial resources, and compromised emotional status (Gulanick & Myers, 2021). Intervention 2: Instruct the client on the benefits of adhering to the prescribed regimen. When the client has inadequate support regarding lifestyle changes, refer him or her to appropriate support groups (Gulanick & Myers, 2021). Rationale: Information provides a rationale for therapy and aids the client in assuming responsibility for care. Groups that meet together for mutual support can be beneficial to complying with the treatment regimen (Gulanick & Myers, 2021).</p>
<p>Evaluation of Interventions 1. The client performs physical activity independently or within limits of impaired muscle function (Gulanick & Myers, 2021). 2. The client demonstrates the use of adaptive techniques that promote ambulation and transferring (Gulanick & Myers, 2021).</p>	<p>Evaluation of Interventions 1. The client uses a form of communication to meet his or her needs and relate effectively with people and his or her environment (Gulanick & Myers, 2021). 2. The client and the client's family will be able to communicate effectively using new adaptive ways (Gulanick & Myers, 2021).</p>	<p>Evaluation of Interventions 1. The client describes the system for taking medications and demonstrates ongoing adherence to the treatment plan (Gulanick & Myers, 2021). 2. The client verbalizes the importance and benefits of adhering to the prescribed regimen with the help of support groups with the same health conditions (Gulanick & Myers, 2021).</p>

References (3) (APA):

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