SPINAL CORD ISCHEMIA PREVENTION AFTER AORTIC ANEURYSM SURGERY

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You are the nurse assigned to Mr AB, a 65 YO patient who underwent Thoraco-abdominal Aortic Aneurysm surgery 8 hours ago. Handover report indicated the following data:

- **Neuro:** Follows commands, RAS Scale (-1), moves all 4 extremities; ICP 10mmHg; Lumbar Drain 10-12mL/hr for the past 4 hours.

- **CV:** VS 125/73(62) HR 125 ST T36.5 R 22 m PAP 24, CVP 6, CO 4.8 CI 2.5

- **Drips:** Nipride 0.2 mcg/kg/min; Esmolol 150 mcg/kg/min; Insulin 2 units/hr; Dexmeditomidine at 0 mcg/kg/min

What are your nursing care priorities at this point?
CASE SCENARIO

• After an hour, you re-assessed Mr. AB’s neuro status and found the following data:
  • Doesn’t follow commands, briefly awakens to voice, moves upper extremities spontaneously, and no movement on the lower extremities.

• What would you do next?
CASE SCENARIO

You continued your care for Mr. AB, stabilized his Vitals, and ensured ICP measurements and CSF drainage were within range. Still, MR AB shows no movement on his lower legs. At the end of your shift, the Resident assessed the patient and found no movement at the lower extremities, ICP 15-16mmHg, CSF drainage of 6 mL. Attending MD advised for an immediate CT Scan to determine the cause of the neurologic compromise. Patient developed paraplegia at the outset. End-Of-Case
ISCHEMIA DEVELOPMENT
TASK FORCE: SPINAL CORD ISCHEMIA PREVENTION

Physicians

Charles Hill
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Nurses

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CURRENT STATE

MD/RN
- Ineffective Communication
- Assertiveness
- Accountability
- Competencies:
  - Knowledge
  - Skills
  - Attitude

Policy
- Variances in Orders per MD preference
  - MAP Goals: 60-80mmHg
  - ICP ≤ 10-12 mmHg
  - CSF Drainage= 10mL/hr

Procedure
- Communication
- Escalation Process
- Activity Prescription
- Initiation and Monitoring: of Neuro Assessment
- Use of RASS
- Documentation

Equipment/Technology
- EPIC: Sensorimotor Neuron Assessment
- Inconsistent Use of Accudrain
CURRENT STATE

- People Barriers
- Policy/Procedure Variances
- Technology Barriers

- Poor Outcome
  - Paraplegia
  - Increased Morbidity
  - Increased Length-of-stay
FUTURE STATE

RN/MD
- Re-train
- Educate:
  - Assessment
  - Documentation
  - Communication

Policy/Procedure
- Communication-Algorithm
- Streamline
- Revise

Equipment/Technology
- Consistency in the Use of Accudrain
- EPIC Changes for Documentation
SENSORI-MOTOR NEURON ASSESSMENT

• Hip Flexion
• Knee Extension
• Ankle Flexion, Extension
LUMBAR DRAIN

- Zero at Phlebostatic Acces Level
- Drain 10ml/hr
- ICP ≤ 8-10 mmHg
- Position: Up to 30 Degree HOB Elevation
QUESTIONS?