NEW 2020 BEST PRACTICE GUIDELINES FOR MANAGEMENT OF SPONTANEOUS INTRACEREBRAL HEMORRHAGE (ICH)

DID YOU KNOW?

ICH patients treated on a specialized stroke unit have reduced risks of death or dependency

ICH is the most prevalent subtype of hemorrhagic stroke, accounting for 10-15% of all strokes in Canada

HERE ARE SOME OF THE KEY DIFFERENCES AND INTERVENTIONS

INCREASED INTRACRANIAL PRESSURE (ICP)

- Large volume ICH is commonly associated with high ICP which can be associated with intraventricular hemorrhage which can lead to obstructive hydrocephalus

INTERVENTION:

- Monitor for clinical signs of increased ICP:
  - ↓ Level of consciousness
  - ↑ Blood Pressure with ↓ heart rate, and with irregular/decreased shallow respirations (Cushing's Reflex)
  - Worsening headache, nausea, vomiting
  - Changes to pupil reaction
  - New cranial nerve palsies, including double vision
  - Seizures
- Physician may manage suspect or confirmed elevated ICP with elevation of head of bed 30°, methods of neuroprotection (e.g. euthermia and euglycemia), analgesia, and mild sedation
- Use of hyperosmotic agents (mannitol and/or 3% saline) is not routinely recommended unless used as a temporizing measure when clinical signs of herniation prior to surgical intervention

SEIZURE MANAGEMENT

- ICH patients are at a greater risk of seizures

INTERVENTION:

- Assess for seizure activity during routine monitoring of vital signs and neurological status
- Prophylactic use of anticonvulsants is not recommended

BLOOD PRESSURE - TEMPERATURE - GLYCEMIA

- Early blood pressure reductions help prevent hematoma expansion
- Hyperthermia and hyperglycemia are associated with poor outcomes in ICH patients

INTERVENTION:

- Initially assess blood pressure every 15 minutes until target is achieved and maintained for the first 24 hours
- Continue blood pressure monitoring, tailored to patients' vital signs and ICP stability
- Target SBP will usually be less than 140-160 mmHg, this may depend on additional clinical factors
- Maintain temperature <37.5 and blood sugar <10 mmol/L

VENOUS THROMBOEMBOLISM PROPHYLAXIS (VTE)

- Frequency of VTE is up to 4 times higher in ICH compared to ischemic strokes
- Low molecular weight heparin (LMWH) is contraindicated for a minimum of 48 hours

INTERVENTION:

- Apply Intermittent Pneumatic Compression devices (ICP) on admission
- Graduated compression stockings are not recommended for DVT prevention
- Discuss initiation of LMWH after 48 hours, if neuroimaging shows hematoma stabilization

REHABILITATION

- Evidence shows that recovery post ICH may start slower in acute phase and may span over a longer period
- Target length of stay in hospital has been established at 7 days

INTERVENTION:

- Ongoing assessment for rehabilitation readiness beyond conventional time frames used in ischemic stroke to avoid underestimating rehabilitation potential

GOALS OF CARE

- ICH type stroke has the greatest mortality rate
- Evidence indicates that care was more likely to be withdrawn within the first 2 days, despite evidence to suggest early interventions may improve outcomes

INTERVENTION:

- Establish goals of care with patient and/or substitute decision maker
- In most patients, prognostication for the purpose of modifying goals of care should be deferred for 48-72 hours after time of presentation to determine extent of deficits, response to medical treatment and potential for worsening of condition

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