

Randomized controlled trial comparing cerebral perfusion pressure (CPP) targeted therapy versus intracranial pressure (ICP) targeted therapy for raised ICP due to acute central nervous system infections in children

Appendix-2

Appendix-2: General care given in the two study groups

1. Head of bed elevated to 30°.
2. Sedation and analgesia with midazolam (1–20 microgram/kg/min) and morphine (0.1 mg/kg/dose Q 6 hourly or continuous infusion at 10–30 microgram/kg/hr). The level of sedation was monitored with the Ramsay Sedation Scale (RSS) score. If ICP was high, the sedation score was increase to 5. Sedation window was given every morning from 6 to 8 A.M.
3. Central venous pressure (CVP) was maintained between 10-12 cmH₂O by adequate isotonic fluid infusion.
4. PaCO₂ and PaO₂ were maintained at ≈35 mmHg and 80 to 100mmHg respectively.
During acute hyperventilation lowest acceptable EtCO₂ and/or PaCO₂ was ≈ 30 mm Hg. Maximum duration of hyperventilation was not more than 3 minutes at the given point of time.
5. Maintenance intravenous fluid composition depending upon serum electrolytes (0.45% or 0.9% saline in D5W) and total volume was calculated according to ^a Holliday and Segar formula and given at 80% of total maintenance initially. Further total volume of maintenance fluid depends on fluid balance, serum electrolytes, CVP and clinical status of the patient.

6. Blood sugar was monitored at least 6 hourly and suitable measures were taken if it was < 80 mg/dl.
7. Lidocaine 1 mg/kg/dose (i.v & endotracheal) were used 5 minutes before endotracheal tube suctioning and painful procedure.
8. Fever ($>38.3^{\circ}\text{C}$) was controlled with acetaminophen 15 mg/kg/dose oral or i.v Q 4hr.
9. Seizure was treated with i.v lorazepam or diazepam bolus at 0.1 mg/kg followed by i.v phenytoin loading dose 20 mg/kg and maintenance 5 mg/kg/day.
10. Vitals parameters (heart rate, respiratory rate, blood pressure, ECG, and a-EEG, oxygen saturation by oximetry and end-tidal CO_2) were monitored continuously. Arterial blood gases were measured at least 12 hourly.

^a Holliday and Segar formula

0–10 kg: 4ml /kg / hr; 10–20 kg: 40ml + 2 ml / kg (wt–10); > 20 kg: 60ml + 1 ml/kg (wt –20)