Catastrophic Brain Injury Pathway - Stabilisation for Brainstem Death Testing

- Do you suspect brain stem death? Yes/No
- Are pupils fixed and dilated and GCS 3/15? Yes/No
- Is the patient apnoeic (not triggering ventilator)? Yes/No
- Are cough and gag reflexes absent? Yes/No

If 'Yes' to all of above questions please commence the following checklist.

Date&Time CBI Started ……..……Date&Time SN-OD called……..

Ensure all sedation is switched off.

Ventilation

Targets: pO_2 8-14 kPa
pCO_2 5-6.5kPa

Additional Actions:

- Sit up the patient at an angle of approx 30° - 45° and turn 3hrly
- Recruitment manoeuvre by medical team to optimise lung ventilation
- (eg.CPAP mode 25-40 cmH_2O for 30-50 seconds)
- Set PEEP 8-10 cm H_2O
- Lung Protective ventilation (TV 6-8mls/kg, Peak pressure ≤30cm H_2O)
- Repeat recruitment manoeuvre if p02 ≤ 10.0kPa
- Review ventilation 2 hourly – repeat recruitment manoeuvre if deteriorating

Circulation

- Insertion of Central Line
- Calibrated non-invasive cardiac output monitor
- Start cardiovascular algorithm (see below)

Renal and Electrolytes

Targets:

- Urine output 0.5-2.5ml/kg/hr
- Na 135-150mmol/L
- K 4.0-5.5mmol/L
- Mg > 0.8mmol/L
- Ca ionised 1.0-1.3mmol/L

Additional Actions:

- If polyuria (>300mls/hr for 2 hours) ensure adequate volume replacement
- If DI, bolus DDAVP 0.5mcg - consider vasopressin infusion if not started
- If oliguria, despite optimisation of CVS, consider Dobutamine (additional inotrope)

Hormones and Haematology

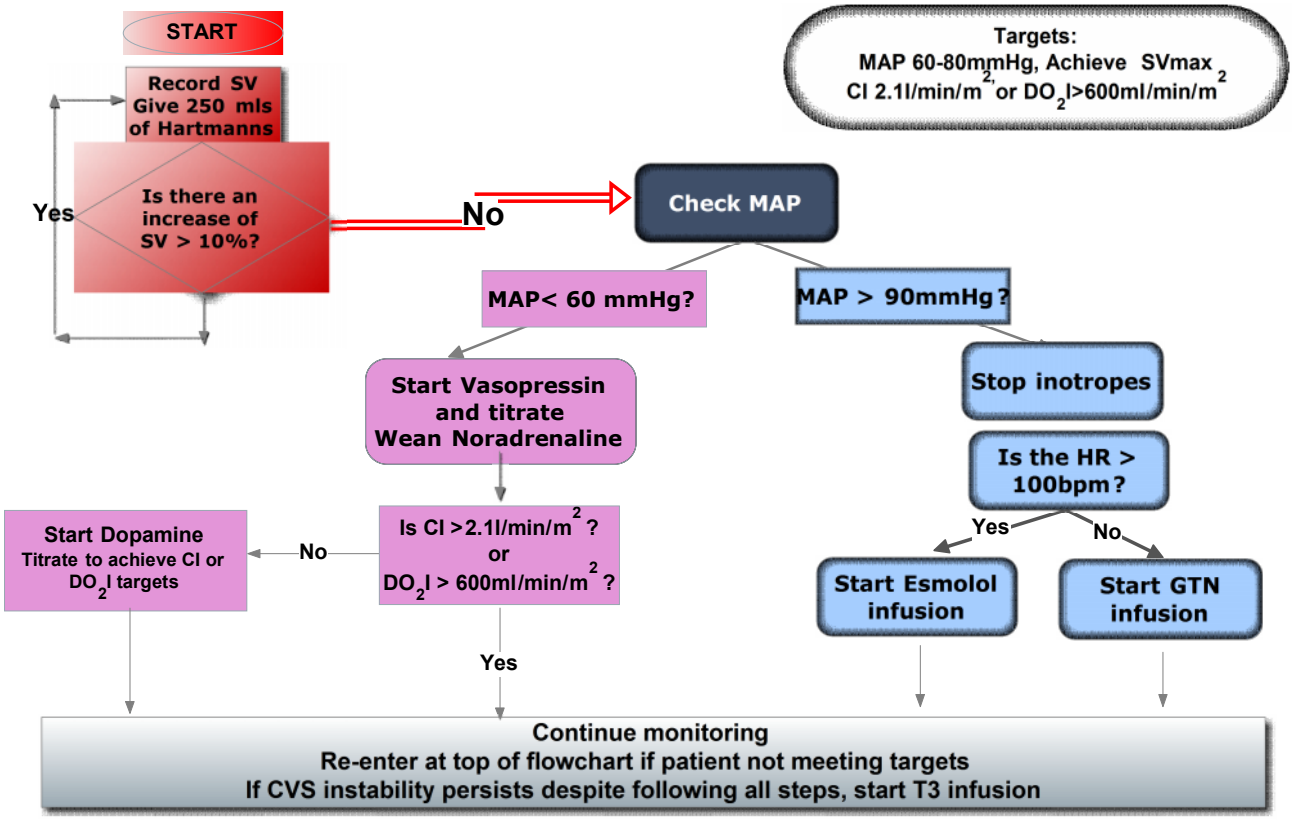
Targets:

- BM 4.0 – 9.0 mmol/L
- Hb ≥ 8g/dL, Plt > 50 x 10^9/L
- INR < 2.0, APTTR < 1.5, Fib > 2.0g/L
- Temperature 35.5 – 37.5

Additional Actions:

- Start Insulin at one unit per hour and titrate to achieve BM control of 4-9mmol/L. If hypoglycaemia, continue Insulin and supplement with 20% dextrose – do not stop Insulin altogether
- Continue enteral feed at low volume (10-30mls/h)

Please note:
High MAP suggests that these patients are likely to be “coning”.
Dopamine and vasopressin are usually the preferred drugs (used in organ optimisation).



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