**UCSD ICH EMERGENCY MANAGEMENT GUIDELINE**

For suspected ICH (focal deficit + headache or deteriorating mental status):

0 min

• **Call stroke code**, get stroke code CT. Take nicard/hydral/labetalol (in stroke code box) to CT

**• If rapidly deteriorating or comatose,** page brain code + neurosurgery + anesthesia

0-10 min

1. **Airway:** intubate IF GCS deteriorating or <8**. IF ICH SEEN ON CT, TELL INTUBATING**

 **PROVIDER SBP TARGET=140 (acceptable range 130-150) DURING INTUBATION OR PT**

 **MAY REBLEED. IF UNKNOWN IF PT IS ICH OR ISCHEMIC STROKE, TELL INTUBATING**

 **PROVIDER TO KEEP SBP EXACTLY WHERE IT WAS ON PRESENTATION**

 Startpropofol drip @ 20mcg/kg/h for sedation

2. **Normoventliate** (RR 14-18), place ETC02 monitor, target EtC02 30-35/PaCO2 35-40

3. **Position**: HOB@30°, neck straight; if herniating start UCSD Brain Code protocol, do not lay flat

4. **Obtain stroke code CT. DO NOT CANCEL CTA** (is needed for emergent crani)

5. **BP: Once ICH seen on CT, IMMEDIATELY LOWER BP IN SCANNER TO SBP~140**

 **(130-150 OK) W/ DRIP. GOAL BP MUST BE REACHED IN 1HR.**Use nicardipine drip 5-20

 mg/h or clevidipine drip.Use labetalol 10mg IVP q15 min PRN / hydralazine 10mg IVP q15min

 PRN if drip unavailable

6. **Emergent coagulopathy reversal**: **target INR </= 1.4, platelets >100K within 1 HR, 1st**

 **dose should be given within 30 MIN.** See UCSD Reversal Protocol for ICH.

 If ⇑INR: 1.5-1.9, give FFP 2 UNITS and Vitamin K 10mg PO (preferred)/IV, √INR p infusion

 2 - <4, give Kcentra 25 UNITS and Vitamin K 10mg PO (preferred)/IV √INR p 15min

 4 - <6, give Kcentra 35 UNITS and Vitamin K 10mg PO (preferred)/IV √INR p 15min

 >6 give Kcentra 50 UNITS and Vitamin K 10mg PO (preferred)/IV √INR p 15min

 If platelets <100K: platelet transfusion 1-2 units

 For ICH 2/2 tPA, consider platelet transfusion 6u and cryo 4-6u

 For ICH on antiplatelet, consider ddAVP (0.3mcg/kg, or dosed by pharmacy)

 For ICH 2/2 heparin, consider protamine dosed by pharmacy (know last heparin dose/amount)

 For ICH 2/2 dabigatran, consider praxbind dosed by pharmacy

7. **Emergent** **ICP management**: IF HERNIATING CALL BRAIN CODE (see brain code

 guideline). If somnolent but not herniating, give 3% 250cc IV bolus (central line wide

 open/good PIV over 15 min) or mannitol20% 1g/kg IVP (periph IV by RN)

8. **Neurosurgical management:**

• Request ICP monitor/EVD for GCS deteriorating or <8, IVH with hydrocephalus

• Consider immediate craniotomy for cerebellar hemorrhage w/ 4th ventricle

 effacement or >15cc, lobar ICH <1cm from surface with mass effect, or any ICH

 causing herniation or refractory ICP

 9. **CPP rx / contrast ppx**: start NS 1L bolus and 100cc/h thereafter. Do not start pressors

 without consulting attending.

• Admit to NCC using orderset “IP CSC NCC Neuro-ICU orders for non-traumatic ICH

• If post coagulopathy reversal, continue labs q6h per UCSD Reversal Guidelines for ICH

10 + min

• Obtain stability CTH noncon 6h after initial CT. Consider CTH at 12 and 24h if coagulopathic

• If intubated, turn down FiO2 immediately to 40% to target normooxia (Pa02<150)

• If symptomatic hydro from IVH >20cc, consider intraventricular tPA after stability CT

 • If ICH>30cc, page vascular nsurg attending for possible minimally invasive removal after 24h