

RETU Head Injury/Traumatic Brain Injury (TBI) Pathway

ED Evaluation

Required testing prior to RETU admission

- Non-contrast head CT
- C-Spine CT if unable to clear spine clinically
- CBC, Basic Metabolic Panel, PT/PTT
- Pregnancy test in women of childbearing age
- ALL patients with CTH showing intracranial hemorrhage **MUST** have a neurosurgical consult prior to RETU

Not appropriate for RETU

- Altered mental status that is severe or persistent
- Subdural Hematoma > 5mm thickness
- Complex Traumatic Hemorrhage (> 1 contusion + SDH)
- Epidural Hematoma
- Suspicion for Non-Traumatic ICH or SAH
- Multiple (≥ 3) discrete traumatic contusions
- Currently taking systemic anticoagulation (NOAC, Warfarin, Heparin, Iovenox) or P2Y12 antagonist (clopidogrel, prasugrel, ticagrelor) for patients with ICH
- GCS < 13
- New focal neurologic weakness
- Recurrent seizures
- Basilar, depressed, or open skull fracture
- CSF leak
- INR > 1.7 or Platelets < 100
- Hemodynamic instability, new oxygen requirement, or O2 sat < 92%
- Any patient requiring drip antihypertensives

RETU Intake Evaluation (do not repeat testing if already done in ED)

Exam Focus

- **Neuro**

Initial Testing

- Labs: **CBC, BMP, PT/PTT** (others as clinically indicated)
- Imaging: **NCHCT**

Monitoring

- Continuous telemetry monitoring
- Q2H neurochecks
- Q4H vital signs

Consults

- Neurosurgery (if evidence of ICH)

RETU Treatment / Evaluation

Q2H neuro checks*

* Repeat GCS, counts backwards 20 to 1, check arm/leg drift bilaterally

Initial head CT showed intracranial hemorrhage?**

**One week of prophylactic anti-epileptic medication is recommended for traumatic subdural or contusion, discuss with neurosurgery

Repeat Non-contrast head CT 8 -12 hours after initial CT

Neurologic worsening
or
repeat CT demonstrates expansion of initial hemorrhage

Y

Consult neurosurgery + admit
(Consider transfer to MSSL Trauma Service, arranged by neurosurgery)

N

Discharge
+
Follow up in TBI clinic within 1 week***

***TBI (Rehabilitation Neuropsychology) clinic: Patient or provider can call 212-241-2221 during day time hours for appointments

Disposition Guidelines

Discharge from RETU

- Neuro exam remains unchanged
- If repeat CT done, no expansion of hemorrhage
- Mental status remains baseline
- No deterioration in clinical status
- Cleared by consulting service

Admission to Hospital (MSSL or MSH)

- Hemodynamic instability
- Worsening neuro exam
- Worsening hemorrhage on CT
- Deterioration in clinical status