

Pediatric Patient with Traumatic Brain Injury (TBI)



Patients with >1 intracranial injury should be automatically classified as kBIG3

Are ANY of the following present?

Radiographic Findings

- IVH
- EDH ≥8mm
- SDH ≥8mm
- IPH ≥ 8mm or multiple
- SAH >3 sulci AND bi-hemispheric
- Displaced skull fracture > 1 cranium width

Clinical Findings

- Abnormal neuro exam (GCS ≤12)
- Anticoagulation or antiplatelet

YES

kBIG 3 High Risk

Transfer / Admit to pediatric trauma center with neurosurgery consultation available

Are ANY of the following present?

Radiographic Findings

- EDH <8mm
- SDH 4.1 – 7.9mm
- IPH 4.1 – 7.9mm
- SAH>3 sulci, single hemisphere
- Non-displaced skull fracture or mildly displaced < 1 cranium width

Clinical Findings

- GCS 13-15
- Intoxication

YES

kBIG 2 Medium Risk

Transfer / Admit to pediatric trauma center with neurosurgery consultation available

- NO neurosurgical consultation
- NO repeat head CT
- GCS 15 at discharge

If worsening: neuro exam

Confirm Intracranial Hemorrhage Size

Radiographic Findings

- SDH ≤4mm
- IPH ≤4mm
- SAH ≤3 sulci (total)
- Non-displaced skull fracture or mildly displaced < 1 cranium width

Clinical Findings

- GCS 15

YES

kBIG 1 Low Risk

- Discharge from Emergency Department
- NO repeat head CT
- NO neurosurgical consultation

If worsening: neuro exam

Isolated Skull Fracture

Radiographic Findings

- No ICH
- Non-displaced skull fracture or mildly displaced < 1 cranium width

Clinical Findings

- GCS 15

YES

kBIG 0 Low Risk

- Discharge from Emergency Department
- NO repeat head CT
- NO neurosurgical consultation

If worsening: neuro exam

Low risk skull fracture and concern for child physical abuse: please call safe and healthy families. Otherwise treat as kBIG 0.

Abbreviations

IVH: Intraventricular Hemorrhage IPH: Intraparenchymal Hemorrhage
EDH: Epidural Hematoma SAH: Subarachnoid Hemorrhage
SDH: Subdural Hematoma ICH: Intracranial Hemorrhage

