

## Guidance document for processing PM-JAY packages

### Intracranial Hematoma

Procedures covered: 3

Specialty: Neurosurgery

Package name	Procedure name	HBP 1.0 code	HBP 2.0 code	Package price (INR)
Surgery for Haematoma - Intracranial	Head injuries	S800012	SN009A	55,000
Surgery for Haematoma - Intracranial	Hypertensive	S800013	SN009B	50,000
Surgery for Haematoma - Intracranial	Child - subdural	S800014	SN009C	50,000

**ALOS:** 5 days

**Minimum qualification of the treating doctor:**

**Essential:** MCh/DNB/Equivalent in (Neurosurgery)

**Special empanelment criteria/linkage to empanelment module:** Care at Tertiary Hospital

#### Disclaimer:

For monitoring and administering the claim management process of Intracranial Hematoma – Head injuries/Hypertensive/Child – subdural, NHA shall be following these guidelines. This document has been prepared for guidance of PROCESSING TEAM and TRANSACTION MANAGEMENT SYSTEM of AB PM-JAY for the claims of procedures mentioned above. The hospitals can also refer to this document so that they have the insight on how the claims will be processed. However, this document doesn't provide any guidance on clinical and therapeutic management of patient. In that respect the hospitals and physicians may refer to any other relevant material as per the extant professional norms.

### **PART I: GUIDELINES FOR CLINICIANS AND HEALTHCARE PROVIDERS**

#### **1.1 Objective:**

The purpose of this section is to act as a guidance & a clinical decision support tool for the clinicians in deciding the line of treatment, plan clinical management of patient and decide referral of cases to the appropriate level of care (as required) for treatment of patients under PMJAY and selection of corresponding Health Benefit Package.

It will also serve as a tool for hospitals to determine and submit the mandatory documents required for claiming reimbursement of health benefit package under PMJAY.

#### **1.2 Clinical key pointers:**

#### **INTRACRANIAL TRAUMATIC HEMATOMA**

Intracranial bleeding (IB) is a common and serious consequence of traumatic brain injury (TBI). IB can be classified according to the location into epidural hematoma (EDH), subdural hematoma (SDH), intracerebral hematoma.

#### **Causes**

- A head injury may result from motor vehicle or bicycle accidents, falls, assaults, and sports injuries.
- In older adult, even mild head trauma can cause a hematoma. This is especially true if you're taking a blood-thinning medication or an anti-platelet drug, such as aspirin.

### **Common clinical presentation**

- Symptoms may include:
  - persistent headache
  - drowsiness
  - confusion
  - memory changes
  - paralysis on the opposite side of the body
  - speech or language impairment
  - other symptoms depending on which area of the brain is damaged

### **Management**

- Craniotomy
- Hematoma Evacuation

### **INTRACRANIAL HYPERTENSIVE HEMATOMA**

Non-traumatic spontaneous (hypertensive) intracerebral hematoma (SICH) is a devastating disease with higher rates of mortality and morbidity than those of ischemic stroke, with an annual incidence of 10–30 per 100,000.

SICH occurs suddenly due to the rupture of vessels affected by hypertension-related degenerative changes in the cerebral lobes, basal ganglia, thalamus, brainstem, and cerebellum.

To confirm the diagnosis of SICH, we must exclude other obvious vascular lesions such as cerebral aneurysm, vascular malformation, arterio-venous fistula, moyamoya disease.

Hypertensive vasculopathy is the most common etiology of spontaneous intracerebral hemorrhage (ICH).

Some hypertensive hemorrhages occur with exertion or intense emotional activity.

### **Clinical Manifestations**

- The neurologic symptoms and signs usually increase gradually over minutes or a few hours
- However, some patients with ICH are obtunded or comatose when first discovered or upon arrival to the emergency department
- Headache, vomiting, and a decreased level of consciousness develop if the hemorrhage becomes sufficiently large.
- Seizures
- Cardiac abnormalities
- Neurologic signs vary depending upon the location of the hemorrhage

## **Management**

Basic life support, as well as control of bleeding, seizures, blood pressure (BP), and intracranial pressure, are critical. Medications used in the treatment of acute stroke include the following:

- Anticonvulsants - To prevent seizure recurrence
- Antihypertensive agents - To reduce BP and other risk factors of heart disease
- Osmotic diuretics - To decrease intracranial pressure in the subarachnoid space

## **Surgery**

- Craniotomy
- Hematoma Evacuation

## **INTRACRANIAL PEDIATRIC SUBDURAL HEMATOMA**

Subdural hematoma (SDH) forms when there is hemorrhage into the potential space between the dura and the arachnoid membranes. SDH in children differs significantly from SDH in adults because abusive head injury is a common etiology, especially in pediatric patients <2 years of age.

Any pediatric trauma patient with a Glasgow Coma Score (GCS)  $\leq 12$  warrants emergent consultation and evaluation by a neurosurgeon. Children with a GCS  $\leq 8$  should undergo intracranial ICP monitoring.

1. Mark R Proctor. Intracranial subdural hematoma in children: Clinical features, evaluation, and management. UpToDate. last updated: June, 2019.
2. Mark R Proctor. Intracranial subdural hematoma in children: Clinical features, evaluation, and management. UpToDate. last updated: June, 2019.

## Subdural hematoma in children: Rapid overview

Clinical features
Evaluate for SDH in victims of major head trauma with impaired consciousness or abnormal neurologic examination at any time after injury
Suspect inflicted head injury (Shaken baby syndrome) in infants $\leq 2$ years of age with SDH and no plausible mechanism for head injury
Physical findings of SDH: irritability, vomiting, bulging anterior fontanelle, increased head circumference, pallor, lethargy, coma, or seizures
Findings of child abuse: retinal hemorrhages, skeletal or skull fractures with SDH (refer to UpToDate topics on child abuse)
Findings of cerebral herniation: lateralizing signs such as a fixed, dilated pupil and contralateral hemiparesis
Diagnostic evaluation
Determine GCS, identify pupillary abnormalities and lateralizing motor findings
Initial laboratory evaluation: complete blood count with platelets, PT, PTT, INR, bleeding time (if available), and type and cross
Obtain emergency brain imaging (eg, CT or fast MRI)
Lumbar puncture is <b>contraindicated</b>
Obtain neurosurgical consultation for all patients with GCS $\leq 12$ or in patients with identified SDH
Make report of suspected child abuse, as indicated by physical findings, to the appropriate government agency according to local requirements and consult a child abuse team, if available
Ensure fundoscopic examination by an ophthalmologist and perform skeletal survey in all children with suspected child abuse once clinically stable
Treatment
Manage patient according to principles of advanced trauma life support*:
Immobilize cervical spine
Treat hypoxemia
Assess airway, breathing, circulation, and disability and initiate supportive care
Endotracheally intubate children with GCS $\leq 8$ or rapidly worsening mental status
If impending herniation, provide hyperosmolar therapy (3 percent saline or mannitol, refer to UpToDate topics on the management of increased ICP in children)
Ensure definitive management by a neurosurgeon with pediatric expertise

SDH: subdural hematoma; PT: prothrombin time; PTT: partial thromboplastin time; INR: international normalized ratio; CT: computed tomography; MRI: magnetic resonance imaging; GCS: Glasgow Coma Score; ICP: Intracranial pressure.

\* Refer to UpToDate topics on trauma management in children.

Mark R Proctor. Intracranial subdural hematoma in children: Clinical features, evaluation, and management. UpToDate. last updated: June, 2019.

## Management (Surgical)

- Chronic Subdural
  - Burr hole surgery
  - Subdural peritoneal shunt placement
- Acute Subdural
  - Craniotomy
  - Evacuation of hematoma

## 1.3 Mandatory documents- For healthcare providers

Following documents should be uploaded by the concerned hospital staff at the time of pre-authorization and claims submission:

<b>Mandatory document</b>	Intracranial Hematoma - Head injuries	Intracranial Hematoma – Hypertensive	Intracranial Hematoma – Child Subdural
<b>i. At the time of Pre-authorization</b>			
Clinical notes including evaluation findings, and planned line of management	Yes	Yes	Yes
Glasgow coma score (GCS)	Yes	Yes	--
Pediatric GCS (<2 years/>2 years)	--	--	Yes
Blood pressure monitoring	Yes	Yes	Yes
Fundus examination	Yes	Yes	Yes
Coagulation profile	Yes	Yes	Yes
CT/MRI Brain	Yes	Yes	Yes
<b>Optional</b> Intracranial Pressure Monitoring (ICP)	Yes	Yes	Yes
<b>ii. At the time of claim submission</b>			
Detailed Indoor case papers (ICPs)	Yes	Yes	Yes
Detailed Procedure / operative notes	Yes	Yes	Yes
Intra-operative photographs (optional)	Yes	Yes	Yes
Glasgow coma score (GCS)/ Pediatric GCS documentation	Yes	Yes	Yes
CT/MRI Brain (optional)	Yes	Yes	Yes
In case of accident FIR report (optional)	Yes	Yes	Yes
Detailed discharge summary	Yes	Yes	Yes

## **PART II: GUIDELINES FOR PROCESSING TEAM**

### **PART III: GUIDELINES FOR IT**

**3.1 Objective:** To enable setting up of cross check mechanisms / rule engines within the IT platform (TMS) to ensure compliance with STGs and to prevent fraud / abuse of the Health Benefit Package.

**3.2 Below mentioned are the scenarios where a provision would be built in TMS for pop-ups:**

- I. Was clinical presentation, GCS/Pediatric GCS score and imaging indicative of surgery?  
Yes
- II. In case of accidental injury was FIR done? Yes/Not applicable

Till the time the functionality is being developed, the processing doctors shall check the above manually.

### **References**

3. Mark R Proctor. Intracranial subdural hematoma in children: Clinical features, evaluation, and management. UpToDate. last updated: June, 2019.
4. Morioka M, Orito K. Management of Spontaneous Intracerebral Hematoma. *Neurol Med Chir (Tokyo)*. 2017;57(11):563-574. doi:10.2176/nmc.ra.2016-0327
5. <https://www.msdmanuals.com/en-kr/home/injuries-and-poisoning/head-injuries/intracranial-hematomas>