



Valencia University General Hospital  
Management of head injured patients in  
coma or with possible multiple injuries





## A) Criteria for Skull X- ray after recent Head Injury

Clinical judgment is necessary but the following criteria are helpful

- 1- Loss of consciousness or amnesia at any time
- 2- Neurological symptoms or signs
- 3- Cerebrospinal fluid or blood from the nose or ear
- 4- Suspected penetrating injury
- 5- Scalp bruising or deep laceration
- 6- Difficulty in assessing the patient

## B) Criteria for Ct- Scan after recent Head injury

- 1- Loss of consciousness or amnesia (F.M 10')**
- 2- Epilepsy**
- 3- Neurological symptoms or signs**
- 4- Coma after resuscitation**
- 5- Amnesia for more than 6-8 h.**
- 6- Depressed skull fracture**



### Criteria for admission of adults to Hospital

- 1- Confusion or any other depressed level of consciousness at the time of Obs**
- 2- Skull fracture**
- 3- Neurological symptoms or signs**
- 4- Difficulty in assessing the patients**
- 5- Other medical conditions- Hemophilia**
- 6- The patients' social conditions**

### Criteria for consultation with the Neurosurgeon

- 1- Skull fracture (With impairment of consciousness, neurological symptoms & signs)**
- 2- Coma**
- 3- Deterioration in the level of consciousness**
- 4- Confusion or other neurological disturbances**
- 5- Compound depressed fracture**
- 6- Fracture of the base of the skull**



## Criteria for ICP monitoring after H.I

**ICP monitoring is established once the neurological examination & complementary studies have been completed.**

- 1- Acute cerebral swelling**
- 2- Extracerebral hematoma after surgery**
- 3- Subdural hematoma after surgery**
- 4- Intracerebral hematomas after surgery**
- 5- General brain swelling whether or not associated with extra- and intracerebral hematoma**



## Risk of cerebral hematoma due to H.I. in adults (12)

Skull fracture    Level of consciousness    Risk

**None**                      **Normal**                      **1/6000**

**None**                      **Impairment**                      **1/100**

**Yes**                      **Normal**                      **1/30**

**Yes**                      **Impairment**                      **1/4**

## H.I patients in coma or with multiple injuries

- 1- Assess for respiratory, shock & internal injuries
- 2- Perform: chest x-ray; blood gases; cervical spine x-ray
- 3- Appropriate treatment may include: intubation & ventilation; IV infusion; Manitol; cervical collar; immobilization of **the patient**#.
- 4- The patient should be accompanied by medical staff during transfer.



## Chart for recording the assessment of consciousness levels (G.C.S.) (13)

Eye response

Opening

Spontaneous

To speech

To pain

None

Best verbal response

Orientated

Confused

Inappropriate

Incomprehensible

None

Best motor response

Obeying

Localizing

Flexing

Extending

None