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# RTA with, Diffuse axonal brain injury– CASE STUDY

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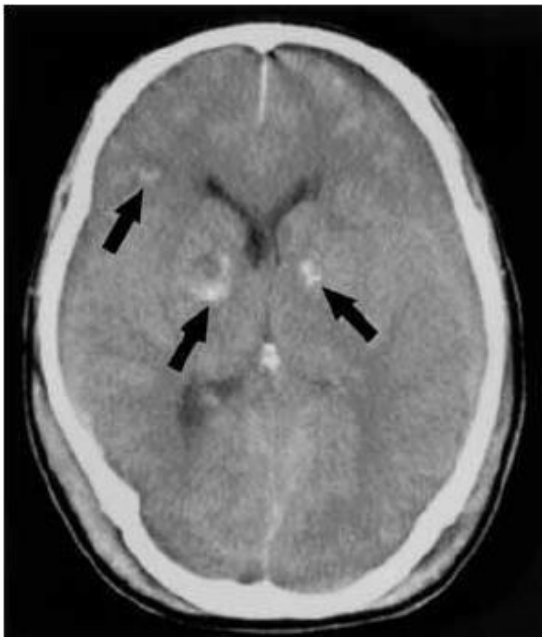
## INTRODUCTION :

Diffuse axonal injury (DAI) is a form of traumatic brain injury (TBI) that occurs due to a blunt force trauma to the brain. Traumatic brain injuries are a major cause of death and long-term disability, especially among children and young adults, in the United States. According to the Centers for Disease Control and Prevention (CDC), over 1.5 million cases of traumatic brain injury are reported annually in the U.S. TBI is categorized in to three levels mild, moderate, and severe—based on the Glasgow Coma Scale(GCS). A GCS score between 13 and 15 indicates a mild TBI, which accounts for the majority of cases. A score ranging from 9 to 12 is considered moderate, while a score of 8 or lower signifies a severe traumatic brain injury.

## CASE PRESENTATION:

- A 50 years old patient came to Emergency department with the complaints of patient got brought CR for Palliative care.
- Diffuse axonal injury is a clinical diagnosis. Typically, diffuse axonal injury is considered in patients with a GCS of less than 8 for over six hours. The clinical presentation of patients with diffuse axonal injury relates to the severity of a diffuse axonal injury.



## SIGNS & SYMPTOMS:

A 50 years old male patient who brought to Emergency for Palliative Care. RTA skid and fall from bike on 18/4/2025 initially treated in outside hospital (Kaveri Hospital)

- **Craniotomy Surgery done**
- **Tracheostomy done**
- **Patient under**

**Catheter VITAL SIGNS:**

**Temperature** : 98F’

**Blood Pressure** : 140/90mmhg

**Pulse** : 72 bpm

**Respiration** : 18 bpm

## INVESTIGATION

| NAME | PATIENTVALUE | NORMAL VALUE |
|---|---|---|
| Bilirubin | 0.12mg/dl | 0.2-0.4 |
| Albumin | 3.15mg/dl | 3.5-5.0 |
| Globulin | 3.4mg/dl | 2.5-3.5 |
| Creatinine | 0.1mg/dl | 0.7-1.3 |
| Hemoglobin | 11.4gm% | 13.0-18.0 |
| PCV | 4.4% | 40-50 |

- **HBS Ag–positive**
- HIV– Negative
- CT.MRI, X-RAY

## DIAGNOSIS

- RTA with, Diffuse axonal brain Injury

## MEDICAL MANAGEMENT

- Inj.Piptaz4.5gm
- Inj.Mixtard8hrs
- Tab.Pheytoin100mg BD
- Tab. Citiclot Plus BD
- Tab.Syndopa110mg(½--½½)
- Tab.Amantral100mgBD
- Tab.Levipiil500mgBD
- Tab.Pan40mgOD
- Tab.Labetalol100mg, OD
- Inj.Para1gm(22hrs)
- Physiotherapy

## OUTCOME:

Prognosis is considered to be poor in patients with severe Diffuse axonal injury.

## NURSING CARE PLAN

**Impaired Physical Mobility related to decreased consciousness and brain injury**

- ✓ Assess motor function
- ✓ Monitor neurological status
- ✓ Reposition regularly
- ✓ Assist with passive range-of-motion exercises
- ✓ Collaborate with physical therapy

**Risk for Ineffective Cerebral Tissue Perfusion related to diffuse axonal injury**

- ✓ Monitor intracranial pressure
- ✓ Position the head of the bed (HOB) appropriately
- ✓ Administer medications as prescribed
- ✓ Maintain oxygenation
- ✓ Monitor vital signs

## CONCLUSION:

Diffuse Axonal Injury (DAI) requires immediate, comprehensive care to reduce neurological damage and promote recovery. Timely interventions, including pain management and mobility support, are essential to enhance patient outcomes. A collaborative, multidisciplinary approach, involving health care teams and family, is crucial in optimizing recovery. While the prognosis can be unpredictable, personalized care plans greatly improve the chances of better functionality and quality of life.

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