# DEVELOPMENT OF POSTTRAUMATIC BRAIN ABCESS FOLLOWING A FALL

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## INTRODUCTION:

Brain abscess is a rare but serious complications that can arise following a trauma. Bacterial contamination of the intracranial space after penetrating injury or skull fracture is common but the incidence of posttraumatic brain abscess is low and such complications associated with blunt trauma is exceedingly rare. Delayed presentation remained a challenge as it comes with serious complications and outcomes.

## CASE REPORT:

A 1 year 9 months old boy previously healthy presented with multiple episodes of seizures associated with fever several weeks after history of fall from bed. He was put into a coma state for cerebral protection.Contrast CT imaging revealed ruptured left frontal cerebral abscess with ventriculitis, acute hydrocephalus and cerebral edema. Clinical presentation of an intracranial abscess following trauma may vary such in this case the patient had persistent fever despite on antibiotic which further complicated with status epilepticus. Neurosurgical team planned for drainage but subdued by parents decision which opted for conservative management.

## DISCUSSION:

Pediatric brain abscess poses a diagnostic challenge in ED due to its rarity, variable duration of symptoms and nonspecific presentation. In this case, patient's clinical presentation with previous hospital visit, especially in the context of a traumatic brain injury with a low PECARN criterion and no focal neurologic deficits at the time, were nonspecific. Per standard of care, this likely explains the previous discharges from the hospital.

This initial delay in diagnosis can portend poorly to prognosis. Diagnostic delay is more likely to occur in the pediatric population . This relates to the inability of pediatric patients to verbalize symptoms, especially in the context of young age, as was seen in our patient. Additionally, the classic clinical triad suggestive of brain abscess, fever, headache, and focal neurologic findings, is more specific than sensitive, as only 20% of affected patients exhibit all three at the time of diagnosis.

This case highlights the necessity for thorough history taking and high index of suspicion as manifestation of brain abscess tend to be nonspecific ; these included patient's history of head trauma in the context of initial normal vital signs served to shift the differential diagnosis away from infectious etiology which prompt for discharge. Early imaging such as computed tomography should be considered for patient with symptoms of intracranial infection or who are at high risk, even after a minor head injury.

The management of intracranial abscess in the setting of TBI requires a multimodal approach including surgical intervention, antimicrobial therapy and supportive care.

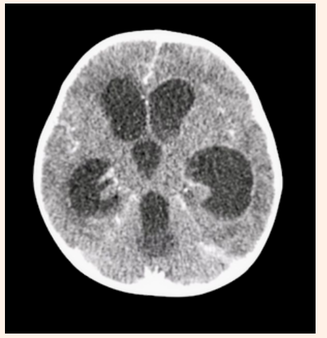

**Figure 1**

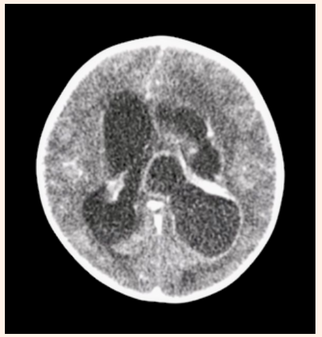

**Figure 2**

*Figure 1 & 2 showing ruptured left frontal cerebral abscess with hydrocephalus and cerebral edema.*

## CONCLUSION:

In conclusion, early detection and diagnosis, appropriate antibiotic therapy based on knowledge of the causative microbes and surgery are the major prognostic factors for brain abscess. Successful treatment necessitates an integrated approach with a systemic perspective to diagnosis and treatment, involving collaborative effort from various healthcare professionals.

## REFERENCE:

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