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SPONTANEOUS RAPID RESOLUTION OF TRAUMATIC ACUTE SUBDURAL HEMATOMA – A CASE REPORT

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INTRODUCTION

Acute subdural hematoma (ASDH) is a common sequel of traumatic brain injury. Immediate surgical evacuation of clot is required for most cases except in patients with poor grade of Glasgow coma scale, irreversible brain stem injury or patients who have poor general condition.

Acute SDHs which are larger than 10 mm or those which are 5–10 mm thick in a patient with low GCS generally require immediate surgical intervention.

However, there are instances where spontaneous resolution of SDH has been noted within first 72 h.

AIMS / OBJECTIVES

To report a case of spontaneous rapid resolution of traumatic acute sub dural hematoma in 50 hrs

Case Report: A 53-year-old male presented with a history of fall from a moving two wheeler due to RTA hit by another 2 wheeler.
GCS was E3V4M6 and pupils were symmetrical and reacting to light.

MATERIALS / METHODS

FIGURE 1. CT SCAN BRAIN done 2 hours after injury showing 9 mm thick acute SDH in Left FTP region with 10 mm midline shift to right side.

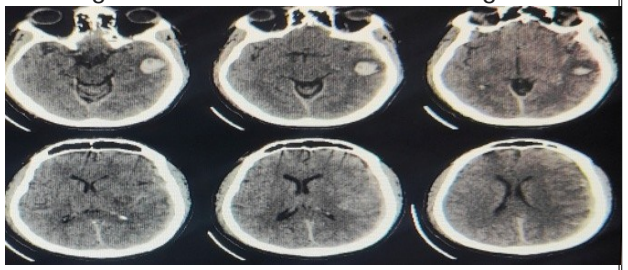

FIGURE 2. 7HRS SCAN after injury showing decrease in thickness of ASDH and midline shift and new finding of left temporal hematoma

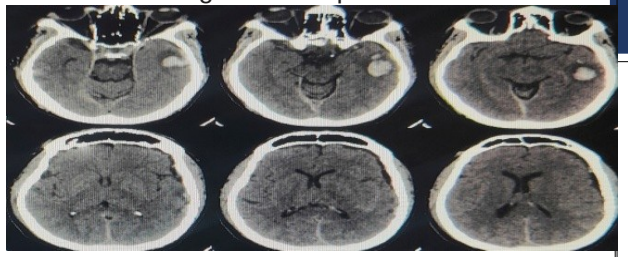

FIGURE 3. 50 HRS SCAN after injury showing complete resolution of SDH

Management: Conservative treatment. Improved to GCS 15 within 2 days and discharged on day 8.

RESULTS & DISCUSSION

An ASDH is usually caused by head trauma, and if not treated quickly, it could result in considerable mortality and morbidity. Emergency surgical intervention is known to improve the prognosis, and thus, rapid surgery is a preferred treatment modality.
However, many researchers have reported cases of rapid spontaneous resolution of ASDH within hours or days, so made surgical procedures unnecessary
The phenomenon of rapidly resolving ASDH is still debated, but there are 2 major hypotheses for mechanism. 1) Dilution and wash out of subdural hematoma by cerebrospinal fluid (CSF) flow driven into subdural space from subarachnoid space through torn arachnoids membrane. So called “low-density band” between ASDH and skull seen in CT scan suggests such CSF collection. 2) Redistribution of hematoma to another space; contra lateral intracranial space, intra diplopic space and/or sub galeal space through the skull fracture, spinal subdural space, by raised pressure caused by brain swelling, other intracranial hemorrhages, and/or subdural hematoma itself.

Ref: 1. Bae HJ, Lee SB, Yoo DS, Huh PW, Lee TG, Cho KS. Rapid spontaneous resolution of acute subdural hematoma in a patient with liver cirrhosis. *Korean J Neurotrauma.* 2014;10:134–136. 2. Berker M, Gulsen S, Ozcan OE. Ultra rapid spontaneous resolution of acute posttraumatic subdural hematomas in patient with temporal linear fracture. *Acta Neurochir (Wien)* 2003;145:715–717.

CONCLUSION

This case is peculiar in 2 points. First, neurological status and clinical course were very benign despite significant amount of hematoma and midline shift. Second, rapid spontaneous resolution within 50 hours was revealed by CT follow-up taken so it was an unexpected surprising incidental finding. Because the patient had no pre morbid factors for rapid spontaneous resolution (e.g., ingestion of anti platelet or anticoagulant, and other coagulopathy) and low-density band on CT were presumed as favorable predictable factors for rapid resolution through both mechanisms; CSF dilution/wash out and redistribution.