

## Delirium Tremens with a Minor Head Trauma

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### Abstract

A 32 years old man presented to the emergency department with abnormal behaviour, agitation, tremor and minor facial bruise with red eye. A diagnosis of Delirium Tremens was made based on thorough history from companions and the fact that he was abstinent since days. However, 2 days after admission a CT-scan of brain done revealing subdural haemorrhage, which required a change in treatment.

**Keywords:** *Delirium Tremens; Head Trauma*

### Background

Delirium tremens (DT) - an acute psychosis that follows abstinence from alcohol - is the most dangerous form of acute alcohol withdrawal syndrome that occurs in a chronic alcohol user. Alcohol withdrawal is characterized by, anxiety, hands tremor, insomnia, nausea, vomiting, psychomotor agitation, transient visual, tactile or auditory hallucinations, along with increase in sweating, body temperature, heart rate, respiratory rate and blood pressure. When the symptoms of withdrawal are accompanied by a state of severe agitated confusion or delirium, sometimes associated with tactile or visual hallucinations, the diagnosis of alcohol withdrawal delirium (also called delirium tremens) is made [1]. Subdural hematoma is caused by sudden acceleration-deceleration of brain parenchyma with subsequent tearing of bridging veins resulting in blood collecting between the dura mater and the arachnoid, however it is usually associated with concurrent underlying damage. Brains with extensive atrophy as in elderly or chronic alcoholics are more susceptible for developing subdural haemorrhage [2].

### Case Presentation

A 32 years old man presented to the emergency department with abnormal paranoid behaviour, agitation, tremor and sweating. He was brought by companions who reported the patient has been acting strangely over the last 3 days. Past medical history confirms heavy alcohol drinking.

On examination, patient was sweaty, agitated, disoriented to place, and mildly confused, he was noted to have small old bruising in the left infra-orbital area, with red left eye, his BP was 160/90 and PR was 121 bpm, GCS was 15/15. Upon further questioning he admitted that he has not been drinking for 5 days.

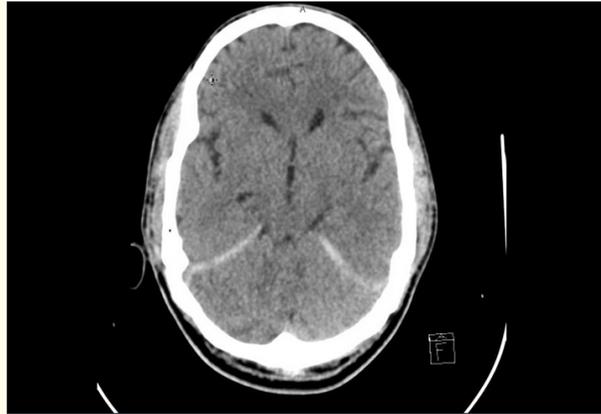
A diagnosis of acute alcohol withdrawal and delirium tremens was made by the ED physician, and patient started on Thiamine, glucose, fluids and benzodiazepines.

Patient was admitted to the hospital as a case of DT continued benzodiazepines, with moderate improvement of symptoms, but then a Brain CT was done 2 days after admission which shows acute subdural haemorrhage, for which the neurosurgeon was consulted and advised conservative approach.

Patient was discharged 4 days later with encouragement to stop alcohol and follow up with psychiatry department.

**Investigations**

Figure 1 and 2 brain CT scan showing subdural haemorrhage.



*Figure 1: CT scan of brain showing Subdural haemorrhage (Subfalcine).*



*Figure 2: CT scan of brain showing Subdural haemorrhage (Subfalcine).*

**Treatment**

The patient was treated with benzodiazepines, glucose, multivitamins and fluids initially, which was stopped for a while after detecting a subdural haemorrhage, for which the neurosurgeon took a conservative approach, but then continued on same measurements until hospital discharge with psychiatry involvement regarding alcohol quitting.

**Outcome and follow up**

Patient was continued on medical care for his delirium tremens, seen by the neurosurgeon but the choice was to treat him conservatively with head elevation and neuro-observation, after 5 days he was discharged from the hospital with excellent condition with strict follow up with neurosurgery and behavioural institute for alcohol abstinence.

**Discussion**

From analysis of Traumatic Coma Data Bank (TCDB) in the United States and Japan Neurotrauma Data Bank (JNTDB), most ASDHs are caused by motor-vehicle related accidents (MVAs) and falls, Frequency of assaults or other mechanisms is significantly less. MVA is most frequent in the younger (15 - 30 y.o.) age group. Falls are most frequent in the older (45 - 80 y.o.) age group [3]. Interestingly in our patient, he had a minor trauma which was attributed to a history of minor fall 3 days ago leaving a small infraorbital bruise and conjunctival haemorrhage. Considering the symptoms and signs with which he presented, it was clear that he was having acute withdrawal symptoms with excitation, tremor and sweating with mild increase in blood pressure and pulse rate. However, hallucinational excitement of delirium tremens not infrequently masks the symptomatology of subdural hematoma in its latent period [4]. The chance that these two-presentation happening together is infrequent, and the clinician attention was attracted to this diagnosis and possibly made him stop looking for other alternative diagnosis and this is why management was focused on the single diagnosis of DT.

However, it should be known that even simple trauma to the head in a chronic alcoholic should raise the possibility of a subdural haemorrhage, and although the management remained the same, but this could have been a fatal mistake if the subdural haemorrhage was larger with pressure effects.

The clinician was informed about the missed diagnosis, and the case was discussed with head of the department and in the monthly meeting. The learning points were shared also among the emergency and internal medicine physicians.

**Conclusion**

We strongly encourage emergency physicians to be highly suspicious about chronic alcoholics regarding the high possibility of subdural hematoma, especially when there is a disturbed level of consciousness even if the presence of clear diagnosis of withdrawal syndrome.

This case report also stresses on bearing other diagnoses in mind even if signs, symptoms, and laboratory findings that clearly favour another disease is present.

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