

Earthquake-related head trauma: initial consequences of an earthquake disaster

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A 73-year-old male patient was dug out of the rubble 25 hours after the Kahramanmaras earthquake in Türkiye and Syria. On physical examination, there was a dent and bruising on the left side of his forehead. The patient's state of consciousness was lethargic and his Glasgow coma score was 12. Non-contrast computed tomography of the brain showed a displaced fracture line on the left anterior side of the superior part of the frontal sinus. The posterior side was intact (**Figure 1**). No intracerebral, subdural or epidural haematoma or subarachnoid haemorrhage was detected (**Figure 2**). The patient was followed up for 24 hours, and was evacuated from the disaster area after his clinical condition improved.

In a systematic review of 34 articles regarding earthquake-related injuries, head trauma was the most common injury after extremity injuries (Igarashi et al, 2022). The most common earthquake-related head injury was laceration or contusion (59.1%), and the most common type of intracranial haemorrhage was epidural haematoma (9.5%), followed by intracerebral haematoma (7.0%) and subdural haematoma (6.8%). The mortality rate of patients with earthquake-related head injury was 5.6% (Igarashi et al, 2022). In the emergency evaluation of patients in situations that may cause psychological and physical trauma, such as earthquakes, hasty examination may lead to misdiagnoses. Therefore, radiological imaging is important to ensure accurate diagnosis and treatment.

How to cite this article:

Onder RO, Tosun A, Ibis E.
Earthquake-related head
trauma: initial consequences
of an earthquake disaster.
Br J Hosp Med. 2023.
[https://doi.org/10.12968/
hmed.2023.0055](https://doi.org/10.12968/hmed.2023.0055)

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Reference

Igarashi Y, Matsumoto N, Kubo T et al. Prevalence and characteristics of earthquake-related head injuries: a systematic review. *Disaster Med Public Health Prep.* 2022;16(3):1253–1258. <https://doi.org/10.1017/dmp.2021.31>

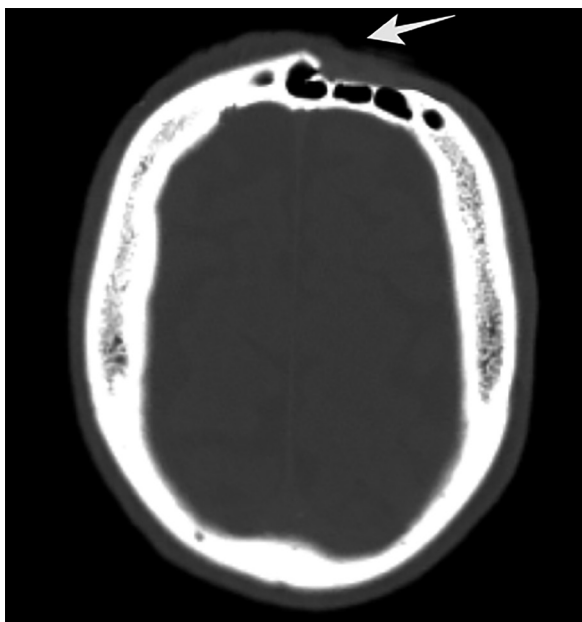


Figure 1. Non-contrast brain computed tomography showed a displaced fracture line on the left anterior aspect of the upper part of the frontal sinus (white arrow).

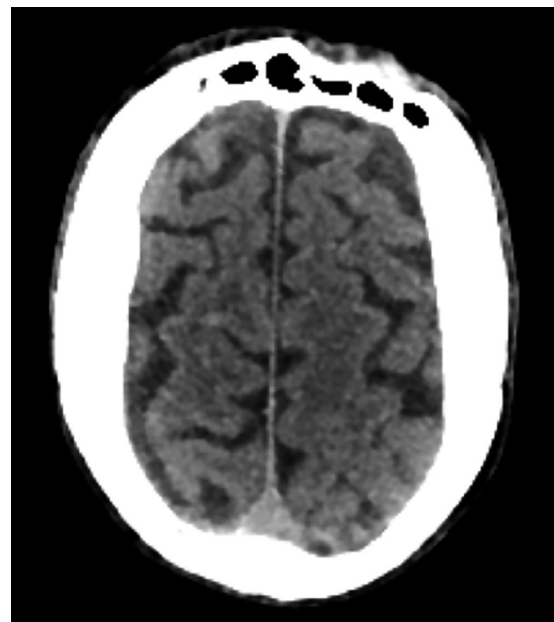


Figure 2. No intracerebral, subdural, epidural haematoma or subarachnoid haemorrhage was detected on non-contrast brain computed tomography.