



## CLINICAL IMAGE

# Cerebral Fat Embolism Syndrome

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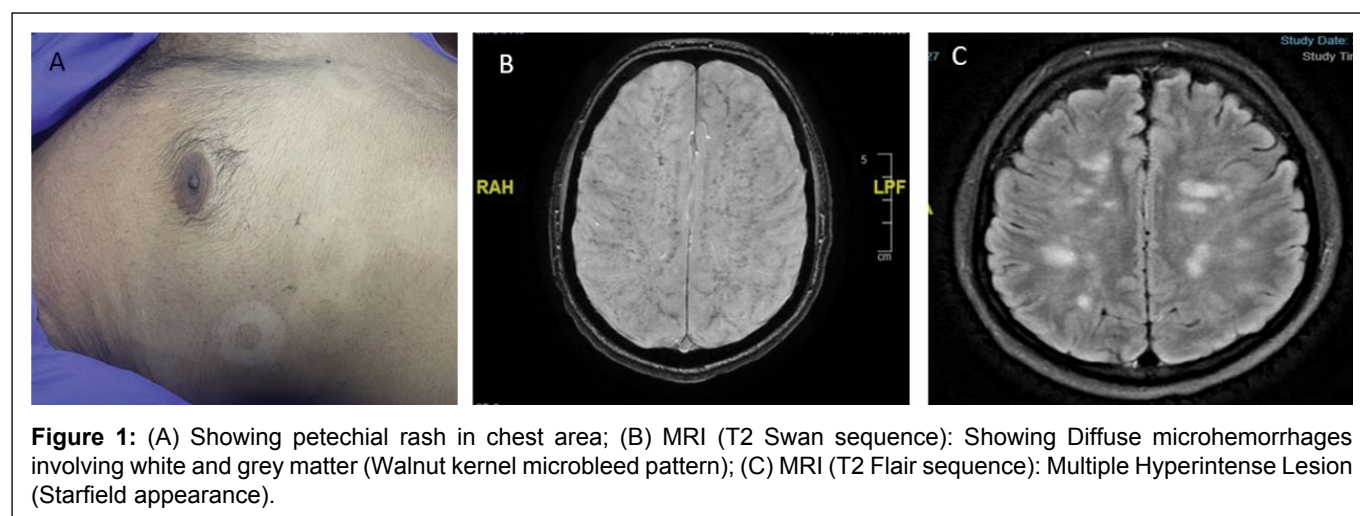
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## Description

A 33-year-old man admitted to the emergency department after being involved in road traffic accident. On evaluation and radiological imaging, he sustained closed subtrochanteric fracture in the right femur and a bilateral pelvic. Following primary survey and initial resuscitation, the patient was haemodynamically stable, so the patients shifted to a ward for further management. After 24 hours, the patient exhibited changes in mental status, including drowsiness, confusion, and restlessness with presence of petechial rash (Figure 1A). Additionally, he experienced respiratory distress and hypoxia on arterial blood gas analysis. He was promptly shifted to the trauma intensive care unit (ICU) where tracheal intubation was performed. His urinalysis was normal. On Radiological

imaging, including chest X-ray and CECT chest, did not reveal any abnormalities. But MRI brain showed multiple small lesions scattered throughout the deep white matter of the brain on FLAIR imaging (Figure 1B) and multiple small infarcts with a characteristic “starfield pattern” in susceptibility-weighted imaging (Figure 1C). Supportive treatment continued and after three days, the patient was successfully extubated. Five days later, he underwent uneventful surgery for proximal femur nailing and finally discharge. A diagnosis of cerebral fat embolism syndrome was made on the classic clinical triad of hypoxemia, neurological abnormalities, and a petechial rash along with classical MRI brain finding. Treatment primarily involves providing supportive care with surgical correction. In severe cases, symptoms may persist for several days, but most patients ultimately achieve complete recovery [1-5].



**Figure 1:** (A) Showing petechial rash in chest area; (B) MRI (T2 Swan sequence): Showing Diffuse microhemorrhages involving white and grey matter (Walnut kernel microbleed pattern); (C) MRI (T2 Flair sequence): Multiple Hyperintense Lesion (Starfield appearance).

## References

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