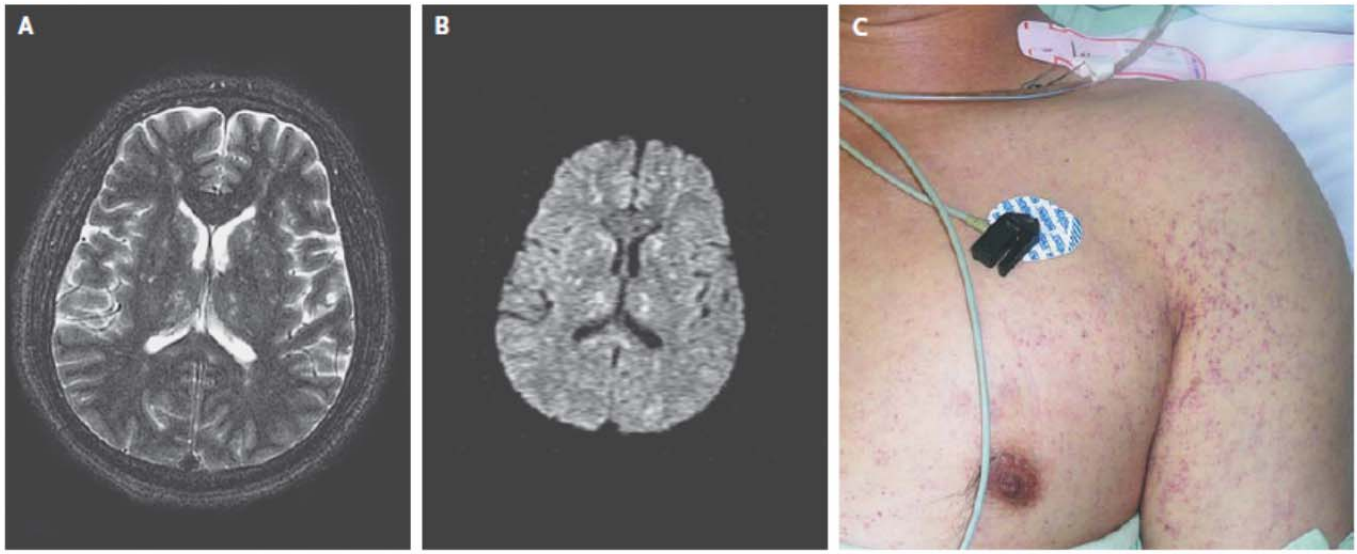

A 48-year-old man who had sustained a traumatic fracture of the left femoral shaft in a motorcycle accident 20 hours earlier was referred for a deterioration of consciousness that began after the accident. He was unresponsive to verbal stimuli, and no focal neurologic abnormalities were found on examination. An arterial blood gas analysis revealed mild hypoxemia, but a radiograph of the chest was normal. Tracheal intubation was performed for airway protection. Seven hours after presentation, widespread petechiae developed on the chest, upper arm, and armpit (Panel C).

# Fat Embolism Syndrome




A 48-YEAR-OLD MAN WHO HAD SUSTAINED A TRAUMATIC FRACTURE OF the left femoral shaft in a motorcycle accident 20 hours earlier was referred for a deterioration of consciousness that began after the accident. He was unresponsive to verbal stimuli, and no focal neurologic abnormalities were found on examination. An arterial blood gas analysis revealed mild hypoxemia, but a radiograph of the chest was normal. Tracheal intubation was performed for airway protection. Magnetic resonance imaging of the brain revealed multiple hyperintense punctate lesions disseminated throughout the cerebral white matter on $T_2$-weighted axial images (Panel A) and a so-called starfield pattern on diffusion-weighted images (Panel B). Seven hours after presentation, widespread petechiae developed on the chest, upper arm, and armpit (Panel C). The combination of a recent fracture of a long bone, petechial rash, mild hypoxemia, and profound impairment of consciousness prompted a diagnosis of fat embolism syndrome. The patient recuperated gradually after orthopedic repair of the fracture and rehabilitation therapy.



Hsiao-Kan Liu, M.D.
Wen-Chau Chen, M.D.

National Cheng Kung University Hospital
Tainan, Taiwan