

A Rare case of FES in a Tibial Shaft Fracture: A Case Report

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INTRODUCTION

Fat embolism syndrome (FES) is a rare but potentially life-threatening complication of long bone fractures. Despite the rare occurrence of FES, estimated at 0.15% in tibia fracture¹ the devastating complications of it prompt an early recognition to prevent morbidity and mortality associated with this condition. This case report presents a rare occurrence of FES in a patient with a closed tibial shaft fracture.

REPORT:

A 45-year old male presented to the emergency department with severe pain and deformity of the right lower leg following a motor vehicle accident. Clinical examination revealed deformity and tenderness at the right shin with intact neurovascular status. After 24 hours of trauma, he developed a sudden onset of shortness of breath requiring oxygen supplementation. Systemic examination revealed scleral icterus, axillary petechiae (**Figure 2,3**) with respiratory rate of 30, HR of 110 bpm and Temp of 38.5°C. Relevant investigation done; results are as such; PaO₂: 58, Hemoglobin: 12>10 (g/dL), Bilirubin 89 umol/L.

Chest radiography demonstrated bilateral pulmonary infiltrates consistent with acute respiratory distress syndrome (ARDS), a hallmark feature of FES (**Figure 1**).

Initial managements including hyperhydration, mechanical ventilation and close monitoring were given as soon as FES was established. He underwent an operation of intramedullary nailing of the tibia on the following day. Post-operatively, fracture is well reduced and his vital signs returned as normal

DISCUSSIONS:

FES is a rare but potentially fatal complication of long bone fractures, characterized by respiratory compromise, neurological symptoms, and multiorgan dysfunction². While typically associated with femoral and pelvic fractures, FES

can occur following fractures of the tibial shaft, albeit rarely.

CONCLUSION:

Multidisciplinary approach is crucial in managing FES. Early recognition of clinical signs and symptoms, coupled with aggressive supportive measures, are paramount in reducing morbidity in patients.

REFERENCES:

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Figure 1



Figure 2



Figure 3