FAT EMBOLISM SYNDROME: A RARE COMPLICATION OF HEMIARTHROPLASTY

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INTRODUCTION

We are presenting a case of an elderly lady who sustained a traumatic fracture neck of femur and developed 'fat embolism syndrome' as a complication of hemiarthroplasty.

CASE SUMMARY

- A 75-year-old lady sustained a fractured neck of femur and was managed 48 hours later with a left hemi-arthroplasty.
- Immediately, post-operatively, she became agitated and subsequently developed reduced consciousness and obtundation. There were no lateralising signs on neurological examination.
- Magnetic resonance imaging (Images ADC and DWI) showed very extensive small infarcts and micro-haemorrhages distributed throughout the brain including the cerebral hemispheres, cerebellar hemispheres and the brainstem in a characteristic "starfield" pattern.
- The appearances were consistent with cerebral fat embolism syndrome (FES) related to the recent fracture and subsequent treatment.
- She remained in a vegetative state and was palliated over three weeks without recovery.

NEUROIMAGING

ADC

DWI

DISCUSSION

- With an incidence of only 0.3% to 2.2%, FES is a rare complication reported primarily following long bone fractures¹
- It most commonly affects the lungs or brain with the potential to affect any organ or system of the body leading to respiratory failure, neurocognitive deficits, and death in severe cases^{2,3}
- It typically manifests 24 to 72 hours after the initial insult, however may rarely occur as early as 12 hours, or as late as two weeks⁴. FES is a clinical diagnosis as there is no definitive laboratory test that offers confirmation. Among imaging test however, only Brain Magnetic Resonance shows obvious perivascular oedema and multiple areas of infarction in a characteristic "starfield pattern"⁵.

CONCLUSION

It is important for clinicians to consider FES as a possible diagnosis in patients with embolic infarcts following long bone fractures.

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