Diagnostic Dilemma in the Post-Partum Period: A Case of Suspected Fat Embolism After Caesarean Section

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Background

- Fat Embolism is a rare but potentially dangerous clinical presentation, with only isolated case reports of the diagnosis following caesarean section[1].
- In the obstetric setting, it can be difficult to differentiate from Pulmonary Thrombo-Embolism (PE), given the similar clinical presentation and the known hypercoagulable state of post-partum women.

Aims

- To demonstrate the clinical work-up of a post-partum patient with symptoms concerning for pulmonary embolic disease. Further, to highlight the importance of all considering differential diagnoses in this setting.

Case

- A 39-year-old primiparous female presented to the Emergency Department day 8 post Emergency Caesarean Section with a three-day history of dyspnoea and pleuritic chest pain. She was haemodynamically stable.
- Imaging with CT-Pulmonary Angiogram reported a segmented filling defect in the right lung, with a Hounsfield unit density below zero, consistent with macroscopic fat embolism. Bilateral lower limb ultrasounds were negative for deep vein thrombosis and troponin was negative.
- Given the differential diagnosis of PE, the patient was commenced on therapeutic enoxaparin. By contrast, fat embolism is typically managed conservatively.

References

[1]Chen, Y., Fan, Y., Yang, Z. *et al*. Severe pulmonary and cerebral fat embolism with sudden cardiac and respiratory arrest after cesarean section: a case report. *BMC Neurol* **26**, 281 (2026). https://doi.org/10.1186/s12883-026-04813-9

Results

- Following review of the clinical presentation and imaging in a multi-disciplinary meeting including respiratory medicine and radiology, the consensus was to manage as for PE, as fat emboli are typically microscopic.
- The patient was referred for outpatient respiratory follow-up on discharge.

Discussion

- This case highlights the importance of using clinical judgement and multi-disciplinary input to supplement imaging findings when making diagnoses in the post-partum period.
- Diagnostic certainty is difficult without histopathological confirmation, but active management may be appropriate when weighing risks untreated PE.