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Anaesthetic management of a parturient who developed acute pulmonary embolism during labour

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Introduction

- Venous thromboembolism remains as one of the direct cause of maternal mortality in UK.
- Acute pulmonary embolism (PE) is a clinical emergency during pregnancy and labour.
- The management should be multidisciplinary to decide on optimal delivery plan.
- We describe the management of a case of a primigravida who developed acute PE during induction of labour.

Case report

- A 31 year old primigravida was admitted at 39 weeks of gestation for induction of labour for static growth. Her past medical history was unremarkable.
- While in labour she developed tachycardia with a heart rate of 130-140/min and tachypnoea with respiratory rate of 25-30/min.
- CTPA showed bilateral pulmonary micro emboli. She needed to be started on enoxaparin. As she was in early labour, not progressing hence decision for an emergency caesarean section(CS) was made.
- Choice of anaesthesia was regional (subarachnoid block) as CTPA did not show any evidence of right heart strain.
- Spinal block was achieved with 2.3mls of heavy Bupivacaine and 250 mic diamorphine. Phenylephrine infusion was commenced for cardiovascular stability. Oxytocin 5 units was given slow IV over 10 min followed by infusion 12.5u/hr .
- Measures were taken to observe meticulous hemostasis during operation. Abdominal drains were inserted to monitor intra abdominal bleeding. Therapeutic enoxaparin was started 4 hours post operatively.

Postoperative period

- She was monitored closely for post partum hemorrhage(PPH) and neurologic recovery from spinal anaesthesia
- She remained stable and was discharged home 3 days later with a plan for follow up in haematology clinic.

Discussion

- Management of PE in pregnancy and labour is challenging.
- In suspected PE without deep venous thrombosis,V/Q (ventilation/ perfusion) scan or CTPA should be performed for diagnosis. CTPA is preferred as it is readily available and shows other underlying pathology.
- Systematic review have shown that LMWH is safe and effective alternative to UFH during pregnancy with reduced risk of bleeding and low incidence of PPH.
- Multidisciplinary decision is important in management. Therapeutic clexane is allowed 4 hrs post spinal.
- Care should be taken to identify bleeding from surgical site and neuraxial haematoma.

References

1. Royal College of Obstetricians and Gynecologists: Thrombotic diseases in pregnancy & puerperium, Acute management, Green top guidelines No 37b 2015