

Spontaneous Coronary Artery Dissection In a Patient with Refractory Primary Postpartum Haemorrhage

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01. Objective

Spontaneous coronary artery dissection (SCAD) is an **emergency** condition, characterised by:

- Sudden **disruption of the coronary artery wall**, separating the **inner intimal lining** from the outer layer.
- **0.2-4%** prevalence in the general population. Rare in pregnancy, affecting approximately 1 in 20,000 women.
- **High mortality rate** and most commonly occurs in the **third trimester** or **early postpartum period**, with **one-third of female SCAD** cases occurring post-partum.

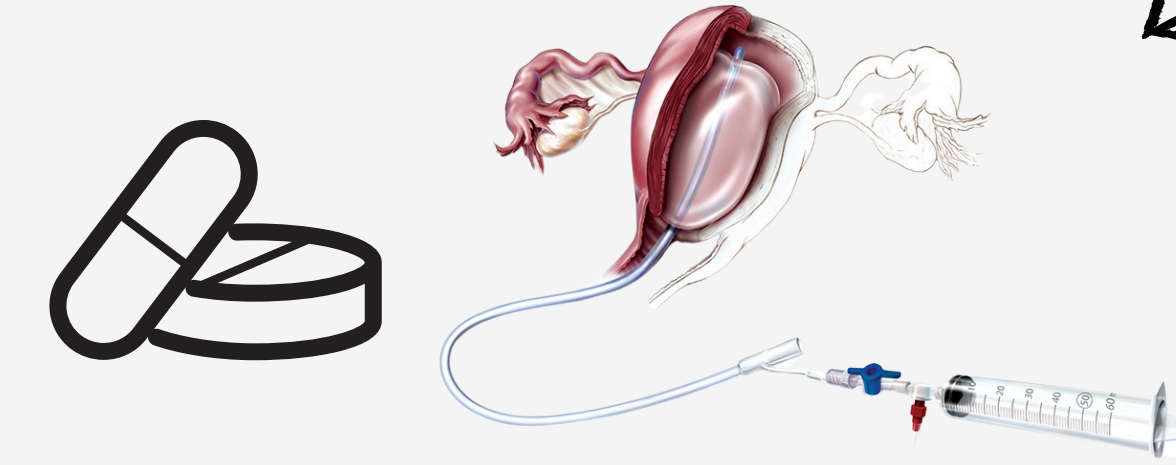
03. Discussion

SCAD is a serious condition, often presenting as **an acute coronary syndrome (ACS)**.

- The aetiology remains uncertain. However, links have been proposed with **hormonal imbalances**, **post-partum state** and **vasoconstrictive medications** (e.g. ergometrine) used in PPH.

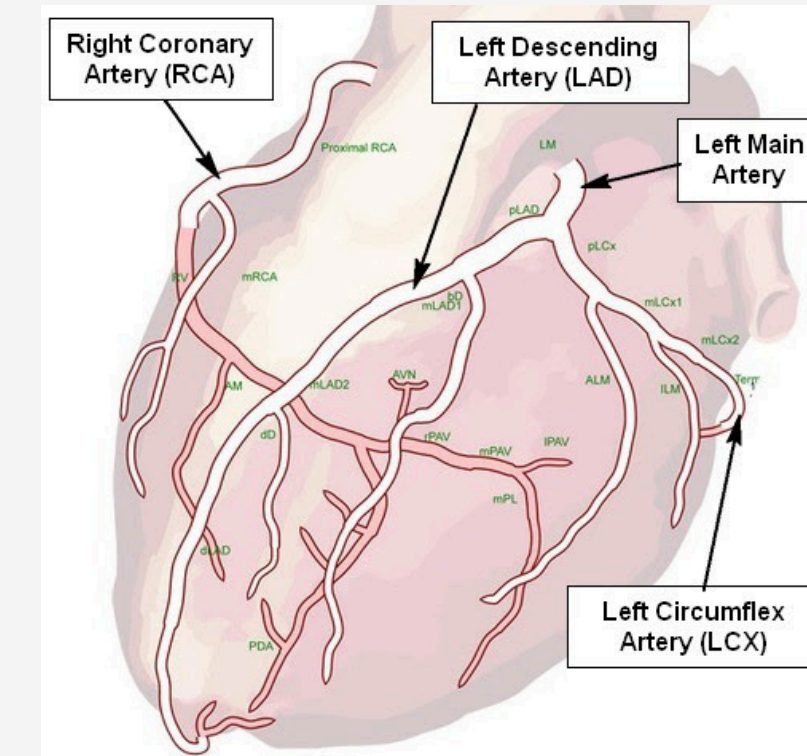
Further research is required to explore the potential association between repeated ergometrine use and ACS in postpartum patients.

29F 25+5 BIBA after SPHD and retained P&M which required manual removal.



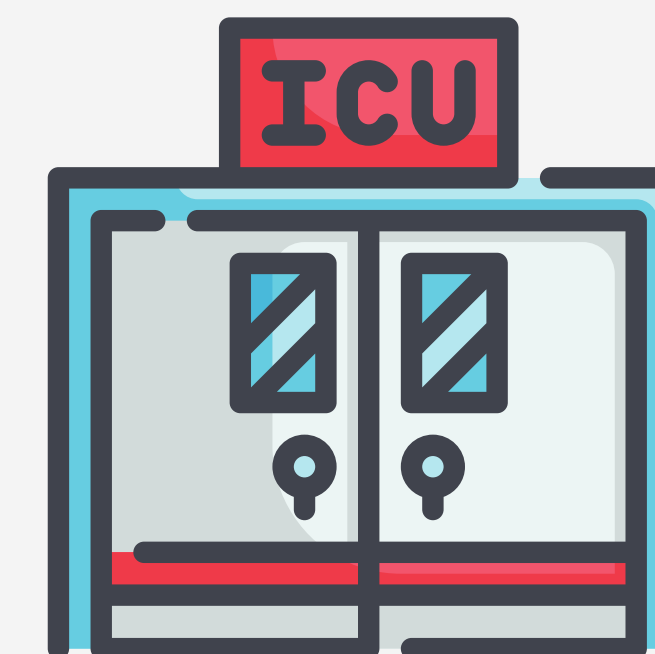
Medications trialled including two doses of ergometrine, a bakri balloon was inserted and two units of RBC transfused.

She then developed chest pain and dyspnoea. ECG showed ischaemia.



CTCA showed LAD occlusion and antegrade flow, and developed cardiogenic shock.

Transferred to ITU for haemodynamic and ionotropic support.



02. Case Summary

Initial Presentation

- This case describes a 29-year-old with a parity of five, and a history of smoking and previous cocaine use.
- She was brought in by ambulance (BIBA) following a **spontaneous preterm home delivery (SPHD)** at **25+5 weeks gestation**. Her history included **premature preterm rupture of membranes (PPROM)** at 24+6 weeks, complicated by postpartum haemorrhage (PPH) secondary to retained placenta and membranes (P&M), which required manual removal under general anaesthetic.

PPH Management

- Various medications were trialled, including **oxytocin**, **carboprost**, **tranexamic acid**, **misoprostol** and **two doses of ergometrine**.
- Due to **uterine atony**, a **Bakri balloon** was inserted and two units of packed red blood cells (pRBC) were transfused. The total blood loss was 2000ml.

Cardiac Symptoms & Investigations

- Four hours later she developed **central chest pain** and **dyspnoea**. The **ECG** suggestive of **ischaemia**.
- CT coronary angiogram (CTCA) showed a **middle LAD occlusion with antegrade flow**.

Diagnosis & Outcome

- Diagnosed with **cardiogenic shock** due to **complete infarction** of the **middle-LAD territory** and subsequent **SCAD**, likely secondary to an undetermined form of cardiomyopathy. The **severely impaired** left and right **ventricular functions (ejection fraction 35%)** resulted in **transfer** to the intensive care unit (ITU) for **haemodynamic and inotropic** support.
- The patient is currently **stable** and has a follow up in the heart failure clinic. Future deterioration may necessitate **biventricular mechanical support**.

04. Conclusion

This poster presents a **postpartum patient** who developed **SCAD** and **biventricular cardiac failure** following **SPHD** and **refractory PPH**. It raises important **considerations** regarding the role of **vasoconstrictive agents** in **PPH management**.