

Intrapartum aortic dissection

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Aortic dissection is **rare** in pregnancy, with a high burden of maternal and fetal mortality. We report a case of aortic dissection diagnosed intrapartum, at a district general site.

Case report:

- 37-year-old primigravida, 39+2 weeks gestation
- Induction of labour for pre-eclampsia
- Immediately following epidural for labour analgesia, sudden **chest pain, differing blood pressures** between arms, **haemoglobin drop** (120g/L to 68g/L) and signs suggestive of fetal distress on CTG
- CT angiogram, Figure 1, demonstrated an **acute Type A aortic dissection** from aortic root to abdominal aorta
- **Emergency transfer** to cardiothoracic centre, with full team escort in case of peri-mortem caesarean
- **Live baby boy** born in good condition via unplanned caesarean birth in cardiac theatre
- Modified Bentall procedure completed on cardiopulmonary bypass, **maternal recovery** following ICU admission
- Pathology confirmed diagnosis of **Loeys-Dietz syndrome**



Figure 1: CT angiogram demonstrating Type A aortic dissection from aortic root and valve, continuing through aortic arch to abdominal aorta

Discussion:

- Aortic dissection has incidence of 0.00004% per pregnancy
- Mortality increases **1% per hour** when untreated
- Pregnancy itself is a risk factor for dissection - both **haemodynamic changes** to increase stroke volume and **hormonal remodelling** of aortic wall increase risk
- Loeys-Dietz syndrome is a rare, inherited connective tissue disease, reducing collagen production
- Primarily affects the **thoracic aorta**, predisposing to dissection and aneurysm and carries a high (1-10%) risk of dissection in pregnancy
- Advised against future pregnancies due to risk of mortality and requires **genetic testing** of child and wider family

Key learning points:

- Maintain a **high index of suspicion** for aortic dissection with chest pain in pregnancy
- **Rapid diagnosis** and **treatment** to reduce mortality requires multi-disciplinary **collaboration**
- Importance of robust **emergency transfer protocols** for rare emergencies

References:

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- 2 Regitz-Zagrosek V, Roos-Hesselink JW, Bauersachs J et al. 2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy: European Society of Cardiology (ESC). Eur Heart J. 2018;39:3165-3251.