

# Maternal outcomes in women with aortopathy: experience in a tertiary joint cardiac obstetric centre

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# Background

Pregnancy is associated with increased risk of cardiovascular complications for women with aortopathy

- 10% risk of serious maternal complications<sup>1</sup>

Confidential Enquiry 2006-8: 7 deaths due to aortic dissection<sup>2</sup>

UKOSS 2009-11: 12 confirmed aortic dissections, 4 died<sup>3</sup>

Approximately 50% dissections occur in women with risk factors<sup>4</sup>

## Aim

**To describe the maternal outcomes in women with aortopathy in our unit**

# Study Design

Retrospective cohort study

Discussed with R&D department

## Inclusion criteria:

Age 16-45

Aortopathy

Recent pregnancy (2008 – 2015)

## Exclusion criteria:

Bicuspid aortic valve

Structural congenital cardiac disease

Coarctation of the aorta

Review of paper and electronic patient records

Data collected: Medical management, mode of delivery, anaesthetic for delivery, obstetric and cardiovascular complications (up to 1 year post partum)

# Findings

23 patients

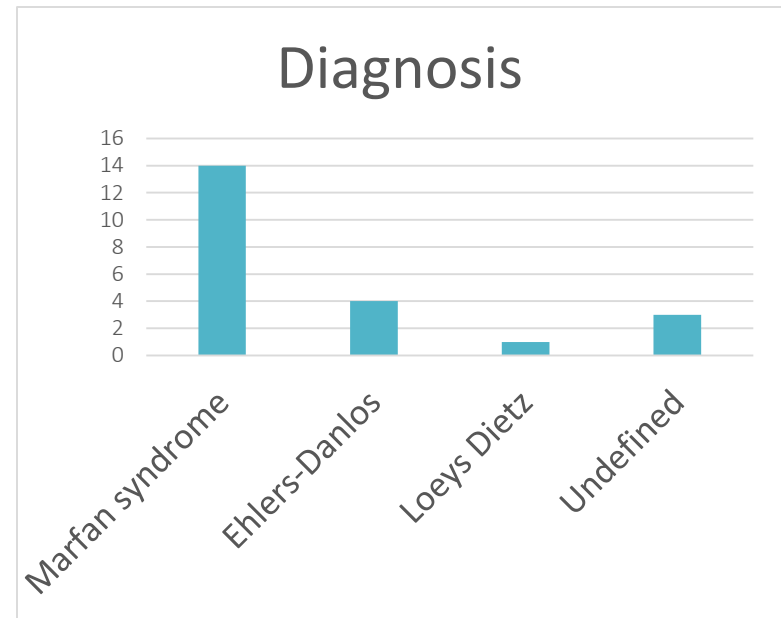
One excluded as family history only

28 pregnancies

- 2 women had previous aortic surgery
- 3 women had a pre-pregnancy aortic diameter > 40mm
- 2 pregnancies terminated due to occurrence of genetic abnormality in fetus

## Complications

- Serious cardiovascular complication in 3 patients
- 2 of these patients had an aortic diameter > 40 mm
- No women died



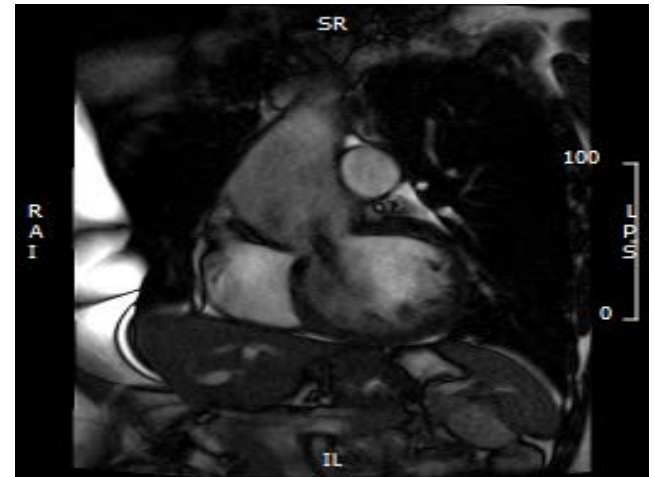
# Complications

## Case 1

Known Marfan syndrome, stable dilated aortic root (42mm)  
Peri-partum Type A dissection  
Emergency aortic root replacement

## Case 2

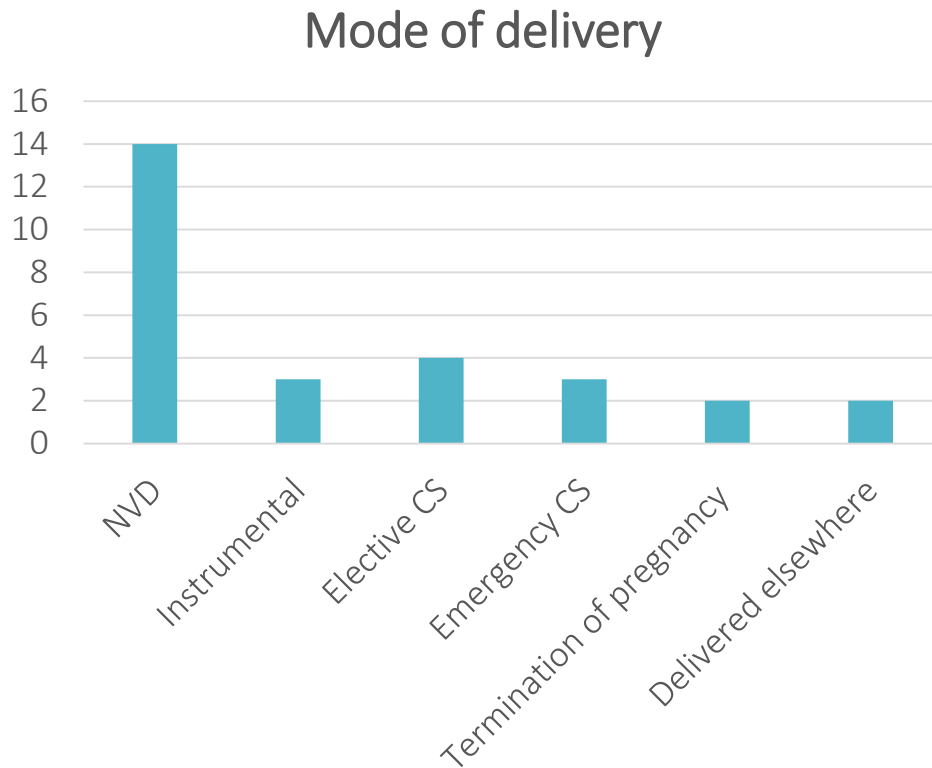
Presumed low risk pregnancy  
Severe chest pain at 38/40: Type A Aortic dissection  
Delivery under CSE, followed by Aortic root replacement  
Diagnosed with Marfan syndrome post operatively



## Case 3

Undefined aortopathy  
Rapidly dilating aorta (43mm – 58mm) during pregnancy  
Aortic root replacement at 22/40  
Necrotising granulomatous aortitis  
Category 3 CS at 34/40

# Findings



## Anaesthetic for delivery

NVD: 3 epidurals

Instrumental: 1 spinal, 1 epidural

Elective CS: 2 CSE, 2 spinal

Emergency CS: 1 Epidural, 1 CSE,  
1 Spinal

# Conclusions

- *Complication rates in our unit are similar to those quoted*
- MRI screening of aortic diameter can help to stratify risk
- The diagnosis of aortic dissection should be considered in pregnant women presenting with chest pain and investigated urgently
- Pregnant women with aortopathy should be managed in discussion with a tertiary centre

## Limitations

Descriptive data only

Reliant on data from medical records

# Questions

## References

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2. Centre for Maternal and Child Enquiries. Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer: 2006-8. *BJOG* 2011; **118** (Suppl 1): 1-203
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4. Rajagopalan S, Nwazola N, Chandrasekhar S. Outcomes in pregnant women with acute aortic dissection: a review of the literature from 2003 – 2013. *Int J Obstet Anaesth* 2014; **23**: 348-56