

A Case of Undiagnosed Rheumatic Heart Disease Presenting as Acute Pulmonary Oedema in Pregnancy



W Stobie¹, S Kanitkar¹

1. Department of Women's and Children's Health, St George Hospital, Sydney

BACKGROUND

Rheumatic heart disease (RHD) is a rare cause of heart disease in non-indigenous Australians but a common cause among certain endemic populations of Oceania, South Asia and Aboriginal and Torres Strait Island communities, where the prevalence of RHD is as high as 5.2%.^{1,2} It typically causes mitral stenosis (MS), presenting as shortness of breath, reduced exercise tolerance, lower limb swelling or palpitations.

CASE

We present a case of undiagnosed RHD, presenting as acute pulmonary oedema at 32+5 weeks gestation in a 31-year-old primiparous woman of South Asian background. The patient was admitted at 32+1 weeks gestation with preterm prelabour rupture of membranes and an antepartum haemorrhage from a large 16cm x 10cm x 10cm, anterior uterine fibroid below the fetal head. She had no past medical history. She went into preterm labour at 32+5 weeks gestation and was given a 500mL IV fluid bolus as intrauterine resuscitation for an abnormal CTG. She then developed shortness of breath, hypoxia to 88% on room air and sinus tachycardia to 140bpm on ECG.

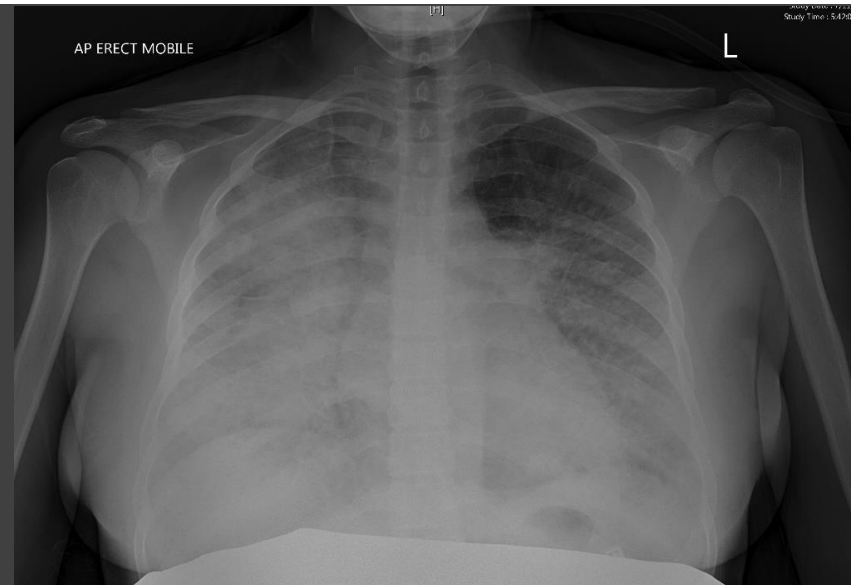


Figure 1: Mobile CXR showing acute pulmonary oedema

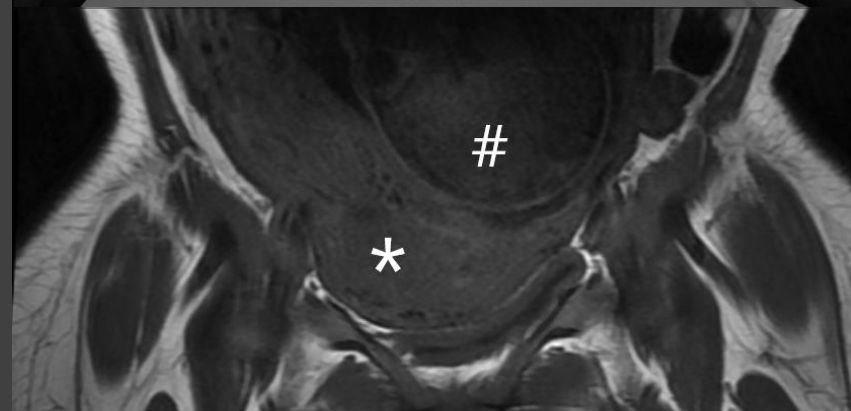


Figure 2: MRI pelvis at 32+2 weeks gestation demonstrating the fetal head (#) in relation to the large anterior fibroid (*)

She had widespread crepitations on auscultation and pulmonary oedema on chest x-ray (figure 1) requiring transfer to ICU for non-invasive ventilation with BiPAP and diuresis. Transthoracic ECHO diagnosed severe mitral stenosis secondary to RHD, with a mitral valve area of 0.8cm² (normal area 4-5cm², severe < 1cm²).³ Following MDT discussion between the obstetric, ICU, cardiology and paediatric teams she underwent emergency Caesarean section under general anaesthetic to improve ventilation. She was extubated day 1 postpartum, recovered well and is awaiting outpatient transoesophageal ECHO and balloon valvuloplasty.

DISCUSSION

The potential for exacerbations of RHD and MS in pregnancy by physiological hypervolaemia, tachycardia, postpartum autotransfusion or iatrogenic causes if undiagnosed make careful planning essential to reduce maternal and fetal morbidity.

REFERENCES

1. Francis JR, Fairhurst H, Hardefeldt H, Brown S, Ryan C, Brown K, et al. Hyperendemic rheumatic heart disease in a remote Australian town identified by echocardiographic screening. *Med J Aust.* 2020;213(3):118-23
2. Watkins DA, Johnson CO, Colquhoun SM, Karthikeyan G, Beaton A, Bukhman G, et al. Global, Regional, and National Burden of Rheumatic Heart Disease, 1990-2015. *N Engl J Med.* 2017;377(8):713-22.
3. Baumgartner H, Hung J, Bermejo J, Chambers JB, Evangelista A, Griffin BP, et al. Echocardiographic assessment of valve stenosis: EAE/ASE recommendations for clinical practice. *J Am Soc Echocardiogr.* 2009;22(1):1-23;101-2

Contact: William.stobie@health.nsw.gov