

# Infective Endocarditis: A Rare Cause of Postpartum Fever

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## Background

Sepsis remains an important cause of maternal death, even in developed countries. Infective endocarditis (IE) is a rare cause of sepsis in the post partum population with a high mortality rates. Sequelae include septic emboli (22-50%), heart failure (50-60%), stroke and death.<sup>1</sup>

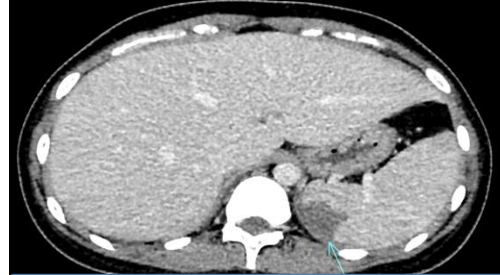
## Case History

A 25 year old G2P0M1 presented at 32+2 weeks gestation in established preterm labour and progressed quickly to a vaginal birth. The pregnancy had been complicated by gestational diabetes and a case of presumed bacterial tonsillitis at 22 weeks. There was no history of IVDU. On day two post partum the patient developed worsening RIF pain and a fever of 38.2 degrees. Bowels had opened, PV loss was small with no urinary symptoms. There was no cough or chest pain. On examination the HR 81, BP 122/58, RR 12. Dual heart sounds were heard plus an ejection systolic murmur loudest in the aortic area and a third heart sound. There was no distension of the abdomen, the uterus was firm and central with tenderness in the RIF and Rovsings positive. Calves were soft and non tender. Blood and urine cultures and a chest x-ray were requested as part of a septic screen. Broad spectrum antibiotics were commenced. Blood cultures were positive at 10 hours for gram positive cocci. Final culture was *Streptococcus oralis*. IVAB's were changed to Benzyl penicillin on advice from ID. A CT abdomen/pelvis showed a splenic infarct and multiple right renal infarct. An echocardiogram revealed a severely dilated left ventricle with an EF of 60%. The aortic valve was bicuspid with severe regurgitation grade 4/4 and three highly mobile vegetation's in keeping with infective endocarditis. The patient underwent a mechanical aortic valve replacement on day 6 post partum. The procedure and her recovery were uncomplicated. She is now on lifelong anticoagulation with warfarin.

## References

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## Imaging



CT abdomen/pelvis showing splenic infarction



Bicuspid aortic valve with large vegetations

## Discussion

In Australia, 7.9% of maternal deaths between 2012-14 were due to sepsis.<sup>3</sup> IE is a rare cause of post partum sepsis with an overall incidence of 1: 100 000 pregnancies. Common risk factors include IVDU, congenital or rheumatic heart disease. Rates of RHD amongst the ATSI population are amongst the highest in the world with 4-5% of ATSI patients 20-50 years affected in QLD.<sup>4</sup> Maori and South Seal Islander women have comparable rates of disease.<sup>5</sup> The mitral valve (41%) closely followed by the aortic valve (37%) are the most commonly affected.<sup>3</sup> Staphylococcal and streptococcal species are the common causative organisms, similar to the non pregnant population. Maternal mortality rate is between 11-30% and foetal mortality 14-30%.<sup>1,2</sup>

Diagnosis of IE is via the modified Duke Criteria but many pregnant and post partum patients lack the classical peripheral stigmata of IE. Diagnosis in the post partum population is typically delayed with an average of 3.5 weeks between delivery and diagnosis.<sup>2</sup> Management is similar to the non pregnant patient but should involve a multidisciplinary team. All pregnant women should undergo examination of their cardiovascular system as part of their initial clinical encounter. Clinicians should maintain a high index of suspicion in those with underlying risk factors or from a high risk group who have an abnormal examination.