

**Abstract:**

Infective endocarditis (IE) is a rare and life-threatening condition characterized by infection of the endocardium, predominantly affecting heart valves. IE during pregnancy is exceptionally uncommon, and it poses significant maternal and fetal mortality risks. Risk factors for IE include intravenous drug abuse, prosthetic valves, prior history of IE, and congenital heart disease. This case report presents the unique scenario of a previously healthy 25-year-old pregnant woman who suffered a complete miscarriage following acute bacterial infective endocarditis caused by *Staphylococcus aureus*. The rarity of this case highlights the challenges in managing IE in pregnancy and emphasizes the need for increased awareness and early detection of this potentially fatal condition.

**Case presentation**

We present a case report of a 25-year-old previously healthy woman in her first pregnancy, at 10 weeks of amenorrhea, who presented with a one-week history of fever, chills, and vomiting. The patient had a prior admission for hyperemesis gravidarum, which lasted 10 days prior to the current presentation. Physical examination revealed fever, tachycardia, hypotension, a pan systolic murmur, and abdominal tenderness. Laboratory tests showed anemia, leukocytosis with neutrophilia, elevated C-reactive protein levels, and a mildly elevated erythrocyte sedimentation rate. Initial transthoracic echocardiography revealed mild mitral regurgitation (MR) with myxomatous mitral valve (MV) leaflets, but no vegetation was detected. However, the patient experienced a complete miscarriage and was managed conservatively. Despite this, significant audible MR persisted. Subsequent trans esophageal echocardiography (TOE) revealed a ruptured chordae tendineae in the posterior leaflet (P3) of the mitral valve, resulting in grade 3 moderate MR, along with a vegetation attached to the base

of P3. Blood cultures confirmed the presence of *Staphylococcus aureus*, sensitive to cloxacillin, indicating *Staphylococcus aureus* infective endocarditis (SAIE). The patient received intravenous flucloxacillin treatment. SAIE is associated with high morbidity and mortality, particularly when affecting the left side of the heart. This case emphasizes the challenges of managing AIE during pregnancy and highlights the importance of early detection and appropriate intervention to prevent severe complications.

### **Conclusion**

This case report highlights the importance of considering IE in febrile patients, particularly those with risk factors such as recent bacteremia or valvular abnormalities. It also emphasizes the value of TOE in detecting subtle valvular lesions missed by transthoracic echocardiography. Prompt diagnosis, appropriate antimicrobial therapy, and consideration for surgical intervention are essential in managing AIE, especially in pregnant women, as it can lead to poor fetal outcomes.