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# Fungal Endocarditis in Pregnancy: A Rare and Fatal Clinical Challenge

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**Abstract** **Case Report**

Fungal endocarditis is a rare condition whose incidence is increasing due to the rising prevalence of immunocompromised patients, particularly those with HIV. Its occurrence during pregnancy is exceptionally uncommon, presenting unique diagnostic and therapeutic challenges. We report the case of a 33-year-old pregnant woman diagnosed with fungal endocarditis caused by *Candida parapsilosis*. Despite antifungal treatment and urgent surgical intervention, the outcome was fatal. This case highlights the need for early diagnosis and multidisciplinary management in such complex scenarios.

**Keywords:** Fungal Endocarditis, Pregnancy, Candidas, Vegetation.



## INTRODUCTION

Fungal endocarditis is a rare but increasingly recognized condition associated with high morbidity and mortality. Its rarity and non-specific presentation often lead to delayed diagnosis. The condition is typically characterized by large, friable vegetations, which predispose patients to embolic complications and congestive heart failure. In the context of pregnancy, management is further complicated by concerns regarding the teratogenic effects of antifungal medications and the risks of surgical intervention. This report details a challenging case of fungal endocarditis in a pregnant woman, underscoring the importance of early detection and tailored treatment strategies.

## CASE REPORT

We present the case of a 33-year-old woman with a two-year history of rheumatic mitral valve disease who was admitted at 21 weeks of gestation for progressive dyspnea classified as NYHA stage III, accompanied by a 15-day history of fever. On admission, she appeared febrile at 38.7 °C and had a grade 4/6 systolic murmur consistent with mitral insufficiency, without signs of cyanosis or right-sided heart failure. Obstetric evaluation confirmed an ongoing singleton pregnancy. Laboratory tests revealed elevated inflammatory markers, and blood cultures were positive for *Candida parapsilosis*. Transthoracic echocardiography demonstrated mitral stenosis with an area of 1.3 $cm^2$, a mean gradient of 12 mmHg, grade II mitral regurgitation, and a mobile vegetation measuring 8 × 6 mm on the anterior mitral leaflet (figure).

The diagnosis of fungal endocarditis was established based on Duke's criteria. Despite initiation of intravenous amphotericin B, the patient's clinical course rapidly deteriorated due to acute pulmonary edema caused by a perforation of the anterior mitral leaflet. Emergency mitral valve replacement surgery was performed under unstable hemodynamic conditions. Unfortunately, she succumbed to cardiocirculatory failure on postoperative day one, illustrating the aggressive and refractory nature of fungal endocarditis in this context.

### Management and Outcome

The patient was initiated on intravenous amphotericin B. However, on the first day of treatment, she developed acute pulmonary edema due to a perforation of the anterior mitral leaflet. Emergency mitral valve replacement surgery was performed under hemodynamically unstable conditions. Unfortunately, the patient succumbed to cardiocirculatory failure on postoperative day one.

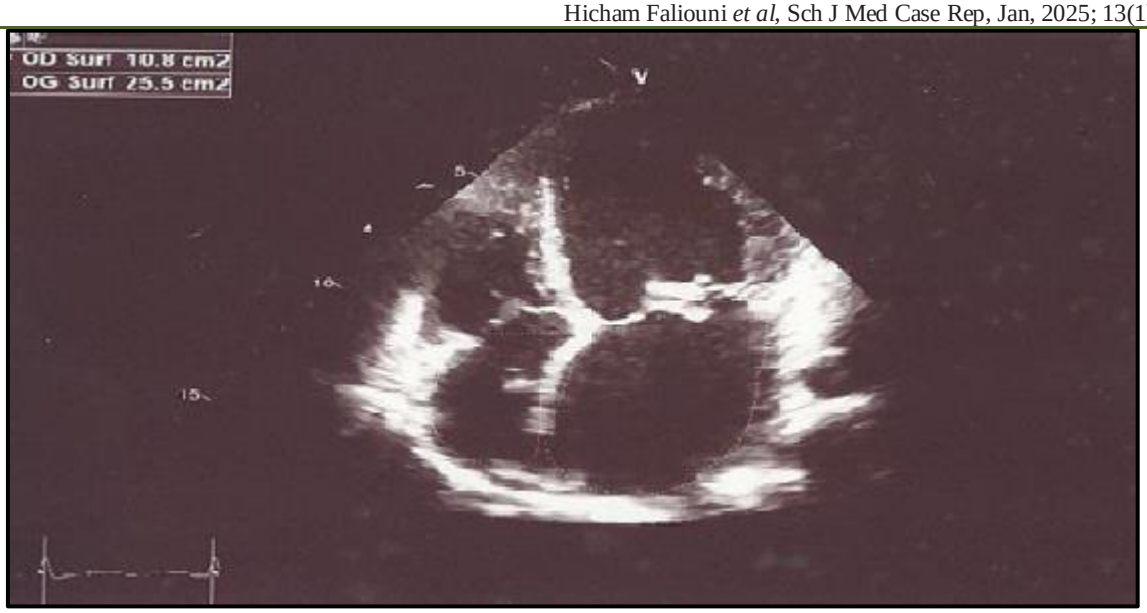


**Figure 1: Mobile vegetation on the anterior mitral valve leaflet**

## DISCUSSION

Fungal endocarditis is a rare and often underdiagnosed infection with a poor prognosis. The most commonly implicated organisms are species of *Candida*, particularly *Candida parapsilosis* [1, 2].

### Clinical Challenges and Diagnostic Delays

The clinical presentation of fungal endocarditis often mimics that of bacterial endocarditis, including fever, heart murmurs, and embolic phenomena. However, fungal endocarditis is distinguished by a more aggressive course and a higher frequency of complications such as congestive heart failure, mycotic aneurysms, and systemic embolization [3]. Delays in diagnosis are common, owing to the difficulty of isolating fungi in standard blood cultures and the non-specific nature of clinical symptoms. Advanced diagnostic tools, including chromogenic media, can improve detection rates of fungal pathogens [4].

### Therapeutic Dilemmas

Optimal treatment for fungal endocarditis involves a combination of antifungal therapy and surgical intervention. Amphotericin B, the gold standard antifungal agent, has limited penetration into vegetations, reducing its efficacy [5, 6]. Newer antifungal agents, such as echinocandins, show promise but lack sufficient evidence in pregnant patients. Surgery, while often lifesaving, poses significant risks, particularly in hemodynamically unstable patients and during pregnancy. Cardiopulmonary bypass during pregnancy carries additional risks for both maternal and fetal outcomes, including preterm labor and fetal demise.

### Prognostic Implications

Despite aggressive management, fungal endocarditis remains associated with a high mortality rate, often exceeding 50% [3]. The poor prognosis is attributed to the virulence of fungal pathogens, the delayed onset of definitive therapy, and the invasive nature of required surgical interventions. Pregnant patients present a unique subset with additional challenges, including limited therapeutic options and heightened risks of adverse maternal and fetal outcomes. Successful treatment requires a multidisciplinary approach and, in some cases, has been documented in patients with prosthetic valve endocarditis using combined medical and surgical strategies [7, 8].

### Lessons from the Case

This case underscores the importance of a high index of suspicion for fungal endocarditis in patients with predisposing factors, such as valvular heart disease and immunosuppression, even during pregnancy. Early recognition and rapid initiation of therapy are crucial but may not suffice in severe cases with advanced complications. Future research should focus on improving diagnostic tools, exploring safer antifungal options for pregnant patients, and developing guidelines for the surgical management of fungal endocarditis in this unique population.

## CONCLUSION

Fungal endocarditis remains a poorly understood and unpredictable condition. Early diagnosis and optimization of therapeutic strategies, combining antifungal agents and surgical intervention, are critical to improving outcomes. This case emphasizes the unique challenges posed by fungal endocarditis in pregnancy and the need for a multidisciplinary approach to management.

## REFERENCES

1. Ellis, M. E., & Al-Abdely. (2001). Fungal endocarditis: evidence in the world literature, 1965-1995. *Clin Infect Dis*.

2. Pierrotti, L. C. (2002). Fungal endocarditis, 1995-2000. *Chest*.
3. Zedtwitz-Liebenstein, K. (2001). *Prosthetic valve endocarditis due to Candida tropicalis complicated by multiple pseudoaneurysms*. Infection.
4. Fricker-Hidalgo, H. (2001). Evaluation of Candida ID, a new chromogenic medium for fungal isolation and preliminary identification of some yeast species. *J Clin Microbiol*.
5. Lepidi, H. (2002). Diagnostic methods current best practices and guidelines for histologic evaluation in infective endocarditis. *Infect Dis Clin North Am*.
6. Rubinstein, E. (1974). *Tissue penetration of amphotericin B in Candida endocarditis*. Chest.
7. Gilbert, H. M. (1996). Successful treatment of fungal prosthetic valve endocarditis: case report and review. *Clin Infect Dis*.
8. Melgar, G. R. (1997). Fungal prosthetic valve endocarditis in 16 patients. An 11-year experience in a tertiary care hospital. Medicine (Baltimore).