

Early Postoperative *Candida glabrata* Prosthetic Valve Endocarditis Successfully Managed with Antifungal Therapy without Reoperation: A Case Report

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Abstract

Case Report

Fungal endocarditis is a rare but life-threatening condition, particularly in patients with prosthetic valves or recent cardiac surgery, and its optimal management remains challenging. We report the case of a 22-year-old Moroccan woman with a history of mitral valve repair who presented with acute heart failure and infective endocarditis requiring urgent double valve replacement. The postoperative course was complicated by persistent fever, negative bacterial cultures, and multiple embolic events. Fungal blood cultures later identified *Candida glabrata*. Intravenous voriconazole therapy resulted in rapid clinical improvement and resolution of echocardiographic lesions without the need for repeat surgery. Early suspicion of fungal infection is crucial in patients with persistent postoperative infection and negative bacterial cultures. Although combined medical and surgical management is generally recommended, this case illustrates that prompt targeted antifungal therapy may achieve favorable outcomes in carefully selected patients when early reoperation carries substantial risk.

Keywords: Fungal endocarditis; *Candida glabrata*; Prosthetic valve; Antifungal therapy.

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INTRODUCTION

Infective endocarditis (IE) is a major public health challenge (*Global Burden of Disease 2023*, n.d.). Fungal endocarditis (FE) is still an uncommon but devastating infection. Although being only responsible for 1–6% of infective endocarditis cases, the mortality rate is higher than 40–60% (Edpuganti, 2025). Prosthetic valves, intracardiac devices, prolonged antibiotic therapy, and recent cardiac surgery are major risk factors.

Historically, non-albicans *Candida* endocarditis was most frequently attributed to *Candida parapsilosis* (Garzoni *et al.*, 2007). However, epidemiological trends have evolved over the past two decades, and *Candida glabrata* has emerged as a prominent non-albicans species in invasive candidiasis and bloodstream infections. Its ability to form biofilms and its reduced susceptibility to several antifungal agents make clinical management particularly challenging (Rodrigues *et al.*, 2017).

Current guidelines emphasize combined antifungal therapy with a low threshold for surgery,

while contemporary reviews advocate for an aggressive multidisciplinary strategy integrating early surgical intervention, targeted antifungal therapy, and prolonged suppressive treatment, particularly in prosthetic valve infections (Akritidou *et al.*, 2025; Delgado *et al.*, 2023). Nevertheless, optimal management remains debated in selected postoperative settings where repeat surgery carries substantial risk.

We report a rare case of early postoperative *Candida glabrata* prosthetic valve endocarditis successfully managed with antifungal therapy without repeat surgical intervention.

CASE PRESENTATION

A 22-year-old Moroccan woman with a history of mitral valve repair performed in March 2016 for severe rheumatic mitral regurgitation was admitted in December 2020 with New York Heart Association (NYHA) class III dyspnea and orthopnea.

On admission, the patient appeared cachectic (35 kg, height 160 cm) with signs of congestive heart

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failure. Physical examination revealed jugular venous distension, a positive Musset sign, hepatomegaly with hepatojugular reflux, and irregular heart sounds with a grade 4/6 systolic murmur at the mitral area and a grade 3/6 diastolic murmur at the aortic area. Poor oral hygiene with multiple dental caries was observed; however, due to the urgent clinical presentation, no dental evaluation or intervention was performed.

Laboratory tests demonstrated leukocytosis, elevated inflammatory markers, and severe anemia

(hemoglobin 5.9 g/dL), while renal and hepatic functions were normal. Six bacterial blood cultures remained negative. Transthoracic echocardiography revealed extensive vegetations involving the mitral valve and annulus with severe regurgitation, as well as vegetations on the aortic valve with severe insufficiency. An illustrative echocardiographic image is provided in Figure 1. Left ventricular ejection fraction was preserved (65%), with severe pulmonary hypertension estimated at 90 mmHg.

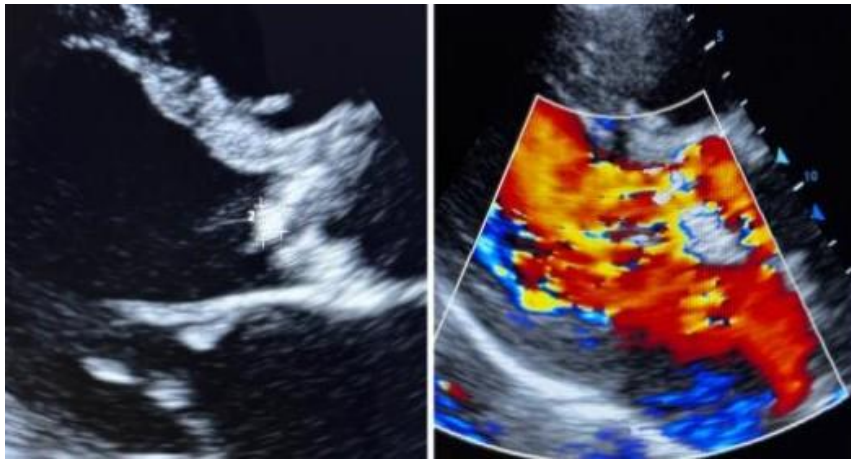


Figure 1: Intraoperative view demonstrating extensive friable vegetations on the ventricular side of the aortic valve, associated with severe aortic regurgitation

Computed tomography showed splenic and renal infarctions, and fundoscopy demonstrated Roth spots. Despite antibiotic therapy with ceftriaxone and gentamicin, infection persisted, and urgent surgery was performed.

The patient underwent double mechanical mitral and aortic valve replacement associated with Kay tricuspid annuloplasty. Intraoperative findings confirmed extensive vegetations involving both the mitral and aortic valves, with representative aortic valve involvement shown in Figure 2. Bacteriological cultures performed on the excised vegetations remained sterile.

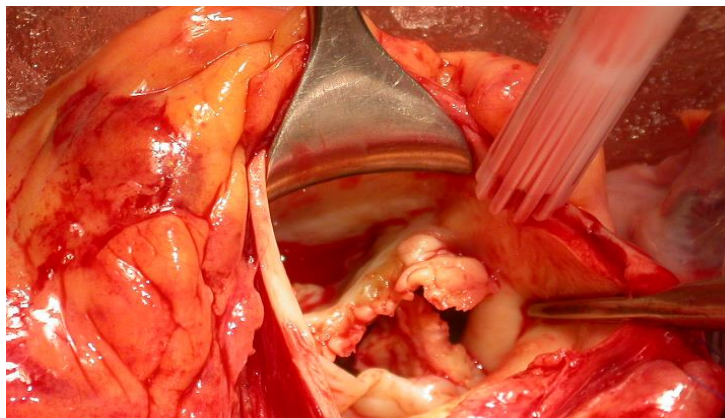


Figure 2: Intraoperative view demonstrating large vegetations on the aortic valve, consistent with infective endocarditis

The immediate postoperative course was complicated by persistent fever and inflammatory syndrome despite broad-spectrum antibiotics. On postoperative day 8, transthoracic echocardiography was performed and complemented by transesophageal echocardiography, revealing three mobile echogenic

masses suggestive of early prosthetic valve endocarditis, although prosthetic function remained normal.

On postoperative day 18, a pulsatile mass appeared in the right groin. CT angiography demonstrated a saccular aneurysm initially suspected to involve the right common femoral artery. Surgical

exploration identified an aneurysm of the profunda femoris artery, which was managed by aneurysm resection with double ligation and division of the profunda femoris artery.

Given persistent infection with negative bacterial cultures and multiple embolic complications, fungal blood cultures were obtained and grew *Candida glabrata*. Considering the recent double valve replacement and the high risk of early reintervention, intravenous voriconazole was initiated as a first-line strategy following multidisciplinary discussion, with close clinical and echocardiographic follow-up.

Clinical improvement was observed within six days of initiating voriconazole therapy, with resolution of fever and progressive decrease of inflammatory markers. Follow-up transesophageal echocardiography no longer demonstrated echogenic lesions. After three weeks of treatment, two consecutive blood cultures obtained one week apart were negative. The patient was discharged after completing a total of six weeks of antifungal therapy. The patient was re-evaluated at one month and at one year of follow-up, demonstrating sustained clinical improvement and no evidence of recurrent infection or prosthetic valve dysfunction.

Written informed consent was obtained from the patient for publication of this case report.

DISCUSSION

Fungal endocarditis remains a rare but severe complication of cardiac surgery and prosthetic valve implantation, accounting for a small proportion of infective endocarditis cases but carrying disproportionately high morbidity and mortality (Akritidou *et al.*, 2025; Thompson *et al.*, 2023). The interval between cardiac surgery and prosthetic valve fungal endocarditis is highly variable. Contemporary series of *Candida* prosthetic valve endocarditis describe a median delay of approximately 9 months after valve implantation, while data on prosthetic valve endocarditis in general indicate that a significant proportion of infections may arise within the first 120 days following surgery (Rivoisy *et al.*, 2018; Siciliano *et al.*, 2018). In our patient, the unusually early postoperative onset raised diagnostic challenges, particularly in the context of persistently negative bacterial blood cultures.

Fungal endocarditis is notoriously difficult to diagnose, as clinical manifestations are heterogeneous and blood cultures frequently lack sensitivity. Imaging findings such as large vegetations or embolic events may be present but remain non-specific. In this context, persistent inflammation with negative bacterial cultures should prompt early consideration of fungal infection, particularly in patients with recent cardiac surgery or prosthetic material (Akritidou *et al.*, 2025; Ben-Ami *et al.*, 2026).

Current guidelines emphasize combined antifungal therapy with a low threshold for surgical intervention (Delgado *et al.*, 2023). Contemporary reviews further advocate for an aggressive multidisciplinary strategy integrating early surgery, targeted antifungal therapy, and long-term suppression, especially in prosthetic valve infections (Akritidou *et al.*, 2025). Nevertheless, real-world management must often be individualized. In the early postoperative setting, repeat surgery may carry substantial operative risk, and clinicians must balance guideline recommendations against patient-specific factors.

Given the well-described reduced antifungal susceptibility and biofilm-forming capacity of *Candida glabrata*, which are typically associated with poor therapeutic response (Rodrigues *et al.*, 2017), achieving infection control without repeat surgery remains uncommon in prosthetic valve endocarditis. In our patient, the decision to pursue antifungal therapy without immediate reoperation was driven by the recent double valve replacement, preserved prosthetic function, and early identification of the fungal pathogen. Rapid clinical improvement following initiation of voriconazole suggests that prompt targeted antifungal therapy may, in selected circumstances, achieve favorable outcomes even in prosthetic valve endocarditis.

This case therefore underscores several important clinical messages: the need for early suspicion of fungal infection in patients with persistent postoperative inflammation and negative bacterial cultures; the evolving epidemiology of non-albicans *Candida* species; and the potential role of tailored antifungal strategies in carefully selected high-risk surgical patients.

CONCLUSION

Persistent postoperative inflammation with negative bacterial cultures should raise early suspicion of fungal endocarditis, especially in patients with prosthetic valves. Although combined medical and surgical therapy remains the standard approach, this case illustrates that targeted antifungal therapy alone may achieve favorable outcomes in carefully selected high-risk patients. Further studies are needed to better define the role of individualized antifungal strategies in selected postoperative patients with fungal endocarditis.

REFERENCES

1. Akritidou, O., Peristeri, A.-M., Lymperatou, D., Prokopidou, A., Christaki, E., & Nikopoulou, A. (2025). A Review of Current Insights in Fungal Endocarditis. *Journal of Clinical Medicine*, 14(17), 6149. <https://doi.org/10.3390/jcm14176149>
2. Ben-Ami, R., Bassetti, M., Bouza, E., Kosman, A., & Vena, A. (2026). *Candida* endocarditis: Current perspectives on diagnosis and therapy. *Clinical*

- Microbiology and Infection*, 32(3), 382–388. <https://doi.org/10.1016/j.cmi.2025.05.035>
3. Delgado, V., Ajmone Marsan, N., de Waha, S., Bonaros, N., Brida, M., Burri, H., Caselli, S., Doenst, T., Ederhy, S., Erba, P. A., Foldager, D., Fosbøl, E. L., Kovac, J., Mestres, C. A., Miller, O. I., Miro, J. M., Pazdernik, M., Pizzi, M. N., Quintana, E., ... ESC Scientific Document Group. (2023). 2023 ESC Guidelines for the management of endocarditis. *European Heart Journal*, 44(39), 3948–4042. <https://doi.org/10.1093/eurheartj/ehad193>
 4. Edpuganti, S. (2025). Fungal endocarditis: Microbial insights, diagnostic and therapeutic challenges in the modern era. *Exploration of Cardiology*, 3, 101264. <https://doi.org/10.37349/ec.2025.101264>
 5. Garzoni, C., Nobre, V. A., & Garbino, J. (2007). Candida parapsilosis endocarditis: A comparative review of the literature. *European Journal of Clinical Microbiology & Infectious Diseases*, 26(12), 915–926. <https://doi.org/10.48350/25687>
 6. *Global Burden of Disease 2023: Findings from the GBD 2023 study | Institute for Health Metrics and Evaluation*. (n.d.). Retrieved February 20, 2026, from <https://www.healthdata.org/research-analysis/library/global-burden-disease-2023-findings-gbd-2023-study>
 7. Rivoisy, C., Vena, A., Schaeffer, L., Charlier, C., Fontanet, A., Delahaye, F., Bouza, E., Lortholary, O., Munoz, P., Lefort, A., & French Mycoses Study Group and Grupo de Apoyo al Manejo de las Endocarditis en España (GAMES). (2018). Prosthetic Valve Candida spp. Endocarditis: New Insights Into Long-term Prognosis—The ESCAPE Study. *Clinical Infectious Diseases*, 66(6), 825–832. <https://doi.org/10.1093/cid/cix913>
 8. Rodrigues, C., Rodrigues, M., Silva, S., & Henriques, M. (2017). Candida glabrata Biofilms: How Far Have We Come? *Journal of Fungi*, 3(1), 11. <https://doi.org/10.3390/jof3010011>
 9. Siciliano, R. F., Randi, B. A., Gualandro, D. M., Sampaio, R. O., Bittencourt, M. S., da Silva Pelaes, C. E., Mansur, A. J., Pomerantzeff, P. M. A., Tarasoutchi, F., & Strabelli, T. M. V. (2018). Early-onset prosthetic valve endocarditis definition revisited: Prospective study and literature review. *International Journal of Infectious Diseases: IJID: Official Publication of the International Society for Infectious Diseases*, 67, 3–6. <https://doi.org/10.1016/j.ijid.2017.09.004>
 10. Thompson, G. R., Jenks, J. D., Baddley, J. W., Lewis, J. S., Egger, M., Schwartz, I. S., Boyer, J., Patterson, T. F., Chen, S. C.-A., Pappas, P. G., & Hoenigl, M. (2023). Fungal Endocarditis: Pathophysiology, Epidemiology, Clinical Presentation, Diagnosis, and Management. *Clinical Microbiology Reviews*, 36(3), e0001923. <https://doi.org/10.1128/cmr.00019-23>