

# Cardiac Tamponade Secondary to *Burkholderia cepacia* Infection: A Rare and Challenging Clinical Presentation

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## INTRODUCTION

*Burkholderia cepacia* is an opportunistic Gram-negative pathogen primarily associated with respiratory tract infections in individuals with cystic fibrosis or compromised immune systems. Its manifestation in immunocompetent individuals is uncommon, and progression to severe complications such as pericardial effusion or cardiac tamponade is exceedingly rare, posing significant diagnostic and therapeutic challenges<sup>1</sup>.

## DISCUSSION

*Burkholderia cepacia* is a rare cause of severe infection in immunocompetent individuals, with cardiac tamponade being an exceptionally uncommon manifestation. This case emphasizes the importance of early diagnosis and intervention, as timely pericardiocentesis and targeted antibiotic therapy were crucial for patient recovery. The patient's history of freshwater exposure suggests an environmental source, highlighting the need to consider atypical pathogens in relevant clinical contexts<sup>2</sup>. The successful use of a central venous catheter set for pericardiocentesis demonstrates the necessity for adaptability in resource-limited settings. This case reinforces the need for a broad differential when evaluating pericardial effusion. It illustrates that *Burkholderia cepacia*, though uncommon, can lead to life-threatening complications even in otherwise healthy individuals.

## CONCLUSION

This case highlights the importance of prompt diagnosis and early intervention in managing rare but potentially life-threatening infections such as *Burkholderia cepacia*. Clinical vigilance, timely therapeutic decision-making, and adaptability in resource utilization were pivotal to the successful outcome, particularly in resource-limited settings.

**Keywords:** Cardiac Tamponade, *Burkholderia cepacia*, Pericardiocentesis

## REFERENCES

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## CASE DESCRIPTION

A 55-year-old previously healthy male presented with a three-day history of pleuritic chest pain, accompanied by a week of dry cough, fever, anorexia, and intermittent right lumbar pain. He reported recent freshwater fishing, raising concerns about exposure to aquatic pathogens. On examination, he was hypotensive with atrial tachycardia and clinical signs of pericardial effusion. Echocardiography confirmed a large circumferential pericardial effusion with right ventricular diastolic collapse, indicating cardiac tamponade. Due to the unavailability of a pericardiocentesis kit, ultrasound-guided pericardiocentesis was performed using a central line set via the left parasternal approach, draining 1.1 liters of hemoserous fluid and stabilizing the patient. Blood cultures grew *Burkholderia cepacia*. Imaging also revealed a mild left pleural effusion and gallbladder wall thickening with pericholecystic fluid. The patient received intravenous ceftriaxone, piperacillin-tazobactam, and ceftazidime, followed by oral trimethoprim-sulfamethoxazole. He was discharged hemodynamically stable with full symptom resolution at follow-up.



Image: Apical 4 chamber: Cardiac Tamponade

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