



Unveiling the rarity

Actinomyces meyeri-linked constrictive pericarditis in Algeria

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INTRODUCTION

Actinomycosis is a subacute-to-chronic bacterial infection caused by filamentous, gram-positive anaerobic or microphilic bacteria primarily from the genus *Actinomyces*. However, *Actinomyces* is a rare cause of pericarditis, with only 27 reported cases since 1980, These patients often present with symptoms of heart failure We experienced a unique case of constrictive pericarditis due to *Actinomyces meyeri*.

Materials and methods

F.S a 59-year-old male with a history of diabetes and renal insufficiency presented with acute anginal chest pain and New York Heart Association Class II dyspnea, in the context of Ischemic dilated cardiomyopathy.

On his admission, initial Thoracic CT scan and transthoracic echocardiography (TTE) demonstrated a large pericardial effusion for which he underwent urgent pericardiocentesis

Three pericardial fluid cultured gram-positive bacillus and was confirmed for *A. meyeri* ultimately. He was diagnosed with purulent bacterial pericarditis,

However, despite receiving appropriate intravenous antibiotic therapy with cefotaxime and gentamicin, the patient's condition deteriorated, ultimately resulting in his demise.

ANTIBIOTICS

CMI interpretation

Penicillin

Sensitive

Ampicillin

Sensitive

Amoxicillin / Clavulanic acid

Sensitive

Cefotaxim

Sensitive

Imipenem

Sensitive

Clindamycin

Resistant

Pristinamycin

Sensitive

Metronidazole

Resistant

Chloramphenicol

Sensitive

Vancomycine

Sensitive

Discussions

- PBP is uncommon in the age of antibiotics, but remains a feared entity due to its rapidly progressive nature and 100% mortality rate if untreated. Even with treatment, mortality remains excessively elevated (20–40%)*
- primary PBP is exceedingly rare. Secondary PBP is more common**, predisposing factors include immunosuppression, dialysis, chemotherapy, In this case, a diagnosis of secondary PBP is more likely, given the patient had renal insufficiency requiring dialysis.
- *Actinomyces* is a commensal organism usually found in the oral cavity and digestive tracts. Pathogenic actinomycosis can arise when these barriers are compromised, affects commonly pulmonary tissues. *Actinomyces israelii* is the most prevalent pathogenic species; *A. meyeri* infections remain rare, but pericardial involvement has previously been described***.
- *Actinomyces* is susceptible to beta-lactam antibiotics. In this case, although the patient was managed with intravenous cefotaxime and gentamicin following pericardiocentesis, the patient was deceased.

CONCLUSION

Despite its rarity in the modern era of antibiotics, PBP is a highly lethal condition requiring early recognition and treatment. Percutaneous pericardiocentesis may be utilized initially to achieve hemodynamic stability, identify pathogen. However, surgical pericardiectomy is often required, especially when there is clinical non-response or rapid deterioration with conservative treatment.

references

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