

Cutibacterium acnes: a novel bacterial etiology of sternal osteomyelitis

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Introduction:

Sternal osteomyelitis following median sternotomy is an extremely uncommon type of deep sternal wound infection. It is considered a life-threatening complication that may develop after cardiothoracic surgery. Its occurrence is relatively low, ranging from 0.2% to 8%, with an associated mortality rate ranging from 8% to 45% (2). For this reason, a high index of suspicion is required in the emergency department setting to reach the ultimate diagnosis.

Case presentation:

We detail a case of a middle-aged man with a history of aortic dissection repair 2 years ago who visited the emergency department with a 4-day history of chest pain and low-grade fever. Clinical evaluation revealed a tender sternal mass, and diagnostic testing revealed elevated inflammatory markers and cardiac enzymes. CT angiogram displayed a destructive sternal lesion. He was admitted with a preliminary diagnosis of sternal osteomyelitis and received a multidisciplinary treatment approach, involving cardiac surgery and infectious disease specialists. Subsequent MRI confirmed the diagnosis, and aspirated subcutaneous collection culture grew *Cutibacterium acnes*. This organism is a novel causal agent of sternal osteomyelitis, which has rarely been documented in the literature. Subsequently, the patient was treated with a 6-week course of antibiotics.

Conclusion:

Sternal osteomyelitis is a difficult diagnosis to establish in the emergency department. A high index of suspicion and thorough history are necessary for appropriate disposition and ultimate management.

Keywords:

Case report, sternal osteomyelitis, sternotomy, *Cutibacterium acnes*.