Kali Gagnon, DO

UNMC

Omaha

kali.gagnon@unmc.edu

(850) 417-3996

Case report (includes case series that include 5 or fewer patients)

Mycotic Coronary Aneurysm: A Rare Cause of STEMI

Mycotic coronary aneurysms are rare but complicated etiologies for STEMI.

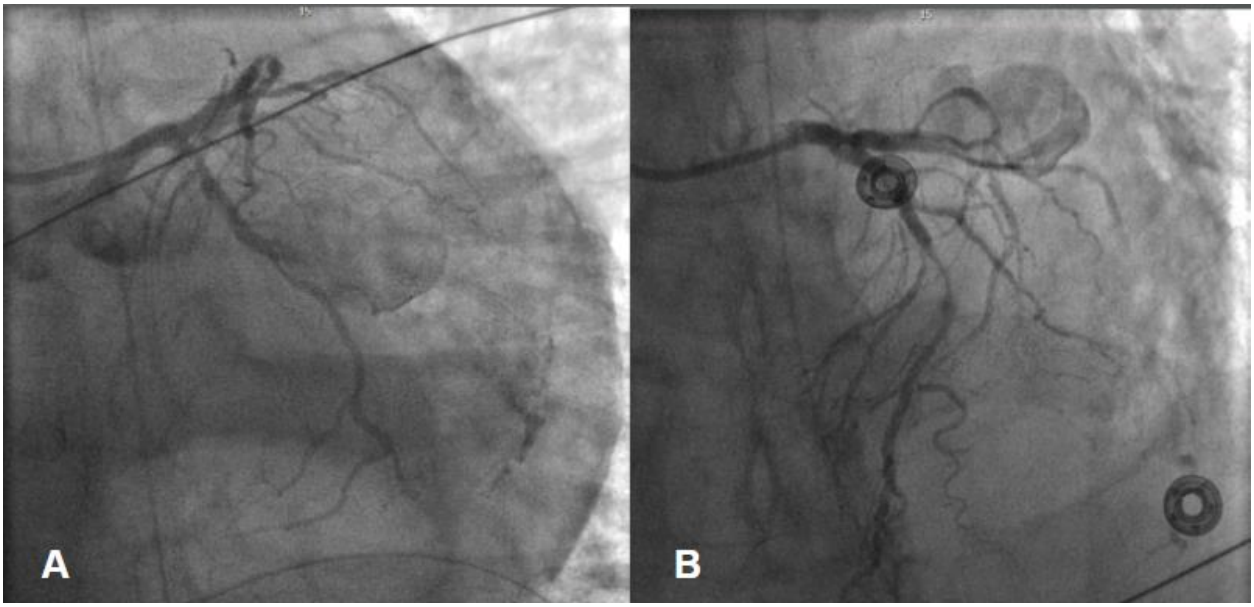
Title: Mycotic Coronary Aneurysm: A Rare Cause of STEMI
Authors: Kali Gagnon, DO; Andrew Goldsweig, MD, FACC, FSCAI, RPVI; Gregory Pavlides, MD, PhD, FACC, FESC

Background: Mycotic coronary aneurysms are rare but complicated etiologies for STEMI.

Case: An 80 year old man presented with intractable back and flank pain. He developed diffuse myalgias and exquisite pain with movement of his extremities. Blood cultures grew methicillin-sensitive *Staphylococcus aureus* and MRI of his spine showed multiple areas of facet joint edema concerning for discitis and psoas abscess formation. He developed new onset atrial fibrillation and elevated troponin for which cardiology was consulted. Troponin peaked at 0.23 ng/mL and trended down and transesophageal echocardiogram was without any endocarditis concerns. His antibiotics were de-escalated to monotherapy with oxilicillin. On hospital day 14, he had chest pain and went into ventricular fibrillation arrest. ROSC was obtained with defibrillation, and EKG demonstrated lateral ST elevation. His troponin trended to >71 ng/mL.

Decision making: Emergent coronary angiogram showed a large aneurysm cavity within the left circumflex and first obtuse marginal coronary arteries filled with thrombotic debris consistent with a mycotic coronary aneurysm (A, B). Cardiothoracic surgery was consulted for possible resection of the mycotic aneurysm and bypass. Unfortunately, due to the multiple areas of infection and ongoing sepsis, he was not a surgical candidate. Family did not want further aggressive treatments and comfort measures were pursued.

Conclusion: Mycotic coronary aneurysm is a very rare condition with fewer than 100 cases ever reported. However, it is a highly lethal condition, causing myocardial infarction and an in-hospital mortality rate >40% (Baker Heart Lung Circ 2020). Diagnosis is difficult, and physicians should have a high suspicion for mycotic aneurysm in patients with bacteremia or endocarditis and myocardial infarction. Diagnosis is made with coronary angiography. There are no clinical trials to guide management of mycotic coronary aneurysms. Expert recommendations suggest treatment of the infection with antibiotics and emergent surgical intervention with debridement and bypass in cases with significant ischemia.


A
B