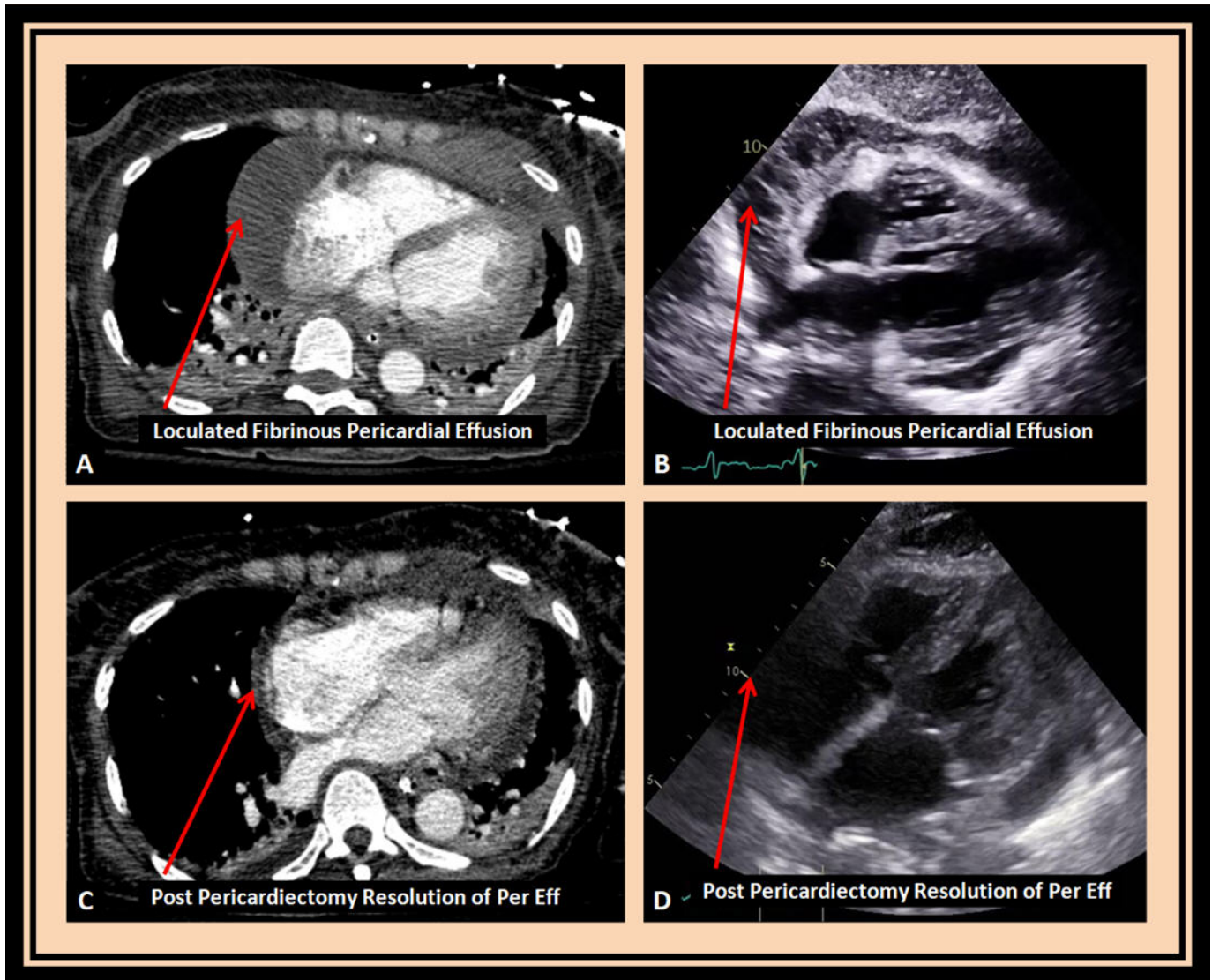


Bacterial Pericarditis: *Loculation Requiring Pericardiectomy!*

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Description

The above coronal computed tomography (CT) image (A) and subcostal transthoracic echocardiography (TTE) image (B) reveal a highly fibrinous pericardial effusion, recurrent following initial pericardial window, with multiple loculations, especially along the right atrial and right ventricular borders; initial pericardial fluid cultures grew *Streptococcus pneumoniae*.

Further percutaneous drainage was deemed not feasible due to excessive adhesions. Persistent fever and positive blood cultures prompted successful widespread pericardiectomy of the majority of the anterior and part of the posterior pericardium with resultant resolution of the loculation on CT (C) and TTE (D) corresponding images, resulting in clinical improvement.

Discussion

Bacterial pericarditis is a serious infection involving the pericardial fluid with high morbidity, and mortality of up to 85% if untreated and nearly 40% with treatment [1]. Although in the majority of cases infectious pericarditis is secondary to procedures or manipulation close to the pericardium, rare cases of primary bacterial pericarditis, without any demonstrable cause, have been reported [2].

Several pathogens have been reported to cause bacterial pericarditis, most commonly *Staphylococcus* and *Streptococcus* species. A case of bacterial pericarditis due to *Staphylococcus aureus* was reported leading to cardiogenic shock, and was successfully treated with pericardial drainage and antibiotics [3]. Another case of primary bacterial pericarditis due to *Streptococcus pneumoniae* was reported which also responded to drainage and antibiotics [4].

Bacterial pericarditis can lead to rapid pericardial fluid accumulation leading to cardiac tamponade and empyema which may be fatal if not treated promptly [5]. Constrictive pericarditis necessitating Pericardiectomy despite initial fluid drainage and antibiotics is also a reported complication of bacterial pericarditis [6].

Several predisposing conditions and compromised immune status have been linked to infectious pericarditis. Bacterial pericarditis due to *Streptococcus hominis* was reported in a patient 18 days following COVID-19 infection, and treated successfully with drainage and antibiotics [7].

Iatrogenic bacterial pericarditis can directly or indirectly be related to intra-abdominal procedure. Polymicrobial pericarditis has been reported due to penetration of the pericardium by catheter tip in a laparoscopic adjustable gastric band, leading to tamponade [8]. Another case of bacterial pericarditis due to biliary stent migration and penetration of the pericardium has been reported [9].

A retrospective review of 33 cases of purulent pericarditis concluded that the condition does not cause classic findings of pericarditis and is often diagnosed late with tamponade or at

autopsy [10]. It is imperative to maintain a high index of suspicion of bacterial pericarditis in patients with infection and any hemodynamic alterations so as prompt life-saving treatment can be implemented.

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