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Acute purulent pericarditis complicated by cardiac tamponade in a human immunodeficiency virus-positive patient

Short title: Purulent pericarditis-related cardiac tamponade

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A 42-year-old male with a positive history of drug abuse was admitted to cardiology department on account of signs and symptoms of cardiogenic shock and echocardiographic features of life-threatening myocardial tamponade (**Figure 1A**). The patient denied any chronic conditions. The patient was urgently submitted to percutaneous pericardiocentesis performed through the infrasternal angle at the local catheterization laboratory (**Figure 1B**), allowing for slow drainage of 700 ml of dense turbid effusion via pig-tail catheter (**Figure 1C**). A computed tomography of the chest did not show significant inflammatory abnormalities within lung parenchyma, while the normal location of the pericardial drain and significant deposits of fluid in the pericardial and pleural cavities were confirmed (**Figure 1D**). Microbiological analysis of the purulent effusion (**Figure 1C**) yielded the growth of *Haemophilus influenzae* and subsequent serologic tests excluded tuberculosis infection but confirmed human immunodeficiency virus (HIV) carriage. The patient finally admitted having undergone an incomplete former

antiretroviral therapy for acquired immunodeficiency syndrome. From the onset of in-hospital stay, the patient received complex antibiotic therapy comprising intravenous ceftriaxone in combination with ciprofloxacin of 14-day duration, which was consistent with subsequent antibiogram, leading to gradual decrease of inflammatory parameters. During in-hospital stay, several episodes of atrial fibrillation were reported, which triggered pharmacological cardioversion with amiodarone. As a result of the applied treatment, patient's general condition improved and the patient was subject to further cardiac follow-up on an outpatient basis. Recommendations included a diuretic and colchicine, proton pump inhibitor, thromboprophylaxis and antiarrhythmic treatment for one month and resumption of retroviral therapy. Given symptoms of gastritis, non-steroidal anti-inflammatory drugs were discontinued. The follow-up visit at 1 month showed mild features of pericardial constriction on transthoracic echocardiography with a slight amount of fluid behind the right ventricle and no pleural effusion, while the patient remained asymptomatic. The prognosis of pericarditis is strictly dependent on the cause of the infection. Untreated bacterial pericarditis confers high mortality rate, while cardiac tamponade and constrictive pericarditis are common complications observed [1, 2]. The diagnosis of purulent pericarditis is extremely rare and should also be considered in the category of an indicator disease for HIV.

Article information

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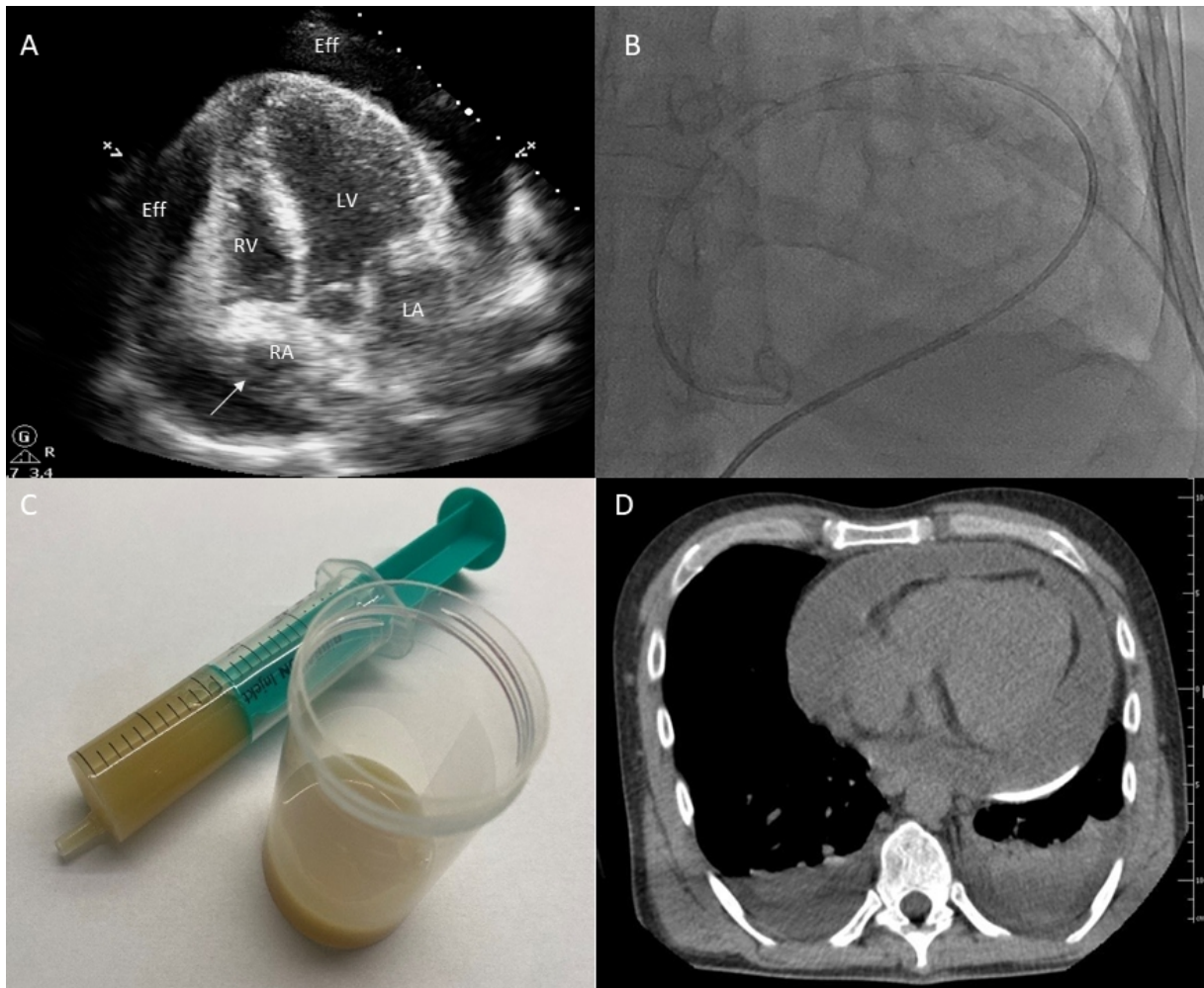


Figure 1. Diagnostics and treatment of cardiac tamponade in the course of bacterial pericarditis in human immunodeficiency virus-positive patient. **A.** Transthoracic echocardiography; pericardial effusion of 28 mm with echocardiographic signs of cardiac tamponade (arrow: compression of right atrium by effusion). **B.** Fluoroscopy with pig-tail catheter introduced to pericardial cavity via the infrasternal angle. **C.** Creamy effusion drained from pericardial cavity. **D.** Computed tomography of the chest with signs of residual pericardial and bilateral pleural effusion and no overt pathological lesion within lung parenchyma and mediastinum

Abbreviations: Eff, effusion; RV, right ventricle; RA, right atrium; LV, left ventricle; LA, left atrium