Atypical cause of purulent pericarditis

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A 53-year old male farmer with no significant past medical history was hospitalized because of cardiac tamponade. On admission, patient was febrile, dyspneic and orthopneic, with elevated inflammatory parameters. Initial echocardiogram showed circular pericardial effusion up to 26-31mm, with fibrin deposits and elements of constriction. Pericardial drainage was performed (3000 ml of purulent effusion in total over 9 days) along with intrapericardial application of alteplase due to large amounts of fibrin with loculations. Diagnosis of purulent pericarditis was confirmed by biochemical and cytological analysis of the pericardial fluid. Multiple hemocultures and effusion cultures were sterile and *Mycobacterium tuberculosis* was excluded using PCR. Afterwards, serology on atypical microorganisms was performed. Beside NSAID, empiric antibiotic therapy with vancomycin and meropenem was started, followed by good clinical response and partial normalization of inflammatory markers. On the 13th day of antimicrobial therapy, patient became febrile with inflammatory parameters elevation. Serology results (ELISA and Western Blot) came positive for *Borrelia burgdorferi*. Therapy was changed to iv ceftriaxone for 14 days, followed by 28 days of doxycycline per os, along with NSAID and colchicine. A month after, control echocardiography revealed minimal amount of pericardial effusion and fibrin deposits, some elements of mild constriction and no laboratory signs of active infection. With this case report, we wanted to emphasize the importance of distinguishing the cause of purulent pericarditis taking into account atypical organisms, especially in case of inadequate response to empiric therapy. *Borrelia burgdorferi* infection, although usually causing conducting abnormalities and myocarditis, should be suspected in patients with purulent pericarditis when some risk factors (profession, endemic areas etc.) are present, even if there is no evidence of tick bite or erythema.^{1,2}

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LITERATURE

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