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Case Report Open Access

Cardiac Tamponade in HIV- A Rare Cause

Nagina Agarwal*

General Physician, Dr. Ram Manohar Lohia Hospital, Delhi, India

Abstract

Pericardial effusion is seen in 25% of HIV patients with advanced disease on echocardiography. But cardiac tamponade is rare in HIV. Here we report an interesting case of cardiac tamponade in HIV secondary to *Burkholderia cepacia (B. cepacia*) infection.

Keywords: HIV, Cardiac Tamponade , *B. cepacia*

Case Report

A 46 year old heterosexual male on antiretroviral treatment for five years, presented with high grade fever and left sided chest pain for fifteen days. Chest pain increased on movement, coughing and deep breath. There was no history of cough, expectoration, haemoptysis, trauma, rash, joint pain. There was history of occasional alcohol intake. On examination, patient was conscious, oriented and pale. Pulse was 104 per min. Blood pressure was 110/70 mm. Pulsus paradoxus of 18 mm was present. Jugular venous pressure was increased 8 cm above sternal angle. Chest was clear and there was no pleural rub. On cardiovascular examination, heart sounds were muffled. Pericardial friction rub was present.

Investigation report showed haemoglobin=11 gm%, total leukocyte Count=7800 per mm^3, differential leukocyte count=70% polymorphs, 24% lymphocytes, 4% eosinophils, 2% monocytes, Erythrocyte sedimentation rate=34 in first hour, blood urea=20 mg%, serum creatinine=1 mg%, serum bilirubin=1.7 mg%, serum aspartate trans aminase=34 IU/ml, serum oxaloacetate transaminase=45 IU/ml, serum proteins=6.4 mg%, serum albumin=4.2 mg%. Blood culture and urine culture were sterile. Chest roentgenogram showed enlarged cardiac silhouette with clear lung fields. Electrocardiogram was low voltage with sinus tachycardia. Echocardiography [1] showed moderate pericardial effusion with right atrial diastolic collapse suggestive of tamponade. Urgent pericardiocentesis was done. Total of 500 ml of haemorrhagic pericardial fluid was drained via pericardial catheter. Examination of pericarial fluid showed 3200 cells, 80% polymorphs and 20% lymphocytes, protein=3.2 gm%, gram negative bacteria on gram stain, polymerase chain reaction for tuberculosis negative , fungal stain negative and no malignant cells were seen. TORCH and VDRL were negative. Rheumatoid factor and antinuclear antibody were negative. CD4 count was 173 cell per mm^3. Culture of pericardial fluid grew *B. cepacia* sensitive to levofloxacin and cotrimoxazole. Patient was given levofloxacin and cotrimoxazole for four weeks. Repeat echo after 4 weeks showed minimal effusion.

Discussion

Average incidence of pericardial disease in HIV [2] is 21%. Most cases are asymptomatic [3]. Gowda et al. analysed 185 cases of cardiac tamponade in HIV & observed that the most common causes are *Mycobacteria. tuberculosis, Avium. intracellulare and kansasii* followed by *Staphylococcus. aureus, Streptococcus, Pseudomonas. aeruginosa*, *Listeria* and *Klebsiella*. Rarer causes included *Cryptococcus, Nocardia*, *Aspergillus, Cytomegalovirus* and *HIV*. 8% had lymphoma and & 7% had kaposi sarcoma. In 20%, no cause was identified [4].

Chen et al. reported that cardiac tamponade was seen in 16 of the 40 cases of pericardial effusion in HIV [5]. *B. cepacia* is an opportunistic pathogen seen commonly in patients with cystic fibrosis, chronic granulomatous diseases and sickle cell haemoglobinopathies. It can cause life threatening infections like pneumonia, meningitis, peritonitis and endocarditis in these patients. But pericardial effusion due to *B. cepacia* is rare. Only two cases have been reported so far , one in an immmunocompetant child by Sharma et al. [6] and other in HIV secondary to video assisted thoracoscopic surgery [7]. It is important as an upcoming nosocomial pathogen resistant to common antibiotics in the era of increasing drug resistance. Treatment is given for 4 weeks guided by sensitivity report.

Summary

Pericardial effusion is common in HIV but tamponade is rare and *B. cepacia* as the causative organism is very rare. It is both difficult to isolate and treat.

Learning points

- Cardiac tamponade is rare in HIV.
- *B. cepacia* is rare cause for haemorrhagic pericardial effusion, difficult to isolate & resistant to commonly used antibiotics.
- Treatment is given for 4 weeks.

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***Corresponding author:** Dr. Nagina Agarwal, M.B.B.S., M.D., General Physician, Dr. Ram Manohar Lohia Hospital, Delhi, India; Tel: 91-9212291899; E-mail: nagina3@gmail.com

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