

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

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Title: CLINICAL AND ECHOCARDIOGRAPHIC CHARACTERISTICS OF PATIENTS WHO DEVELOPED ADVERSE EVENTS FOLLOWING BENZATHINE PENICILLIN G INJECTION FOR SECONDARY PROPHYLAXIS OF RHEUMATIC HEART DISEASE: EXPERIENCE FROM A UNIVERSITY HOSPITAL IN ETHIOPIA

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Background & Aims: Secondary prophylaxis through long-term Benzathine penicillin G (BPG) administration is essential to prevent the progression of acute rheumatic fever to rheumatic heart disease (RHD). BPG has been shown to be the most efficacious antibiotic for this purpose; however, serious adverse events associated with its administration have been anecdotally reported. This study therefore aimed to characterize the clinical and echocardiographic features of RHD patients who experienced serious adverse events associated with BPG administration for RHD prophylaxis in Ayder University hospital, Northern Ethiopia

Methods: Charts of Patients who received intramuscular BPG for secondary prophylaxis of RHD and had fatal adverse event were reviewed retrospectively. The study was done at Ayder hospitals' outpatient adult and pediatric units from January 2017 to December 2022. Data was collected using a structured questionnaire from available sources. Demographic, clinical and Echocardiographic Characteristics were documented and analyzed.

Results: Three cases that developed fatal adverse events were retrieved. All patients were females, two of them adults and one pediatric age group. All patients had clinical and echocardiographic evidence of advanced rheumatic valvular heart disease. The first case was a 19-year-old with severe mitral regurgitation, moderate pulmonary hypertension and NYHA class IV Heart Failure (HF) with recurrent hospitalization (three times in one year) for HF. The second case was a 19-year-old with severe mitral stenosis, severe pulmonary hypertension and NYHA class IV HF. This patient had been again had recurrent hospitalization (seven times in 5 years) for HF and she had thyrotoxicosis. Case three was a 14-year-old adolescent with moderate to severe aortic and mitral regurgitation, severe pulmonary hypertension and NYHA class IV HF. Two of the patients had received BPG prior to the event with no previous adverse reaction but case 3 received BPG for the first time. In all the cases, the reaction was fatal. Only one case met Level 2 Brighton criteria consistent with anaphylaxis.

Conclusions: The results of this review showed that anaphylaxis was not a major cause of death in RHD patients following BPG injection and all cases had advanced heart failure clinically and on echocardiography.