RESEARCH LETTER

Relapse of Post Medical Termination of Pregnancy Methicillin Resistant Staphylococcus Aureus Positive Tricuspid Valve Infective Endocarditis

Priyanka Gupta

Any surgical intervention even intravascular lines can lead to Staphylococcus aureus bacteriaemia causing infective endocarditis (IE) (1). But MRSA tricuspid valve IE following MTP has rarely been described, to our knowledge, especially presenting as a relapse case has not been reported so far. Here, we present a rare case report of a female patient as a case of relapse of post MTP MSRA positive tricuspid valve infective endocarditis.

Thirty-four years old female came with low grade fever with pain in back radiating to chest of 2 months duration. Cardiovascular examination revealed a pansystolic murmur best heard at base of heart, increasing in intensity with inspiration along with mild splenomegaly; leucocytosis (18,000/mm3) (N85, L10), ESR 60 mm 1st hour, microscopic hematuria and two blood cultures positive for MRSA. Echocardiography showed tricuspid valve (TV) vegetation at base of TV and moderate tricuspid regurgitation (TR).

In the past, she was treated as a case of MRSA tricuspid valve infective endocarditis with mild to moderate pericardial effusion, received 36 days of antibiotic therapy in the form of ceftriaxone and vancomycin; completed the course of antibiotics two and half months back. There was a significant history of an MTP, 4 days before onset of fever prior to first admission, done at 8 weeks of gestation. Within 15 days, after completion of course of antibiotics, she again developed similar signs and symptoms. In second admission, she was put on linezolid, gentamycin and ceftraxione antibiotics for 6 weeks. Repeat blood culture at 2 weeks was sterile. She was discharged after 6 weeks of treatment.

Infective endocarditis (IE), infection of endocardial surface of heart, with intracardiac effects including severe valvular insufficiency, which may lead to intractable congestive heart failure and myocardial abscess and systemic signs and symptoms through sterile and infected emboli and various immunological phenomena. In last 50 years, worldwide incidence of IE has been 2-4 cases/ 100,000 persons/year; 25-50% of cases occur in people > 60 years old, 3 times more common in females. High mortality is associated if left untreated (2).

Fig.1 Echocardiography Showing Tricuspid Valve (TV) Vegetation at base of TV and Moderate Tricuspid Regurgitation (TR)

Relapse of IE occurs within 2 months of finishing clinically effective treatment, more common with organisms like S. aureus, Enterococci, pseudomonas, intravenous drug users (40%), patients with pretreatment symptoms of IE of more than 3 months duration; and in presence of previous history of IE, prosthetic valve or congestive heart failure and in enterococci infection of mitral valve (3, 4, 5). In our case, patient relapsed after treatment with vancomycin and ceftriaxone but responded to linezolid treatment (6, 7).

Overall, S. aureus is the most common cause of IE; 35-60.5% of Staphylococcus bacteriaemias are complicated by IE, more than half cases are not associated with any underlying valvular disease; mortality rate is 40%. Incidence of MRSA is upto 50%, primary risk factor for S. aureus blood stream infection is intravascular lines, other risk factors include cancer, diabetes, corticosteroid use, intravenous drug abuses (IVDA), alcoholism and renal failure (8). In our case, possibility of bacteriaemia after MTP was considered.

From the PG Department of Internal Medicine, Govt Medical College, Jammu J&K- India
Correspondence to : Dr. Priyanka Gupta , Senior Residant, PG Deptt. of Internal Medicine , GMC, Jammu

Documentation of continuous bacteriaemia more than 30 minutes in duration is standard test for diagnosing IE (9). 5-10% are culture negative patient (due to fastidious organisms, inadequate blood volume for culture, prior antibiotic intake) (10). Trans-thoracic echocardiography (TTE) is more sensitive for naïve valve endocarditis than transesophageal echocardiography (TEE); is vice versa for prosthetic valve endocarditis (PVE) (11).

Early diagnosis and prompt treatment is needed for IE which is a fatal disease. Antimicrobials should not be administered to febrile patients with heart murmurs without first obtaining two sets of blood cultures, especially with history of some surgical intervention in past that could lead to bacteriaemia. Possibility of relapses of IE can be kept despite adequate antibiotic treatment especially with vancomycin therapy.

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