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Complete cure with medical treatment of prosthetic mitral valve endocarditis, which is initially diagnosed as mitral valve thrombus

Başlangıçta mitral kapak trombüsü tanısı konulup medikal tedavi ile tam iyileşme sağlanan yapay mitral kapak endokarditi

Dear Editor,

A 59-year-old male patient was admitted to hospital with a complaint of fatigue and anorexia. He underwent mitral valve replacement operation nine months before the presentation. After the operation, patient attended control examinations irregularly. On admission; his blood pressure, heart rate and body temperature were within the normal range. Physical examination was also normal except prosthetic valve sound on auscultation. Electrocardiogram showed normal sinus rhythm and first laboratory findings were as following: INR: 1.64, prothrombin time: 21.8 second, sedimentation rate: 83 mm/h, hemoglobin: 13.9 gr/dl, hematocrit: 41.8%, platelets: 278000/mm^3, white blood cells: 11200/ mm^3 with 82% of granulocytes. Transthoracic echocardiography revealed thrombus at the edge of prosthetic valve. Transesophageal echocardiography (TEE) displayed multiple and mobile with a maximum of 1.4x0.4 cm sized thrombus at sutured site of prosthetic valve (Fig. 1). During first 3 days, patient was managed with warfarin and unfractionated heparin. Despite 3-day heparin infusion, control TEE did not show any regression in thrombus size. After that, 50 mg of alteplase was infused with a 4 mg/h dosage. TEE revealed mild regression in the thrombus size after thrombolytic therapy (Fig. 2). However, 24 hours after alteplase infusion, prominent fever, malaise and deterioration of consciousness were observed. Infective endocarditis was thought as possible diagnosis and eight tubes of blood culture was taken. Then, methicillin resistant *Staphylococcus aureus* was isolated in the four specimens as causative microorganism although first two specimens that had been taken during initial evaluation were clear. After six-weeks of antibiotics treatment, control TEE was free of the thrombus and/or vegetation (Fig. 3) and patient was discharged from hospital with a complete cure of prosthetic valve endocarditis (PVE).

PVE is associated with a high mortality rate despite diagnostic and therapeutic improvements. It's incidence is increasing and reaches 20-30% of all infective endocarditis episodes. PVE is a common indication for surgery (1, 2). Complete cure with medical therapy was reported up to 20% of selected cases (2, 3). TEE is a standard method for diagnosis of PVE. However, differentiation of thrombus and vegetation in the prosthetic valves could be difficult in the atypical presentation as our case (4). In such cases, final diagnosis usually is made according to clinical picture (5). Suspicion of endocarditis in such cases could prevent overlooked diagnosis of endocarditis. In the progression of our case, we thought that, initial thrombolytic therapy elicit the clinical signs of endocarditis. Thrombolytics could clear the surface of vegetation from covering thrombus and direct exposing of vegetation surface can lead to development of fever and other signs of endocarditis. Thrombolytic therapy may also enhance the effect of antibiotics via cleaning of thrombus coat, and by the way, antibiotics could penetrate

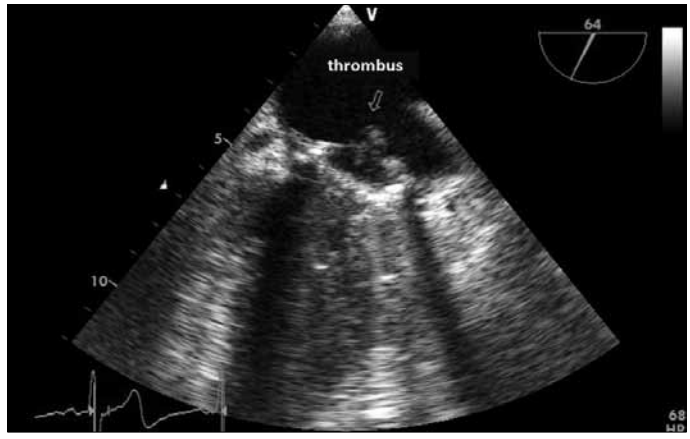

Figure 1. TEE images of mobile vegetation before thrombolytic treatment
TEE - transesophageal echocardiography

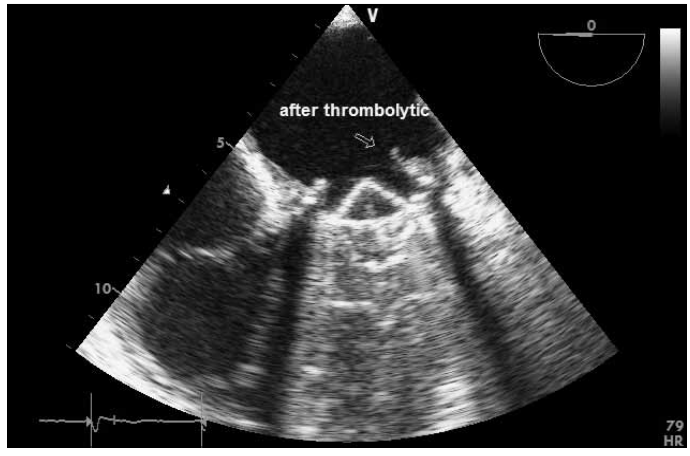

Figure 2. TEE images after thrombolytic treatment
TEE - transesophageal echocardiography

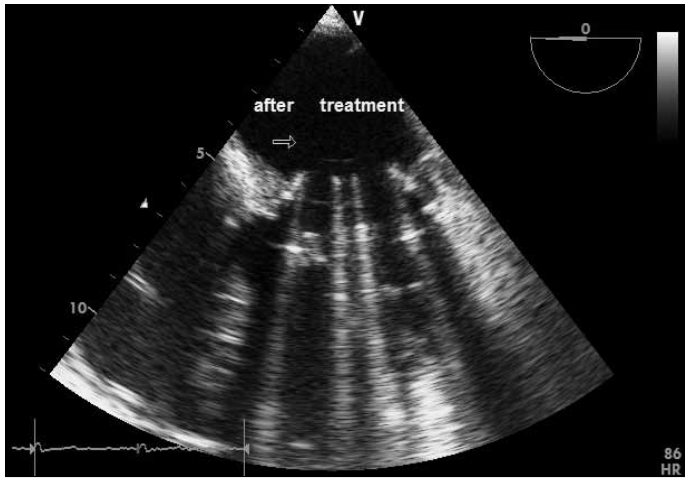

Figure 3. TEE images of prosthetic mitral valve after thrombolytic and antibiotic treatment. Initial images of vegetations were disappeared completely after medical treatment
TEE - transesophageal echocardiography

inside of vegetation more easily.

In conclusion, thrombolytic treatment is not medical fault in the atypical cases of PVE in which differential diagnosis from thrombus could not be done. Rarely, thrombus coat can accompany vegetation in PVE cases and combined therapy with thrombolytics and antibiotics could yield complete cure without any need of surgery.

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Nuclear leakage and hypertension: Is there any relationship?

Nükleer sızıntı ve hipertansiyon: Herhangi bir ilişki var mı?

Editor, the present global public health concern is on radioactive contamination from nuclear electricity plant leakage in Japan after the Japanese biggest Tsunami. Generally, there are many possible health effects on the affected population to the nuclear leakage and an interesting question is on hypertension. The relationship between hypertension and nuclear detonation is of interest. Focusing on the problem of the hypertension, there are some interesting reports. Based on the data from the well-known nuclear leakage episode in 1986, Chernobyl case in Russia, the increased in rate of hypertension among the affected population is noted. In the acute situation, it is noted that high blood pressure might be partly due to the psychological reactions to the accident (1, 2). However, some reports show the long-term effect of radioactive contamination exposure on hypertension. Cardiac contractile dysfunction induced hypertension was proposed (3). Of interest, Alexanin et al. (4) also reported for "positive correlations between the grade of hypertension and the level of chromosomal aberrations". The relationship between hypertension and nuclear detonation is the topic of interest and should be the future focus in following up of the present nuclear crisis originating from Japan.

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