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Prosthetic valve thrombosis: About 205 patients

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Background: The prosthetic heart valve thrombosis (PVT) is a life threatening complication of mechanical valve prosthesis. It can be attributed more frequently to inadequate anticoagulant therapy. In the aortic and mitral position reported incidence varies widely from 0.5% to 6% per patient-year, and is highest in the mitral position and up to 20% in tricuspid valve prosthesis. Medical therapy (thrombolysis) has emerged as an alternative therapy in high-risk surgical patients, considering that surgical prosthetic valve replacement is related to significant operative morbidity and mortality rates.

Aim: The purpose of this study is to present a single-center experience of 205 consecutive patients hospitalized between 2000 and 2016.

Methods: From 2000 to 2016, 205 consecutive patients were hospitalized in our center for mechanical prosthetic valve thrombosis (PVT). The diagnosis of PVT was mainly assessed by echocardiography and/or fluoroscopy. There were 41 men and 164 women (28 pregnant) aged 07–75 years. Prosthetic valve location was mitral in 186 patients, tricuspid in five, aortic in eight and mir-tricuspid in one case. Predisposing causes of MVT were poor compliance with warfarin, pregnancy or unknown. PVT occurred from one day to 38 years after surgery. Delay from first symptoms to hospitalization ranged from one to four months. The diagnosis was an incidental finding during an echocardiographic: on the basis of a subacute increase in the transvalvular gradient seen due to thrombotic obstruction on transthoracic echocardiography and was confirmed by transesophageal echocardiography. First clinical symptoms were: systemic emboli, progressive exertional dyspnea (NYHA II to III–IV), muffled opening or closing sounds of the prosthetic valve; left heart failure, stroke, and cardiogenic shock. Transthoracic echocardiography is the diagnostic tool often used to evaluate a patient with valve prosthesis, when there is suspicion of PVT and also useful in the follow-up of patients during thrombolysis. Fluoroscopy was complementary. Anticoagulation regimen was inadequate, recently stopped or incorrectly conducted.

Results: There were two groups; the first group (A) (139 patients) have been operated (CPB). It was emergency surgery in 103 patients; prosthetic replacement was done (128) or declotting and excision of panus (11 patients). In this group, we deplored 19 (13.6%). 66 patients underwent medical treatment (heparin, oral anticoagulants and aspirin) on clinical, sonographic and under strict supervision in a hospital and some external purposes for a period of seven days at six months. For the non-operated group, all patients have unlocked their fin; four deaths (6.06%) (hemorrhagic stroke, LV dysfunction and dysfunction VD).

Conclusion: PVT remains a serious complication of mechanical heart valve prosthetic with high morbidity and mortality despite aggressive treatment by thrombolysis and/or surgery. Surgery treatment should be the preferred therapeutic modality for most patients with PVT. Thrombolysis followed by heparin, warfarin and aspirin is advised or high-risk surgical candidates without hemodynamic instability under strict echocardiographic survey because of the high risk of thromboembolism during thrombolysis for left sided PVT. For certain category of patients, medical therapy (thrombolysis anticoagulation + + aspirin) may be offered in high-risk surgical patients; this with the consent of patients on medical and surgical rigorous monitoring and evaluating the operational risk compared to the risk of progression under medical treatment.

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