

## **Bioprosthetic Mitral Valve Thrombosis: 10 Years Single Center Experience**

**Lev Bloch**<sup>1</sup>, Limor Ilan Bushari<sup>1</sup>, Mohamed Jabaren<sup>1</sup>, Zafrir Or<sup>1</sup>, Yaron Barak<sup>2</sup>, Dan Aravot<sup>2</sup>, Yoav Turgeman<sup>1</sup>

<sup>1</sup>*Heart Institute, HaEmek Medical Center, Israel*

<sup>2</sup>*Cardio- Thoracic Department, Lady Davis, Carmel Medical Center, Israel*

### **Background:**

Mitral valves bioprosthesis (MVB) are advantageous over mechanical devices as their incidences of thrombosis are significantly lower. However the real prevalence of MVB thrombosis is unknown

### **Aim:**

We aimed to determine the prevalence and predictors for MVB thrombosis.

### **Material & Methods:**

During 10 years, 156 pts were referred to MV surgery. Thirty five of 156 (22.4%), mean age 68.7± 9.5 years (range 40-81) underwent valve replacement using bio prosthesis. Among them: Mozaic 16 (46%), Magna Perimount 9(26%), Carpentier Edwards 4(11%) and other 6 (17%). The etiology for MV surgery was: ischemic 17(49%), rheumatic 11(31%) degenerative 6 (17%) and endocarditis 1 (3%). Fourteen of 35(40%) had persistent atrial fibrillation under chronic anticoagulation. All pts were followed clinically and echocardiographically in a time interval of 6-12 months after surgery.

### **Results:**

In 3 /35 pts (8.5%) the diagnosis of MVB thrombosis was established. Mean period from surgery to the index event was 40 ± 18 months. Predominant symptoms were severe dyspnea and reduced functional capacity. All 3 pts were in sinus rhythm without anticoagulation and belong to the ischemic etiology group. Echocardiography showed significantly reduced LVEF ( $\leq 35\%$ ), increased diastolic pressure gradient and elevated pulmonary artery systolic pressure. 3D Trans esophageal echocardiography demonstrated echogenic masses on the left ventricular face of MVB suggestive of thrombi. Two pts underwent redo MV surgery and one recommended aggressive long life anticoagulation. Multivariate analysis of clinical and echocardiographic parameters showed that only reduced EF ( $\leq 35\%$ ) was a predictor to this phenomenon (p=.005)

### **Conclusion:**

1. MVB thrombosis is a relatively frequent cause of valve dysfunction.
2. The predictor of this phenomenon was significantly reduced LVEF in pts with ischemic etiology.
3. In this group the need for early and long term anticoagulation should be considered.