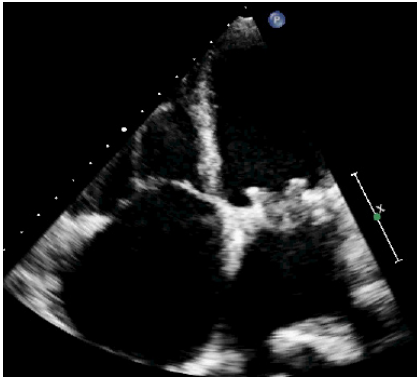


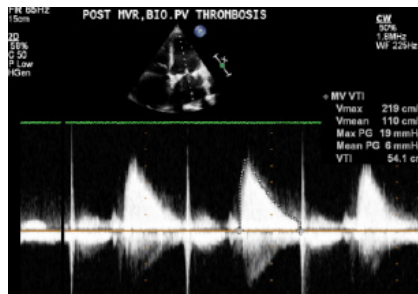
## PICTORIAL CME

## Thrombosis of Bioprosthetic Mitral Valve

Rajeev Bhardwaj<sup>1</sup>, Munish Dev<sup>2</sup>

**Fig. 1: Evidence of thrombus over the mitral bioprosthetic valve**

A 45 years female, had undergone mitral valve replacement for severe MR, with bioprosthetic valve, two and half months back. She was on Warfarin, 4 mg once a day. She presented with breathlessness for three day. She also had paroxysmal nocturnal dyspnoea. On examination her BP was 100/70 mm Hg, heart rate 124/min, respiratory rate 24/min. On cardiovascular examination, she had long mid diastolic murmur at apex. Echocardiography showed evidence of thrombus over the prosthetic mitral valve (Figure 1). Peak gradient across mitral valve was 19mm Hg and mean



**Fig. 2: Continuous valve Doppler across prosthetic mitral valve**

gradient was 6 mm Hg. Her INR was 1.3. She was thrombolized with streptokinase and improved.

The incidence of thrombosis of mechanical prosthetic valves ranges from 0.5 to 6 percent (in the aortic- and mitral-valve positions) to 20 percent (in the tricuspid-valve position) per patient-year. For bioprostheses, the overall average rate of thrombotic stenosis is 0.03 percent per year.<sup>1</sup> Heart-valve thrombosis may present insidiously, and recognition of it may be difficult. Guidelines differ in their recommendations regarding the choice of treatment for prosthetic valve thrombosis. For example, although the Society for Heart Valve Disease (SHVD)

recommends fibrinolytic therapy (FT) for all patients,<sup>2</sup> the European Society of Cardiology (ESC) recommends FT only if the risk of surgery is prohibitive or in the event that it is not available and the patient cannot be transferred.<sup>3</sup>

## References

1. Grunkemeier GL, Rahimtoola SH. Artificial heart valves. *Annu Rev Med* 1990; 41:251-263.
2. Lengyel M, Horstkotte D, Voller H, Mistiaen WP. Recommendations for the management of prosthetic valve thrombosis. *J Heart Valve Dis* 2005; 14:567-575.
3. Vahanian A, Alfieri O, Andreotti F, Antunes MJ, Baron-Esquivias G, Baumgartner H, Borger MA, Carrel TP, De Bonis M, Evangelista A, Falk V, Jung B, Lancellotti P, Pierard L, Price S, Schafers HJ, Schuler G, Stepinska J, Swedberg K, Takkenberg J, Von Oppell UO, Windecker S, Zamorano JL, Zembala M, Bax JJ, Ceconi C, Dean V, Deaton C, Fagard R, Funck-Brentano C, Hasdai D, Hoes A, Kirchhof P, Knuuti J, Kolh P, McDonagh T, Moulin C, Popescu BA, Reiner Z, Sechtem U, Sirnes PA, Tendera M, Torbicki A, Von Segesser L, Badano LP, Bunc M, Claeys MJ, Drinkovic N, Filippatos G, Habib G, Kappetein AP, Kassab R, Lip GY, Moat N, Nickenig G, Otto CM, Pepper J, Piazza N, Pieper PG, Rosenhek R, Shuka N, Schwammenthal E, Schwitler J, Mas PT, Trindade PT, Walther T. Guidelines on the management of valvular heart disease (version 2012): The Joint Task Force on the Management of Valvular Heart Disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS). *Eur Heart J* 2012; 33:2451-2596.

<sup>1</sup>Professor, <sup>2</sup>Senior Resident, Cardiology, Indira Gandhi Medical College, Shimla, Himachal Pradesh  
Received: 10.02.2017; Accepted: 11.04.2018