Long-Term Follow-Up after Thrombolytic Therapy for Obstructive Prosthetic Heart Valve Thrombosis

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Background: Thrombolytic therapy has become an alternative to re-do surgery in certain patients with obstructive prosthetic valve thrombosis (OPVT). We summarize our long-term single-center results.
Methods and Results: 67 patients were admitted with OPVT of mitral (42), aortic (16) or tricuspid (9) valves within a 15-year period (1996-2001). 50 of these patients (age 55.8±15.0, male/female = 16/34) received thrombolytic therapy, after ruling-out high-risk thrombi by TEE. Major results are depicted in the table. Full response (FR) to thrombolysis was 34/50 (68%) – 65%, 70% and 70% for MVR, AVR and TVR, respectively. Additional 5 patients had partial response (PR). There were 6 (12%) neurological complications, one case of transient STEMI and 2 cases of major bleeding. There was no treatment-related mortality.
11 patients (22%) required a re-do to surgery after unsuccessful thrombolysis. Late reoperation was required in additional 7 patients (14%).
During a mean follow-up of 7.4±4.5 years, 22 patients (44%) died. These included 14/33 (42%) of initial responders, who died due to other valvular disease (3), CVA (2), CHF (1), malignancy (1), infection (2) or unknown causes (5). Repeated episodes of OPVT occurred in 14 patients. Attempted re-administration of thrombolytics was successful in most cases. However, 7 patients with relapse were eventually referred for valve re-replacement after numerous recurrences. 15 of the 34 initial responders (44%) were alive with their original valves after 7.4±3.9 years (range 0.3-13.9 years). They were in NYHA class 1.7±0.5.
Conclusions: Thrombolysis is an acceptable alternative to surgery in OPVT. Repeated episodes are not unusual, especially after TVR, but can usually be overcome with repeated thrombolysis. Late mortality was not related to the index stuck valve, but to associated cardiovascular diseases and other co-morbidities.