

Coexistent, Covert Mitral Disease in Hypertrophic Obstructive Cardiomyopathy: Trap for the Unwary During Transaortic Septal Myectomy

Basheer Sheick-Yousif¹, Ehud Schwammenthal², Danny Spiegelstein¹, Yaron Moshkovitz⁴,
Michael Arad³, Probal Ghosh¹, Ami Shinfeild¹, Leonid Sternik¹, Ehud Raanani¹

¹ Cardiac Surgery Department, ² Heart Institute, Echocardiography, ³ Heart Institute, Heart Failure, Chaim Sheba Medical Center, Ramat Gan, ⁴ Cardiac Surgery Department, Assuta Medical Center, Petah Tikva, Israel

Background: Left ventricular outflow obstruction and mitral regurgitation in hypertrophic obstructive cardiomyopathy (HOCM) are usually attributed to systolic anterior motion (SAM) of the mitral valve (MV). Conventional wisdom warrants that effective relief of obstruction by transaortic septal myectomy (TSM) will subsequently result in resolution of mitral regurgitation (MR), even if significant.

Material and Methods: Between January 2004, 27 consecutive patients with HOCM and preoperative significant MR underwent TSM. We describe five patients in whom MR remained significant despite effective TSM. In all 5 patients a reparable cause of the residual MR was identified by intraoperative TEE and the MR was abolished in a second pump-run for MV repair / replacement. In 3 of them, the additional reparable lesion could have been detected by the preoperative study, in 1 patient it became apparent on the preoperative TEE only in hindsight, and in 1 patient the significance of MR became apparent only after TSM. In 2 patients mitral valve replacement had to be performed due to intraoperative evidence of organic mitral valve disease unrelated to HOCM.

Conclusion: In up to 20% of the patients with HOCM and significant MR it may be difficult to predict whether abolishing SAM by TSM may also effectively abolish MR, because of: 1) intrinsic MV abnormalities typical for HOCM – particularly leaflet redundancy; 2) changes in MV configuration following TSM and 3) the potential presence of coincidental organic MV disease. Therefore, the MV of the HOCM candidates for TSM should not only be carefully examined by preoperative TEE, but also by off-pump intraoperative TEE following TSM.