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## Intraoperative 3D transoesophageal valvular evaluation

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The aims of this study were to evaluate the feasibility of real-time 3-dimensional (3D) transoesophageal echocardiography in the intraoperative assessment of valvular pathology and to compare this novel technique with 2-dimensional (2D) transoesophageal echocardiography.

**Methods:** 1450 consecutive patients undergoing valvular were studied prospectively. Intraoperative 2D and 3D transoesophageal echocardiographic (TEE) examinations were performed using a recently introduced TEE probe that provides real-time 3D imaging. Expert echocardiographers blinded to 2D TEE findings assessed the etiology of MR on 3D transoesophageal echocardiography. Similarly, experts blinded to 3D TEE findings assessed 2D TEE findings. Both were compared with the anatomic findings reported by the surgeon.

**Results:** At the time of surgical inspection, ischemic MR was identified in 12% of patients, complex bileaflet myxomatous disease in 31%, and specific scallop disease in 25%, aortic stenosis in 20% and insufficiency in 12% of patients. Three-dimensional TEE image acquisition was performed in a short period of time (60 ± 18 seconds) and was feasible in all patients. Three-dimensional TEE imaging was superior to 2D TEE imaging in the diagnosis of P1, A2, A3, and bileaflet disease ( $P < .05$ ), as well as in aortic stenosis and insufficiency evaluation (leaflet morphology).

**Conclusions:** Real-time 3D transoesophageal echocardiography is a feasible method for identifying specific valvular pathology in the setting of complex disease and can be expeditiously used in the intraoperative evaluation of patients undergoing valvular repair surgery. (J Am Soc Echocardiogr 2009;22:34-41.)

**Keywords:** Real-time 3D TEE, Mitral valve, Aortic Valve Diagnosis.

### Biography

Tanja Anguseva is Subspecialist cardiologist in Special Hospital for surgical diseases Z Mitrev. Scientific work titled "SySchechan", Clinic of Obstetrics, Faculty of Medicine, Skopje Graduation at the Faculty of Medicine within Ss. Cyril and Methodius Skopje, Macedonia. Doctor – general practitioner, Military Outpatient Clinic, Veles. Specialization in internal medicine at the University Ss. Cyril and Methodius Assistant at the Department of Hemodialysis - Department for Internal diseases, Military Hospital, Skopje. Postgraduate studies at the Clinic of Cardiology, Faculty of Medicine, Skopje. Topic: Immunoactivity of patients in end-stage ischemic heart failure. Intensive Care Unit – Department of Internal Diseases, Military Hospital, Skopje. Coronary (cardiac) stress test, Echocardiography, 24-hour ECG and ABP Holter monitoring – Department of Internal Diseases, Military Hospital, Skopje. Doctor in charge at the Intensive Care Unit, PHI FILIP VTORI, Skopje.

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