Superiority of Real Time Three Dimensional Echocardiography in the Evaluation of Extra-Cardiac Intra-Thoracic Pathologies: Initial Experience

Dawod Sharif¹, Camilia Shahla¹, Amin Khalil¹, Uri Rosenschein²

¹ Cardiology Department, Echocardiography, ² Cardiology Department, Intervention, Bnai Zion Medical Center, Haifa, Israel

Real time three dimensional echocardiography (RT3DE) allows the evaluation of cardiovascular anatomy and hemodynamics without many of the assumptions adopted in two dimensional Doppler echocardiography.

Aim: evaluate the utility of RT3DE in the assessment of extra-cardiac intra-thoracic pathologies.

Methods: Real time trans-thoracic and trans-esophageal echocardiography using Phillips IE33 echocardiographic machine in subjects with extra-cardiac intra-thoracic pathologies.

Results: Huge aortic arch chronic pseudoaneurysm before rupture was diagnosed by RT3D-TEE in a subjects with stab-wound in the back before 60 years.

Aortic dissection in a subject with ascending aneurysm was detected by RT3DE-TEE not seen by other methods. In addition undiagnosed bicommissural aortic valve as a reason for severe aortic regurgitation was diagnosed.

Evaluation of a large thoracic tumor, assessing its extent, volume and content with the left coronary artery running through the mass was performed by RT3DE.

Conclusions: RT3DE is valuable in the assessment not only of cardiac anatomy and hemodynamics but also of extra-cardiac intra-thoracic pathologies without the need for radiation.