

Real-time three dimensional versus two dimensional transesophageal echocardiography for visualization of thoracic aortic atheroma

Torasik aortta aterom görüntülemeye gerçek zamanlı üçboyutlu ve ikiboyutlu transözofajiyal ekokardiyografi

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Here we present a 63-year-old woman who underwent transesophageal echocardiography (TEE) before cardioversion of atrial fibrillation. TEE revealed a mural thrombus located at the posterior wall of the left atrium (Fig. A, B), and therefore, cardioversion was abandoned. Two-dimensional (2D)-TEE evaluation of the descending aorta showed a “simple” aortic atheroma (Fig. C, D). Further assessment with RT-3D-TEE provided an en-face view of the atheroma and disclosed an ulcerated atheroma with thrombosis extending to the entire surface of the plaque (Fig. E, F). Therefore, the patient was diagnosed as having a “complex” plaque of the thoracic aorta. This case highlights the successful and accurate diagnosis of complex aortic atheroma by RT-3D-TEE as compared with the 2D-TEE diagnosis of simple plaque. However, RT-3D-TEE versus 2D-TEE imaging of aortic atheromas with regard to their clinical significance has yet to be defined.

Figures- (A) Left atrial thrombus imaged with 2D (B) and RT-3D-TEE. 2D-TEE of a descending aorta showing simple atheroma, which is non-mobile, has a thickness of 3 mm, and has an apparently non-ulcerated plaque in the short (C) and long axis (D) aortic views. (E) RT-3D-TEE imaging demonstrates thrombosis (arrow heads) of the entire luminal aspect of the identical atheroma. (F) Decreasing the gain during RT-3D-TEE examination uncovered the underlying ulcerated (red arrow) atheroma (black arrows). 2D: Two dimensional; RT: Real time; 3D: Three dimensional; TEE: Transesophageal echocardiography; LA: Left atrium; RA: Right atrium; LAA: Left atrial appendage; MV: Mitral valve; AV: Aortic valve.

