

Echocardiographic Assessment of Prosthetic Valves

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As population aging is a global phenomenon, the incidence and prevalence of prosthetic heart valve replacement continue to increase. Patients with prosthetic heart valves need to be followed up with the same care as those with native valvular disease. A comprehensive approaches which integrates information assessed with echocardiography would be important to evaluate prosthetic valvular function.

Transthoracic two-dimensional and Doppler echocardiography is recommended as first line imaging modality for assessing prosthetic valve function. It allows us to evaluate prosthetic valve hemodynamic profiles and discriminating between intra and/or periprosthetic regurgitation. However, complete evaluation by transthoracic echocardiography is sometimes challenging because of acoustic shadowing. In this case, transesophageal echocardiography (TEE) can provide additional information especially in the patients with suspected prosthetic valve dysfunction. Baseline echocardiography after valve implantation is indicated to fingerprint the prosthesis as a baseline for future follow-up. Serial comparison of two-dimensional imaging with Doppler findings is important to assess prosthesis accurately. When echocardiography is inconclusive, additional imaging modalities such as cinefluoroscopy, cardiac CT and/or cardiac MR may be warranted.

Reference

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