Cardiologia Croatica. 2013;8(7-8):e16-e17.

Extended abstract

Aortic valve endocarditis: the role of echocardiography

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Infective endocarditis (IE) has an annual incidence of 5 to 7 cases per 100,000 persons and is a serious illness associated with significant morbidity and mortality. Based on its clinical course if untreated, IE can be classified as acute or subacute. Acute endocarditis often occurs in patients without structural heart disease by highly pathogenic organisms, such as *Staphylococcus aureus*. The subacute form has a more indolent course and is frequently caused by *Streptococcus viridians*. Structural heart disease, prosthetic heart valves, and intravenous drug abuse are risk factors for IE. A nosocomial infection is responsible for an estimated 10 % of cases.

A major advance in the diagnosis of IE was the inclusion of echocardiographic findings as a major criterion in the Duke criteria in 1994. These findings include vegetations on a heart valve, an abscess in the tissue surrounding the heart valve, or a new dehiscence of a prosthetic valve. Transesophageal echocardiography (TEE) is more sensitive than transthoracic echocardiography (TTE), especially for detecting small vegetations and for assessment of prosthetic heart valves. In cases with an initially negative examination, repeat TTE/TEE must be performed 7 – 10 days later, if clinical suspicion is still high. Follow-up echocardiography to monitor complications (e.g. abscess, pseudoaneurysm, perforation, fistula, valve aneurysm) and response to treatment is mandatory. An increase in vegetation size suggests active disease. On the other hand, some vegetations may persist after bacterial cure. Although data are conflicting, large (> 10 mm) and mobile vegetations confer a higher embolic risk. Intraoperative TEE is recommend in all cases of IE requiring surgery.

In summary, echocardiography is an essential component in the diagnostic evaluation of patients with suspected infective endocarditis.

KEYWORDS: infective endocarditis, echocardiography, diagnosis, cardiac masses.

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Received: 26th Jun 2013

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