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Letter to the Editor

Dipyridamole stress echocardiography for the diagnosis of cardiac allograft vasculopathy in heart transplant recipients

Dear Editor,

We read with great interest the article titled "Cardiac allograft vasculopathy after heart transplantation: current prevention and treatment strategies" by Spartalis et al[1]. Cardiac allograft vasculopathy (CAV) affects over 50% of recipients within 10 years of transplant and represents an important cause of morbidity and mortality post-transplantation[2]. Early detection of CAV is critical because it allows the identification of high-risk patients and the implementation of therapeutic strategies before end-stage heart failure[3]. Current guidelines recommend coronary angiography to monitor the development and progression of CAV[4].

Dobutamine stress echocardiography (DSE) has been reported to be the main non-invasive tool for the diagnosis of CAV, with a high negative predictive value (89%)[5,6]. Coronary microvascular dysfunction defined by means of a reduced coronary flow reserve (CFR), is emerging as a strong predictor of outcome in heart transplantation[7]. In this regard, Sade et al[8] reported that the assessment of CFR together with dobutamine stress echocardiography improved the sensibility and diagnostic accuracy of the latter method. Dipyridamole stress echocardiography (DiSE) in detecting CAV was first proposed by Picano et al[9]. They showed that in transplant recipients, the best marker of acute cardiac rejection was DiSE-induced ST segment depression without detectable impairment in regional systolic function. We assessed the diagnostic value of the evaluation of both wall motion and CFR during high-dose DiSE for the diagnosis of CAV in 74 heart transplant patients. Our results show that a normal DiSE result combined with the evaluation of wall motion abnormalities and CFR analysis is highly predictive of the absence of significant CAV (negative predictive value: 91%), which is similar to studies examining dobutamine stress echocardiography. Dual DiSE could be helpful in selected patients to adjust the time and indications of coronary angiography. Longer series are needed to validate this proposal.

Conflict of interest

The authors declare no conflicts of interest.

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