

◇ Transcutaneous doppler sonographic evaluation of the internal mammary artery graft patency: a comparison with coronary angiography

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배경 및 목적 : A noninvasive method to assess coronary bypass graft patency would be useful for clinical diagnosis and long-term follow-up of graft outcome. The purpose of this study was to evaluate the usefulness of transcutaneous doppler sonography for assessment of internal mammary artery graft patency

방법 : Doppler sonography of internal mammary artery was performed in 16 patients who underwent postoperative cardiac catheterization studies. Fifteen patients underwent coronary artery bypass graft surgery using the left internal mammary artery graft to the left anterior descending artery or to the left circumflex artery. One patient underwent both internal mammary artery graft surgery. Doppler signals were obtained from the proximal part of the internal mammary artery graft at the supraclavicular fossa in cases of the left internal mammary artery and at the high intercostal space in case of the right internal mammary artery.

결과 : According to the coronary angiographic studies, a total of 17 internal mammary arteries were divided into two groups: Group A with significant stenosis (>75% stenosis) of the internal mammary artery(n=5), and Group B with no significant stenosis of the internal mammary(n=12). The diastolic/systolic peak velocity ratio and the diastolic/systolic flow-volume ratio in group A were significantly smaller than in group B(p<0.05). A diastolic/systolic peak velocity ratio < 0.35 predicted significant internal mammary artery graft stenosis (>75% stenosis) with a sensitivity and specificity of 100% and 75%, respectively. A diastolic/systolic flow-volume ratio < 0.4 predicted significant internal mammary artery graft stenosis (>75% stenosis) with a sensitivity and specificity of 80% and 75%, respectively.

결론 : Transcutaneous doppler sonography is useful for noninvasive assessment of internal mammary artery graft patency.

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