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A Pilot Study of Intravenous Urapidil, α 1-Adrenergic Blockade in the Treatment of Severe Congestive Heart Failure

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WANG ET AL.: A Pilot Study of Intravenous Urapidil, α 1-Adrenergic Blockade in the Treatment of Severe Congestive Heart Failure. Objective: The aim of this study was to evaluate the efficacy and tolerability of small dose urapidil in the treatment of patients with severe congestive heart failure. **Methods:** Thirty patients with severe (NYHA class IV) congestive heart failure (male 16, female 14; mean age 55.3 ± 15.6 years) were randomly assigned to open-labeled treatment with urapidil (Group A, 15 patients) or nitroglycerin (Group B, 15 patients). Five patients had old myocardial infarction, 2 had essential hypertension, 22 idiopathic dilated cardiomyopathy, and one had peripartum cardiomyopathy. Both groups were comparable in respects of age, heart rate and blood pressure. Urapidil (100 μ g/min) or nitroglycerin (20 μ g/min) was administered intravenously for 24 hours in addition to conventional treatment of heart failure (oxygen, diuretic and digitalis). Heart rate, blood pressure, blood gas and echocardiography were measured before and after the treatment. **Results:** After treatment, relative changes of heart rate, diastolic blood pressure and blood gas compared with baseline were not significantly different in both groups. However, systolic blood pressure at 2 hours and 6 hours after treatment were lower in groups B (nitroglycerin) patients. In group A, the left ventricular systolic parameters and stroke volume measured by echocardiography increased significantly compared with baseline, and so were left ventricular ejection fraction and maximum flow velocity of aortic valve. In comparison, in group B, only left ventricular ejection fraction increased and flow accelerate time of E wave prolonged significantly. **Conclusion:** Small dose intravenous urapidil is a potentially useful agent in the management of severe congestive heart failure, demonstrating a significant improvement in cardiac systolic function and good tolerability. (J HK Coll Cardiol 2005;13:54-58)

Heart failure; Urapidil

摘要

目的：評價小劑量烏拉地爾治療嚴重充血性心力衰竭療效和安全性。**方法：**嚴重充血性心力衰竭（紐約心功能分級，IV級）患者30例（男性16例，女性4例），平均年齡 55.3 ± 15.6 歲。病因包括：冠心病陳舊性心肌梗死5例、高血壓病2例、擴張性心肌病2例、圍產期心肌病1例。入院後採用隨機方法分為烏拉地爾組（A組）15例，硝酸甘油組（B組）15例。兩組間年齡、心率、血壓無顯著性差異。兩組患者在常規心衰治療基礎上（如吸氧、利尿劑、洋地黃治療），分別靜脈使用A組烏拉地爾（100 μ g/min）或B組（硝酸甘油20 μ g/min）24小時。分別檢查用藥前、用藥後心率、血壓、血氣分析、超聲心動圖。**結果：**兩組患者用藥後心率、舒張期血壓、血氣分析參數與用藥前比較無顯著性差異。但是，B組（硝酸甘油）患者用藥後2小時、6小時收縮期血壓減低較明顯。A組（烏拉地爾）患者超聲心動圖參數的收縮功能指標SV明顯增大、EF%明顯增大、AoVmax明顯增快。B組患者的收縮功能指標僅EF%明顯增大，舒張功能指標中E dct明顯延長。**結論：**小劑量持續靜脈泵入烏拉地爾可有效用於充血性心力衰竭治療，能明顯改善患者心臟收縮功能，同時患者耐受性較好。

關鍵詞：心力衰竭 烏拉地爾

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