Perioperative changes of plasma endothelin-1 concentrations in patients undergoing cardiac valve surgery.

陳大樑

Huang CH;Huang HH;Chen TL and Wang MJ

摘要

Abstract

Twenty-one patients who underwent cardiac valvular replacement procedures were studied to determine the perioperative changes of plasma endothelin-1 (ET-1) concentration and disposition of ET-1 in the pulmonary and systemic vasculature between patients with elevated (over 20 mmHg) mean pulmonary artery pressure and patients with normal pulmonary artery pressure. The overall profile alterations of plasma ET-1 concentration did not differ between the two groups of patients. The plasma ET-1 levels in the pulmonary artery and right atrium were significantly higher in patients with high pulmonary artery pressure than in patients with normal pulmonary artery pressure. Before cardiopulmonary bypass, significant pulmonary extraction of the plasma ET-1 existed in patients with high pulmonary artery pressure but the pulmonary extraction was not seen after bypass. There was no transpulmonary difference of the plasma ET-1 concentration in patients with normal pulmonary artery pressure either before or after bypass. The high levels of ET-1 in the pulmonary circuit and the pulmonary extraction of the ET-1 in patients with high pulmonary artery pressure might be a protective mechanism for rheumatic valvular patients with elevated pulmonary artery pressure