



Surgical Approaches to the Management of Heart Failure

Introduction

The ever-increasing challenge of heart failure has prompted a concerted research effort spanning a multitude of disciplines over the last 15–20 years, all with the aim of improving symptoms and survival in the patient with heart failure. The results of therapy have indeed improved outcome: from a mortality of 44% at 6 months in the placebo arm of the CONSENSUS-1 trial in the mid-1980's to a 17% 12-month mortality rate at the end of the millennium in the treatment arm of class 4 patients in the MERIT trial.

At the same time, we have witnessed over the years a number of developments in the field of cardiac surgery, which have made it possible to offer a surgical approach in many patients with heart failure. Surgical treatments impacting on heart failure started with the introduction of myocardial revascularization by coronary artery bypass in 1967, and also with the first human heart transplant at the end of the same year. Other operations such as timely valve surgery and early correction of various congenital defects have contributed significantly to the reduction in mortality in the heart failure population over the years.

This special issue reviews some of the current surgical approaches to the problem of heart failure. Drs Mitropoulos and Eleftheriades discuss myocardial revascularization in the patient with advanced ventricular dysfunction and review pertinent issues regarding patient selection and long-term outcome with this approach. Dr Bolling describes the pathophysiology and results of mitral valve reconstruction in patients with heart failure, while Dr Dor reviews his experience with endoventricular circular patch plasty (the Dor procedure). These techniques offer a means of improving ventricular geometry and loading conditions in the patient with mitral regurgitation and of reducing the mechanical disadvantage imposed by significant ventricular asynergy.

Discussion regarding surgically-induced reversed left ventricular remodeling – by ventricular resection or by buttressing the left ventricle – are discussed in the next two papers. Dr Abe and colleagues review left ventricular resection (Batista procedure), highlighting the theoretic advantages, but also the rather controversial indication for this form of surgery. Drs Moreira and Stolf discuss the current status of dynamic cardiomyoplasty as a therapeutic alternative and address issues such as patient selection, patient monitoring and follow-up, comparing the outcome with medical therapy.

The last part of this surgical issue focuses on the current status of heart transplantation. Drs Magliato and Trento review the surgical techniques, and current short- and longer-term results of the procedure. Dr Laks and colleagues discuss special problems regarding transplantation in the young and the elderly. Drs Cotts and Johnson address the issue of the challenge of rejection and cardiac allograft vasculopathy which presents such a major problem and limits long-term survival.

The treatment of heart failure in the individual patient is likely to remain a composite one based on a number of possible choices. We hope that this special focus on surgical approaches will help clinicians and researchers position current and new pharmacotherapeutic options against the surgical possibilities in the management of heart failure patients.

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