The pulmonary autograft and rheumatic heart disease

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Background: The pulmonary valve is rarely affected by chronic rheumatic valvulitis. Therefore it is the most suitable living substitute for the diseased Aortic and Mitral valves (Ross Procedures). In patients with pulmonary hypertension the pulmonary valve withstands systemic pressure, the pulmonary arterial wall thickens and the hypertrophied Right ventricular muscle protects the first septal artery during explantation. These changes make the pulmonary autograft even more suitable for replacing diseased Aortic and Mitral valves. Unfortunately when transplanted to the aortic position in young rheumatics the autograft develops rheumatic valvulitis in a short period of time.

Methods: From October 1993 to September 2003, 81 patients underwent the Ross procedure. Mean age was 29.5 Yrs (11-56). 40 patients were below 30 yrs of age. Mitral valve repair in 19, open mitral commissurotomy in 15, Tricuspid valve repair in 2 and Mitral valve replacement with a homograft in 2, were the associated procedures.

Results: The early mortality was 7.4%. At a median followup of 109 months (82% followup) 7 patients required reoperation for autograft dysfunction. All were young (under 30) rheumatics and had mitral valve disease. Explanted autograft cusps showed typical changes of rheumatic valvulitis.

Conclusions: The pulmonary autograft is not a suitable substitute for diseased aortic valve in young rheumatics.

Biography
Arkalgud Sampath Kumar has retired from All India Institute of Medical Sciences in 2009 as Head of cardiothoracic surgery and has 40 yrs experience in surgery for RHD. He is a member of many international professional associations and he is currently in private practice. He is the Editor in Chief of Asian Cardiovascular and Thoracic annals. He has more than 200 publications including 3 textbooks. This abstract is from a previously published

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