svenous mitral commissurotomy in juvenile mitral stenosis.

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Abstract:

OBJECTIVE: To determine the efficacy and safety of percutaneous transvenous mitral commissurotomy (PTMC), using multi-track double balloon technique in juvenile mitral stenosis. DESIGN: Open non-randomised intervention. SETTING: Cardiac catheterisation laboratories of The Mater Hospital, The Nairobi Hospital and Kenyatta National Hospital from 1996 to 2001. PATIENTS: Forty five consecutive patients aged less than 21 years with severe pure mitral stenosis and suitable mitral valve apparatus (leaflets, chordae and papillary muscles) for successful commissurotomy. INTERVENTION: Percutaneous transvenous mitral commissurotomy under local anaesthesia. Standard left and right heart catheterisation for mitral valve disease. Trans-septal left atrial entry using standard septal puncture technique and left ventricular position secured by super-stiff guide-wire. Double-balloon mitral valvotomy on single guide-wire using multi-track balloon catheters. MAIN OUTCOME MEASURES: Mitral valve area, left atrial pressures, mitral regurgitation grade, NYHA functional class. RESULTS: Mitral valve area increased from 0.6 +/- 0.19 cm2 to 1.9 +/- 0.19 cm2 ($p<0.001$), left atrial pressures from 30.5 +/- 3.9 mmHg to 11.5 +/- 3.8 mmHg ($p<0.001$). Most patients NYHA functional class immediately improved from class III-IV to class I-II. There was no significant changes in grades of mitral regurgitation or significant complications related to the procedure. CONCLUSIONS: PTMC in juvenile mitral stenosis using the multi-track technique is safe and effective yielding satisfactory immediate results. Comment in