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APPLICATION OF PERCUTANEOUS TRANSLUMINAL SEPTAL MYOCARDIAL ABLATION ON HYPERTROPHIC OBSTRUCTIVE CARDIOMYOPATHY

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Objectives To evaluate the feasibility and efficiency of percutaneous transluminal septal myocardial ablation (PTSMA) for treatment of hypertrophic obstructive cardiomyopathy (HOCM).

Methods Eleven patients with 1–10 years history of HOCM underwent the PTSMA. Left ventricular outflow tract gradient (LVOTG) were measured before and after septal branches occluded by 96%–99% alcohol. The thickness of septal myocardium, width of LVOT and amplitude of systolic anterior motion (SAM) were also measured before, at the time of discharge and 1 month after PTSMA by echocardiography.

Results Ten patients were accomplished by Sigwart method, among which, DDD pacemaker was implanted in one patient because of permanent complete heart block 5 days later. One patient died from acute myocardial infartion 4 h after ablation. Immediate post-operation, LVOTG decreased significantly from (90.40±41.95) mm Hg to (52.90±34.12) mm Hg ($p<0.01$). At the time of discharge, LVOTG and amplitude of SAM improved significantly (82.98±36.46 mm Hg vs 44.56±28.87 mm Hg; 4.1 ±1.37 mm Hg vs 2.3±1.06 mm Hg, $p<0.01$). At 1 month follow up, LVOTG, thickness of septal myocardium, width of LVOT and amplitude of SAM had a good direction to improvement ($p<0.01$).

Conclusions PTSMA can significantly reduce LVOTG and has a satisfactory short-term efficacy in the treatment of HOCM. Risk control must be emphasised during the ablation procedure and further careful evaluation is needed.