

## Percutaneous transluminal septal myocardial ablation (ptsma) of hypertrophic cardiomyopathy: Indonesian initial experience

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### Abstrak

Tujuan Percutaneous transluminal septal myocardial ablation (PTSMA), adalah suatu intervensi non-bedah untuk terapi kardiomiopati hipertropi (KMH), telah menjadi terapi standar di negara-negara maju. Di Indonesia PTSMA belum secara sistematis dilakukan. Seri kasus ini bertujuan untuk mengetahui fisibiliti, efektifitas dan keamanan PTSMA di Pusat Jantung Nasional Harapan Kita. Metoda Tiga pasien KMH (2 laki-laki) dengan gradient tekanan dinamik jalan keluar ventrikel kiri (JKVKi) lebih dari 30 mmHg dilakukan PTSMA. Tekanan apeks ventrikel kiri diukur memakai kateter multipurpose sedangkan tekanan aorta diukur dengan kateter penuntun secara simultan. Pembuluh darah target dikonfirmasi dengan kontras ekokardiografi miokardium. Dua cc alcohol absolute disuntikkan ke pembuluh target melalui balon over the wire. Perubahan gradient tekanan JKVKi diukur kembali 10 menit pasca pemberian alcohol. EKG dimonitor secara terus menerus sepanjang prosedur. Hasil Seluruh subyek mengalami penurunan gradient tekanan JKVKi lebih dari 50%. Satu pasien mengalami total AV blok dan blok berkas cabang kanan sementara yang pulih kembali 6 jam pasca prosedur. Pada satu pasie lainnya, pembuluh target harus diganti karena memberi perfusi pada daerah ventrikel kanan yang luas. Kesimpulan PTSMA dengan panduan kontras ekokardiografi miokardium mampu laksana, efektif dan aman untuk menurunkan gradient tekanan JKVKi pada subyek KMH.

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<b>Abstract</b><br>

Aim Percutaneous transluminal septal myocardial ablation (PTSMA), a non-surgical intervention to treat hypertrophic cardiomyopathy (HCM), has been a standard treatment in developed countries. However, this procedure not yet systematically performed in Indonesia. This case series aim to study feasibility, safety and efficacy of PTSMA in National Cardiovascular Center Harapan Kita, Jakarta. Methods Three HCM patients (2 male) with dynamic left ventricle outflow tract (LVOT) pressure gradient of higher than 30 mmHg underwent PTSMA. Left ventricle apex pressure was measured using multipurpose catheter and aortic pressure was measured by means of left coronary guiding catheter simultaneously. Target vessel is confirmed by myocardial echocardiography contrast. Two ml absolute alcohol delivered to the target vessel by means over the wire balloon. Immediate pressure gradient changed 10 minute after alcohol administration was recorded. Continuous ECG monitoring is attempted along the procedure. Results All subject demonstrated more than 50% LVOT pressure gradient reduction. One subject experienced transient total AV block and right bundle branch block which completely recovered 6 hours after procedure. In one patient, target vessel must be changed as it gives perfusion to extensive area of right ventricle. Conclusion PTSMA guided with myocardial echocardiography contrast is feasible, safe and effective to reduce LVOT pressure gradient in HCM patient.