

Hypertrophic cardiomyopathy associated with coronary artery disease

Clinical Case Portal

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Case Report

A 72 years old woman presented after medical resuscitation subsequent a ventricular fibrillation episode and a history of hypertension for 20 years. Both echocardiogram and MRI showed severe left ventricular hypertrophy and an apical area of akinesis. Coronary angiography showed a severe interventricular anterior coronary stenosis and left ventricular angiography showed a significant cavity obliteration but no significant obstruction of the outflow tract. The patient underwent a succesfull interventricular anterior coronary PTCA with stent implantation.

Patient history prior to current observation :

The patient is a 72 year old woman with a history of smoking cigarettes and hypertension since 20 years. She reported family history of heart disease and sudden death. She then began to experience fatigue and increasing precordial pain with exercise. Electrocardiogram showed signs suggestive of left ventricular hypertrophy. The patient had a out hospital cardiac arrest subsequent ventricular fibrillation and a succesfull medical resuscitation.

Clinical findings on admission, evolution and outcome :

Examinations to detect the cause of cardiac arrest were performed. Severe hypertrophy of the left ventricular with apical akinesis was diagnosed by transthoracic echocardiography (fig. 1). An interventricular gradient of 40 mmHg was detected by Doppler examination. MRI (fig. 2) confirmed the echocardiographic finding of severe hypertrophy associated with a mesoventricular obstruction of the left ventricle and the presence of an apical area of akinesis. Coronary and left ventricular angiography (fig. 3 e fig. 4) was indicated and showed a severe anterior descending branch stenosis, the left intraventricular gradient was of 30 mmHg. The patient underwent succesfull PTCA with coronary stent implantation in the mid tract of anterior descendent branch (fig. 5).

Conclusion

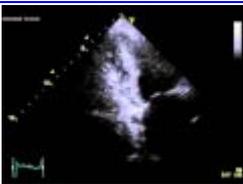
Previous studies indicate that incidence of coronary artery disease is significantly higher in patients older than 45 with hypertrophic cardiomyopathy and coronary arteriography is indicated prior to cardiac surgery. In this case patient with hypertrophic cardiomyopathy and coronary artery disease experienced a cardiac arrest subsequent a ventricular fibrillation episode and the prior clinical history was suggestive for coronary artery disease. In consideration of absence of significant midventricular pressure gradient the patient underwent a succesfull coronary artery PTCA and stent implantation.

References

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- 2-Nambi V, Buergler JM et Al. effectiveness of percutaneous intervention for patients with obstructive hypertrophyc cardiomyopathy and coronary artery disease. Am J Cardiol 2005; 96: 580-1
- 3-Honda T, Sakamoto T et Al. Successful coronary stenting of the left anterior descending artery at the branching site of the targeted septal perforator immediately after percutaneous transluminal septal myocardial ablation in hypertrophic obstructive cardiomyopathy. Intern Med 2005; 44: 722-26

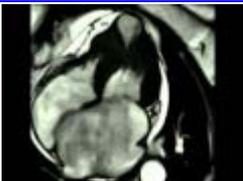
Video 1 :

[HCM associated with CAD TTE left ventricular wall motion and tickness](#)



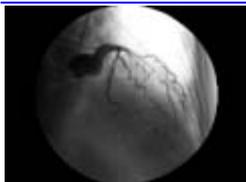
Video 2 :

[HCM associated with CAD MRI Midventricular obstruction](#)



Video 3 :

[HCM associated with CAD_Coronary Angiography_Anterior Descendent Branch Stenosis](#)



Video 4 :

[HCM associated with CAD_Coronary Angiography_Left ventricular obstruction](#)



Video 5 :

[HCM associated with CAD_Coronary Angiography_After coronary stent implantation](#)

