Coronary artery-left ventricular micro-fistulas associated with apical hypertrophic cardiomyopathy

Koroner arter-sol ventrikül arasındaki mikro-fistüllerin apikal hipertrofik kardiyomiyopati ile birlikteliği

A 72-years-old man was admitted to our hospital for effort angina and dyspnea. He had a history of arterial hypertension and treated with ramipril. In his physical examination his blood pressure was 150/75 mmHg, his pulse was regular; 75 bpm. There was not any pathological finding in his other systems examinations except for a 2/6 systolic murmur at apex. Electrocardiography revealed sinus rhythm and deep symmetrical T wave inversions in leads I, AVL, and V2-V6. His laboratory findings were within normal limits and chest radiography was normal.

Two- dimensional transthoracic echocardiography showed typical of apical hypertrophic cardiomyopathy (AHCM) without regional wall motion abnormality and with normal left ventricular systolic function (Fig.1, Video 1. See corresponding video/movie images at www.anakarder.com). Transthoracic color Doppler echocardiography in the apical region using a high frequency transducer with a low Nyquist limit, showed the presence of multiple linear color flow signals perpendicular to the epicardium, draining into the left ventricle, demonstrating multiple coronary artery-left ventricular micro-fistulas (Fig. 2, Video 2. See corresponding video/movie images at www.anakarder.com). The pulse wave Doppler revealed particularly diastolic flow pattern (Fig. 3). No intraventricular systolic gradient was detected at rest and with Valsalva maneuver.

Coronary artery and left ventricular fistula associated with AHCM is a very rare condition. It has not known yet that if these two conditions are coincidence or related to each other. Treatment of coronary artery and LV fistulae is essentially medical with beta-blockers and calcium canal blockers. Surgery is another treatment of choice and must be considered in only severe forms.

Video 1. Apical hypertrophic cardiomyopathy ACHM was visualizationized with two- dimensional transthoracic echocardiography

Video 2. Transthoracic color Doppler echocardiography in the apical region using a high frequency transducer with a low Nyquist limit, showed the presence of multiple linear color flow signals perpendicular to the epicardium, draining into the left ventricle, demonstrating multiple coronary artery-left ventricular micro-fistulas.

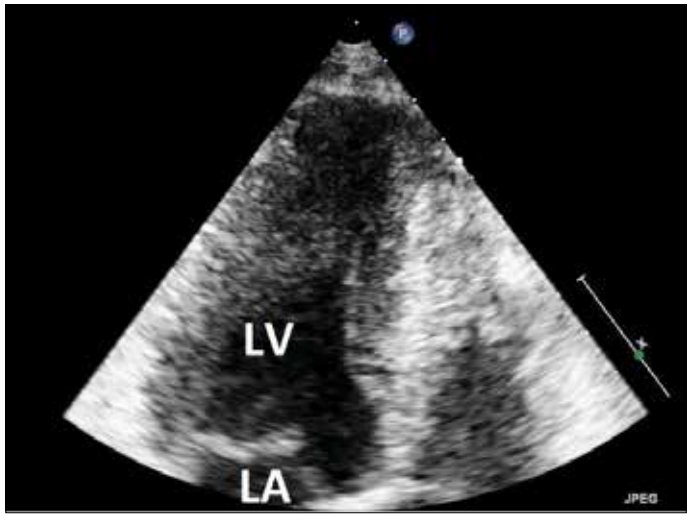

Figure 1. Apical hypertrophic cardiomyopathy visualization with two-dimensional transthoracic echocardiography

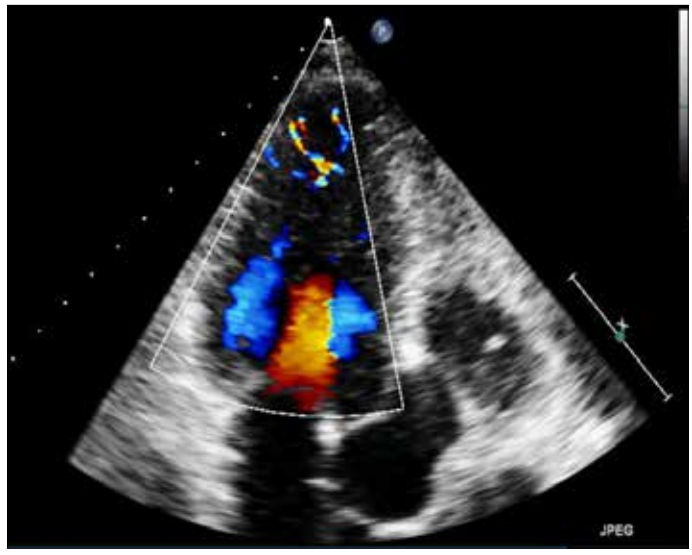

Figure 2. Transthoracic color Doppler echocardiography in the apical region using a high frequency transducer with a low Nyquist limit, showed the presence of multiple linear color flow signals perpendicular to the epicardium, draining into the left ventricle, demonstrating multiple coronary artery-left ventricular micro-fistulas

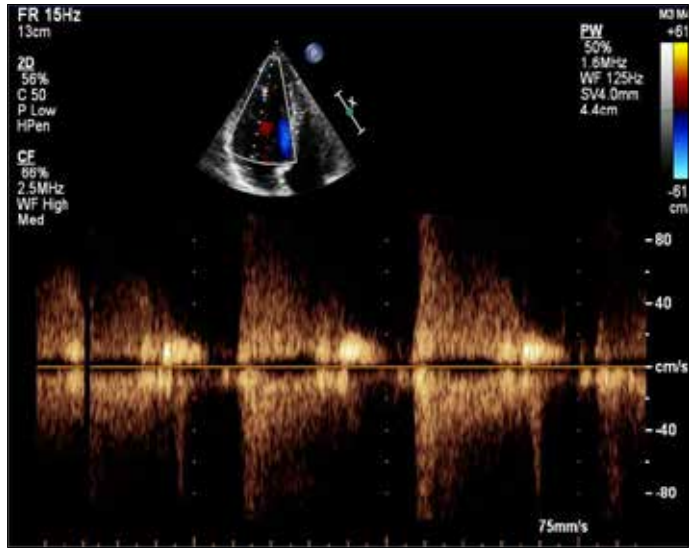

Figure 3. The pulse wave Doppler revealed particularly diastolic flow pattern

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