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Percutaneous transluminal septal myocardial ablation for left ventricular outflow tract obstruction due to sigmoid-shaped septum

A 71-year-old female was suffered from dyspnea on effort, with a grade 3/6 ejection systolic murmur. Three years ago, she had been diagnosed left ventricular outflow tract (LVOT) obstruction due to sigmoid-shaped septum by ultrasound echocardiography (UCG) and cardiac catheterization, and administration of atenolol and cibenzoline had carried good control of LVOT obstruction. UCG findings of this time were the normal left ventricular function, mild concentric left ventricular hypertrophy (11 mm of intraventricular septum and 11 mm of posterior wall), sigmoid-shaped septum (SS) (Aorto-septal angle: 84 degree) and pressure gradient at LVOT of 107 mmHg, and revealed recurrent of LVOT obstruction. We performed percutaneous transluminal septal myocardial ablation (PTSMA), and 1.3 ml of ethanol was injected into first septal branch. Although complete atrioventricular block (AVB) occurred during injection of ethanol, atrioventricular conduction normalized within a few hours. Immediately after PTSMA, pressure gradient at LVOT reduced to 30 mmHg. Peak creatin kinase level was 1587 IU/l. Dyspnea on effort improved after that. The indication of PTSMA is for drug resistant hypertrophic obstructive cardiomyopathy. Moreover, PTSMA also has potential efficacy for drug resistant LVOT obstruction due to SS, like this case. We should pay attention to AVB during PTSMA for SS because the amount of myocardium was relatively small in comparison with hypertrophic cardiomyopathy. We should also pay attention to unwanted arrhythmic event for the long term after PTSMA.