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Heart Failure and Cardiomyopathies

FIRST RESULTS OF MICROSPHERE EMBOLIZATION AS AN ALTERNATIVE FOR ALCOHOL IN PERCUTANEOUS TRANSLUMINAL SEPTAL MYOCARDIAL ABLATION

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Heart Failure and Cardiomyopathies: Diagnostic, Prognostic and Therapeutic Strategies in Cardiomyopathies
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
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Background: Percutaneous transluminal septal myocardial ablation (PTSMA) using microsphere embolization instead of alcohol is a new interventional technique to treat patients with obstructive hypertrophic cardiomyopathy (HCM).

Methods: Six HCM patients (age 68.4 ±6.3) with severe left ventricular outflow tract (LVOT) obstruction (>50 mmHg at rest) were selected for PTSMA because of invalidating symptoms despite optimal medical therapy. All patients were thought to be unsuitable for surgery by multidisciplinary heart-team consensus and thus were considered for PTSMA. All patients provided written informed consent for the procedure. Arterial access was either femoral (n=3) or radial (n=3), and after echocardiographic contrast determination of the appropriate anatomical target, the septal perforator was occluded with microspheres to reduce left ventricular outflow tract gradient.

Results: There were no major clinically relevant complications during the procedure. In 1 patient no microspheres were given because of septal artery rupture after inflation of the over-the-wire balloon resulting in an intraseptal hematoma. LVOT gradient in the other patients was reduced from 95 ±14 to 15 ±9 mmHg, directly after the procedure. Sustained ventricular tachycardia occurred in 1 patient 4 days post-procedure, and an ICD was implanted. After hospital discharge no adverse events occurred at a median follow-up of 7 months.

Conclusions: Short-term results of microsphere embolization for HCM appear safe and effective in improving hemodynamics and reducing LVOT gradient. The absence of intrinsic cardiotoxic effects (as seen with alcohol) may preclude untoward acute myocardial damage and creates a more controlled infarction.