

Difficult decisions. Percutaneous closure of Postinfarction Ventricular Septal Defect – peri-procedural and long-term observation.

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Introduction

Postinfarction Ventricular Septal Defect (PIVSD) is a rare and severe complication after myocardial infarction (MI) with poor prognosis. Transcatheter closure (TC) of such defect can be a good alternative to surgery in selected patients.

Materials and methods

All data of 26 consecutive patients (pts) (64,6±10y; 9 female) in whom TC of PIVSD was attempted in our center between 2000-2015 were retrospectively analyzed. Initially, all pts were in NYHA III or IV in whom 18 pts with cardiogenic shock; 4 pts with recanalization of previously operated PIVSD. Every pt had coronary arteries angiography performed before TC, subsequently: 12 pts PCI, 6 pts CABG. Mean time between PIVSD occurrence and its TC was 10±5 weeks (2-56). Mean PIVSD diameter was 11,4±3,8mm (5-21mm) in angiography. Implants used during TC: 16 Amplatzer Atrial Septal Occluders, 4 Amplatzer Postinfarction VSD Occluders, 2 Amplatzer Muscular Ventricular Septal Occluders, 1 Amplatzer Cribriform Septal Occluder, 2 Cardi-O-Fix ASD Occluder, 1 Cera ASD Occluder. All procedures were performed under fluoroscopic (10-87min; mean time 39min) and echocardiographic guidance.

Results

Twenty (74%) from 26 attempted PIVSD TCs were successful. In 3 pts procedure was abandoned because of unfavorable morphology, in 2 pts in acute phase because of occluder instability and in 1 pt embolization occurred. No peri-procedural death was observed. Significant immediate improvement occurred in 14 pts and they were discharged from hospital but 6 pts died before discharge because of increasing multiorgan failure. Mean follow-up was 5,2±4,4y, 4 pts needed percutaneous or surgical reintervention.

Conclusions

Transcatheter PIVSD closure is feasible procedure and should be limited to properly selected pts.