
Galeczka M. (1,2), Knop M. (1,2), Litwin L. (1,2), Szulik D. (2), Fiszer R. (2), Szkutnik M. (1,2), Bialkowski J. (1,2)
Department of Congenital Heart Defects and Pediatric Cardiology, SMDZ in Zabrze, Medical University of Silesia, Katowice, Poland (1); Silesian Center for Heart Diseases, Zabrze, Poland (2)

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.