Transcatheter closure of perimembranous ventricular septal defect (pmVSD) has gained wide acceptance as an alternative to surgery. Several devices have been used in transcatheter closure with good long results. Among them, modified AGA perimembranous VSD device & Amplatzer duct occluders were most common devices used. In the past, we used Amplatzer duct occlude I and II to close small-to-moderate size pmVSD on an off-label basis. Recently, the Lifetech symmetric perimembranous VSD device (Heart R) was approved by our FDA and was reimbursed by health insurance. It was used routinely to close pmVSD in Taiwan. Inclusion criteria of transcatheter closure of VSD included 1. Qp/Qs ≥ 1.5, and/or left ventricular dilation or symptomatic 2. Body weight ≥ 10 kg 3. aortic rim > 1 mm. Exclusion criteria included any condition 1. significant prolapse of aortic valve 2. moderate aortic regurgitation 3. more than moderate pulmonary hypertension 4. VSD diameter > 14 mm 4. presence of left or right ventricular obstruction. In our center, we have performed 284 pmVSD closure. But, there were 7 failures including device migration in 3. There were no other major complications occurred. No patients had increased severity of valve regurgitations during follow-up. Transcatheter closure of perimembranous VSD is effective and safe in selected patients.