We present 10 year experience with 78 patients (pts), age 0.3-15 y, with perimembranous ventricular septal defects (PMVSDs) who underwent transcatheter closure at 4 different Institutions with the Amplatzer asymmetric PMVSD occluder. The devise was permanently implanted in 72/78 patients. Complete occlusion of the communication at six month, one-year, and 2-year follow-up was observed in 93%, 97%, and 97% patients, respectively. Main complications included: Early. Were observed in patients less than one year (body weight < 8 Kg) and included: a. Device embolization 2 patients, b. severe procedural bradycardia (5 pts) and c. Mobitz II and complete heart block hear (CHB)t in 3 and 1 patients respectively. (Sinus rhythm after device removal). Late (FU 6 m-10 yrs). CHB, was developed in 1 pt (4-year old with Down syndrome). No other patient developed heart block during the follow-up. Three patients developed mild aortic regurgitation. In one of them the regurgitation was not seen at the 1-year follow-up. No other complications were observed. Conclusions: Transcatheter closure using the Amplatzer APMVSD occluder is as a safe and effective nonsurgical alternative that should be offered in properly selected patients with PMVSDs.