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**Transcatheter membranous VSD closure by Nit-Occlud Lê VSD Coil. A French multicentre study**

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Background: Interventionists are interested by nonsurgical closure of membranous VSD (mVSD). The Nit-Occlud Lê VSD Coil (PFM, Cologne, Germany) was used to close mVSD with the advantage of absence of atrioventricular block.

Methods: We describe here French multicentric experience in mVSD closure with Nit-Occlud Lê VSD Coil.

Results: We had 24 patients with mean age of 15 years 5 months (1.5-59 years), mean weight of 58 kg (9-79.6 kg). Mean VSD size was 8.5 mm on the left side and 4 mm on the right side. Mean procedures time was 112 minutes (45-200 min), with mean fluoroscopy time of 33.8 min (17-63 min). Closure failed in 5 patients: 4 because of insufficient aneurysmal tissue, and one because of retention of the coil into the aortic valve. Trivial residual shunt persisted in 6 patients. Major complications occurred in five patients including: hemolysis in two patients due to residual shunt requiring shunt closure by catheterization in one patient and by surgery in the other, tricuspid regurgitation due to cordage lesion, traumatic aortic valve regurgitation by cusp lesion, and finally severe transient hemodynamic collapses requiring short chest compression. Transient grade 1 atrioventricular block occurred in one patient. Mean left ventricle end diastolic diameter decreased significantly from 45.6 to 41.2 mm in patients with succeeded percutaneous closure.

Conclusion: mVSD closure by The Nit-Occlud Lê VSD Coil is effective with no permanent atrioventricular block. The procedure is complicated requiring high experience and learning curve which explains the high complications rate, but also this demonstrates the need of meticulous selection of patients.