

Transcatheter closure of ventricular septal defects: Early and Midterm follow-up results

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Background:

Ventricular septal defect (VSD) is a common form of congenital heart disease and can occur in isolation or in combination with other structural defects. They represent nearly 20% of all congenital heart lesions and are encountered in different positions within the ventricular septum.

Aim and objectives:

To report early and mid-term results of percutaneous closure in all types of VSD in the Pediatric Cardiology department at Cairo University, Specialized Children Hospital (School of Medicine).

Methods:

We conducted a retrospective study with a total of 85 cases that underwent trans-catheter repair for VSD. We included patients from the Pediatric Cardiology department at Cairo University, Specialized Children Hospital in the period between 2010 and January 2020. We evaluated patients regarding; their baseline characteristics, VSD description, devices used, and complications developed whether during device insertion or later during the follow-up. Patients were followed up to seven years.

Result:

In the current study, we included 85 patients; the Majority of our patients had PM VSD 72.9% (21 cases) with size ranging between 4 to 8 mm 78.8% (67 cases). Most VSDs were closed by Amplatzer device 89.4% (76 cases). During the procedure; 3.7% of cases had failed implantation (3 cases), 1.2% of cases (1 case) had Heart Block, 3.6 % of cases (3 cases) had residual shunt and 3.6% of cases (3 cases) had vascular insufficiency.

Conclusion:

Transcatheter closure of VSD is a safe and effective procedure. With the newly developed devices, there is a significant decrease in the risk of redo surgery and procedure-related complications.

Keywords:

VSD; Trans-catheter device closure; complications; diastolic dysfunction.