# TRANSTHORACIC ECHOCARDIOGRAPHY GUIDED ATRIAL SEPTAL DEFECT DEVICE CLOSURE IN CHILDREN

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**Background:**

Although transthoracic echocardiography (TTE) is easy and more widely available with excellent acquisitions in children, there are limited evidence in regarding appropriateness of TTE to guide transcatheter closure of ASD.

**Objective:**

We aimed to evaluate the safety, feasibility, and outcome of transcatheter closure of ASD in children guided by TTE in combination with fluoroscopy.

**Methods:**

All children aged 4- 15years who were considered and underwent transcatheter ASD closure under TTE and fluoroscopy guidance at the Shahid Gangalal National Heart Centre (SGNHC) at Kathmandu, Nepal from August 2018 through May 2021, were retrospectively reviewed.

**Results:**

Of the 94 children, transcatheter closure was attempted in only 89 patients, and implantation of device was successful in all of them (100%). The procedure was done under total intravenous anaesthesia in 79.8% of children, and local anaesthesia in the rest. The ASD size varied between 7-32 (15.2±5.8) mm. ASDs were closed using the device size ranged between 10 and 38(19.2±1) mm. The mean of device/patient weight and device/ASD size ratio was 0.82±0.33 and 1.28 ±0.25 respectively. Similarly mean duration of procedure and fluoroscopy was 31.2±8.6 and 6.5±2.8 minutes respectively. Five children (5.6%) had tiny residual shunt and had closed spontaneously as documented by TTE within 6 months after the procedure. A new onset atrial tachycardia was detected in one child during follow up. Otherwise, we observed no major early postprocedural and late complications during follow up period of 18.4±8.5months.

**Conclusion:**

TTE was safe and feasible guided tool in children with adequate acoustic windows for the deployment of the ASD device under fluoroscopy.