SHORT-TERM OUTCOMES OF CHILDREN FOLLOWING TRANSCATHETER DEVICE CLOSURE OF PATENT DUCTUS ARTERIOSUS

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INTRODUCTION

Patent ductus arteriosus remains to be one of the causes of heart failure in children presenting with volume overload with significant left-to-right shunting. PDA closure through a percutaneous approach has been the recommended method of choice that has been considered as safe and effective in all age groups.

OBJECTIVES

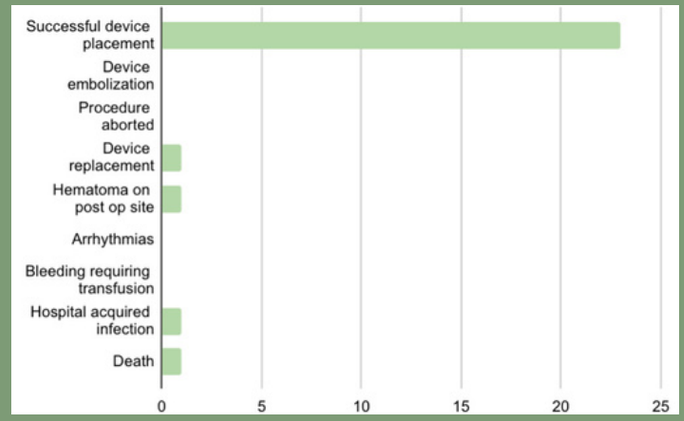
To determine the short-term outcomes of percutaneous closure of patent ductus arteriosus in children at a tertiary hospital setting in terms of successful device placement or development of complications after the procedure.

METHODOLOGY

Patients who underwent percutaneous transcatheter closure of PDA from December 2020 to June 2022 were included in this study. All charts and records of the study group including demographic data, diagnostic parameters, echocardiographic studies, angiographic data, procedural details and clinical characteristics after the procedure were reviewed and analyzed.

RESULTS

All patients in the study group underwent successful percutaneous transcatheter PDA device closure. Mean age of the subjects is 2.35 ± 2.66 years with a mean weight of 11.53 ± 6.14 kilograms. Angiography revealed a mean PDA size of 0.49 ± 0.24 cm and all were occluded using the Lifetech Occluder with device size ranging from 6/4 to 20/18. Major complication reported was one mortality that occurred 3 hours after the procedure secondary to malignant hyperthermia. Minor complications noted were hematoma on the puncture site, hospital acquired pneumonia, presence of residual shunt and new onset regurgitation on 2D echo. On follow-up after 1 month, there was noted clinical improvement in terms of Modified Ross classification and decrease in the left atrial size and left ventricular end diastolic dimension.



CONCLUSION/RECOMMENDATION

Percutaneous transcatheter closure of a hemodynamically significant patent ductus arteriosus using a device occluder in the pediatric population is feasible and effective. A larger, prospective controlled study is recommended to evaluate the long-term results of percutaneous PDA closure. A continuous follow-up is also essential to evaluate the long term complications.

KEYWORDS

PDA, Device Closure, Short-term Outcomes