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Title:

# Medium term Follow up Treatment of Severe Native Coarctation of Aorta Using of Balloon Angioplasty in Young Infants Less Than one Year's age


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**Abstract**

**Background**: The spectrum of therapeutic approaches for the treatment of native aortic coarctation has widely expanded from surgical correction to balloon angioplasty (BA) and stent implantation. The aim of this study to assess the safety and efficacy of BA for native CoA therapy in infants less than one year' sold age.

**Method**: Sixteen patients (10 male) with discrete COA underwent BA of COA between May 2014 and May 2015 at our centen The age ranged from 23 days to 10 months (mean 4.28 1 2.84 m) and body weight ranged from 3 to 7 kg (mean 4.76 1 1.33 kg). Appropriate balloons )mean 6.181 0.91 mm) were choosedand were inflated 2-3 times under fluoroscopic guidance. Successful outcome was defined as peak systolic pressure gradient after balloon angioplasty < 20 mm Hg or decreased by more than 50% and at least 50% increase in diameter. Follow-up duration was 6.0 1 3.0 months (1-12 months.(

**Result**: The mean value of the peak-to-peak systolic pressure gradient between ascending to descending aorta significantly decreased from 48.43 1 11.65 mmHg (range 25-65 mmHg) to 11.43 1 8.29 mmHg (range 0-30 mmHg) (P < 0.001). Echocardiographic peak and mean pressure gradients decreased significantly from 58.81 1 11.15 and 30.56 1 6.51 before ofprocedure to 23.06 1 11.75 and 12.31 1 6.86 mmHg during follow-up respectively (P<0.001.(Conclusion: For native discrete aortic coarctation in young infants <12 months of age percutaneous BA is a safe and effective treatment alternative to surgical approach.

**Keywords**: Balloon angioplasty; Coarctation ofaorta; Congenital heart disease

**Abbreviations**: BA: Balloon Angioplasty; COA: Coarctation of Aorta; TTE: Transthoracic Echocardiography; ECG: Electrocardiogram; VSD: Ventricular Septal Defect; CGDRC: Child Growth and developmental Research Center

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