Short- and Mid-term Results of Balloon Angioplasty for Coarctation of the Aorta in Neonates

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Background: To review our clinical experience with short- and mid-term results of balloon angioplasty for coarctation of aorta in neonates.

Methods: The data of 51 neonates who underwent balloon angioplasty for aortic coarctation between December 2004 and March 2010 were retrospectively studied.

Results: Balloon angioplasty was performed in 51 neonates (mean age 13±9 days). Of these 41 (80.4%) were male and 10 (19.6%) female. Isolated coarctation was found in 13 patients (25%) and complex coarctation, in 38 (75%). The mean systolic pressure gradient across the coarctation site fell from 36±20 mm Hg before dilatation to 8.6±7.0 mm Hg following the intervention. The mean follow-up period was 8.7±9.6 months (range 1-46, median 6 months). Recoarctation developed in 20 (39.2%) patients after an average 3.2±3.1 months. Of these, 9 (45%) underwent redilatation and 11 (55%) surgical repair. On follow-up, seven (13.7%) patients died with a follow-up of 1-7 months.

Conclusion: According to our short- and mid-term results, balloon angioplasty has a higher recoarctation rate than surgery. For this reason, balloon angioplasty should be done to ensure survival until full corrective surgery can be performed in patients with complex cardiac disease and poor general condition.

Key words: aortic coarctation, balloon angioplasty, neonates