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## Short-term outcome of balloon angioplasty of discrete coarctation of aorta

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**Introduction:** Balloon angioplasty has been proposed as an alternative way to surgery in primary treatment of aortic coarctation (CoA) for both children and infants.

**Aim:** The aim of this study is to assess the immediate and intermediate term effectiveness and safety of balloon angioplasty in infants and children with native discrete membranous CoA.

**Patients & Methods:** 40 consecutive patients with native discrete coarctation of the aorta were treated with balloon angioplasty. They were eight infants and 32 children; with ages ranged from two months to 10 years and all weighted below 35 kg. All patients were clinically evaluated immediately after and at six to 12 months and 18 to 24 months after the procedure. Follow up data were collected and Doppler echocardiography was done before intervention to confirm diagnosis and to plan management and post interventional to follow-up patients and estimate the outcome and complications.

**Results:** Immediate successful relief of native CoA was obtained in 92.5% of the population study, while 7.5% recorded immediate suboptimal results with pressure gradient above 20 mm HG. The peak systolic gradient across the coarcted segment was reduced significantly with 82.5% immediately after balloon angioplasty, 75% and 73.2% at the end of first and second follow up period respectively. Pressure gradient decreased significantly from  $57 \pm 15.7$  mm Hg before balloon angioplasty to  $14.23 \pm 11.30$  mm Hg 9 to 12 months after, but it was increased slightly to reach  $15.15 \pm 11.80$  mm Hg at the end of the second year. The systolic ascending aortic pressure decreased significantly (19%) and the systolic descending aortic pressure increased significantly (11.4%) at the end of the study. Recoarctation occurred in 17.5% at the end of the 1st year and balloon angioplasty was repeated for all patients successfully. At the end of the 2nd year, restenosis was evidenced in 10% of the whole study population at the site of coarcted segment occurred in 5%.

**Conclusion:** Balloon angioplasty is an effective and safe alternative to surgery for treatment of CoA in infants older than two months and children 10 years of age or younger.

### Biography

Reda Biomy completed his Graduation at Benha University, Egypt and MD in Cardiology in 1992. In 1995, he worked as an Associate Professor of Cardiology at Benha University, Egypt and he was responsible for non-invasive cardiology lab and cardiac catheterization lab.

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