

Outcomes after Aortic Coarctation Stenting in Adolescents and Adults: a single-center experience.

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Purpose:

The aim of this study was to evaluate the short and midterm results of aortic coarctation (AoCo) stenting in an adolescent and adult population.

Methods:

We retrospectively evaluated all patients older than 14 years old with an AoCo treated by stent placement between December 2000 and November 2016. In total, 28 patients with an invasive peak systolic pressure gradient of >20 mmHg were identified; number of redilatation, non-invasive systolic blood pressure, peak systolic pressure gradient, antihypertension medication intake, claudication status and aortic complications were evaluated.

Results:

Twenty-two covered and 6 uncovered stents were placed with technical success rate of 100%. In all patients, peak systolic pressure gradient decreased immediately after stenting from a mean of 32 mmHg to 4 mmHg. Mean AoCo diameter increase was $8,1 \pm 4,2$ mm. Peripheral arterial injury was seen in two patients (7,1%). The mean follow-up time was 26 ± 30 months. Redilatation of the stent was required in 4 young patients to accommodate for growth. Median systolic blood pressure differential between the right arms and legs was ± 1 mmHg. Six (35%) patients could stop antihypertension medication. All claudicants (6/29) remained asymptomatic. No aneurysms, stent fracture or migration were noticed, one dissection of the aorta occurred.

Conclusion:

AoCo stenting is a safe and effective treatment that reduces significantly peak systolic pressure gradient. Antihypertention medication can be reduced, and increase of walking distance in claudicants can be obtained. Younger patients may need more frequent reinterventions to accommodate for growth.