

Close and remote results of endovascular treatment of aorta coarctation in children.

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Aim: To assess close and remote results of endovascular treatment of aorta coarctation (AoCo) in children and teenagers.

Methods: From 1998 to 2010 endovascular angioplasty of AoCo was performed to 59 patients with average age $6,4 \pm 2,4$ years old. All the patients were performed clinical instrumental examination:

Echo – before and after endovascular intervention, balloon dilatation in X-ray operation room.

Necessary balloon diameter was defined according to aorta diameter on the level of left atrium. 28 pts were examined in a year after the procedure.

Results: At the preoperative stage the most pts (80%) complained only on high blood pressure (BP). Only 28 children (47,5%) had AoCo without combination with other heart diseases. According to Echo, till endovascular intervention peak pressure gradient in a descending aorta was 30 mm Hg in 6,8% pts, in 37,3% - 30-50mmHg, in the rest – more than 50mmHg. Manometry, performed before angioplasty, did not always coincide with Echo data. After balloon dilatation transstenotic gradient (TSG) was absent only in 8 children (13,5%). The rest TSG was 10mmHg in 10 pts (16,9%), in 23 pts (38,9%) – 10-22mmHg, in 14 pts (23,7%) – 20-30mmHg and only in 4 children it was significant enough – more than 35mmHg. High remaining TSG was marked only in patients with primary high pressure gradient in the AoCo field in combination with its hyperplasia. BP normalization was marked in the most pts after treatment, and only 14 children required antihypertensive drugs. All the pts were performed Echo after angioplasty in 2-3 days. Peak pressure gradient was up to 10mmHg in 10 pts (16,9%), 20mmHg – in 25 pts (42,4%), 30mmHg – in 18 pts (30,5%), higher than 30mmHg – in the rest. In a year the most examined children (60%) kept good treatment effect – peak pressure gradient – 10-20mmHg, absence of arterial hypertension (AH). The rest pts had AH in spite of low TSG (15-30mmHg) and good feet pulse.

Conclusion: In spite of AoCo abolition preserved arterial hypertension in 40% of children was disclosed. It requires follow-up and adequate therapy.