Determining Arterial Functions In Children Who Got Repaired Aortic Coarctation

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Objective: Despite the apparently succesful surgical repair of aortic coarctation, subsequent cardiovascular complications have sometimes been encountered. In our study, we investigate arterial functions by measuring carotis intia-media thickness, brachial artery dilatation by blood stream and distensibility of the abdominal aorta.


Results: Of the operated aortic coarctation patients, 6(33%) were female, 12 (66%) were male, of the control group 6 (42%) were female, 8(58%) were male. Mean age of patients were 12,2±4,6 years and control groups were 13,0±2,0 years. Both groups were compaired for weight, height, arterial tension, heart rate and echocardiographic measurements. Aortic strain and aortic distensibility were lower in patient group than control group but they are not meaningful statistically (p>0,05). Aortic stiffness measurements were found statisticaly higher in patient group than control group (p=0,035). Carotis intima-media diameters were higher in patient group but it is not meaningful statistically (p>0,05). Stream mediated brachial artery dilatation in 1rd minute was statisticaly lower in patient group than control group (p=0,047).

Conclusion: By means of parameters measured in operated aortic coarctation group, being higher aortic stiffness and lower stream mediated brachial artery dilatation, are cautinary for close follow-up for long time and taking preventive measures for hypertension.

Key words: aortic coarctation, aortic stiffness, brachial artery dilatation