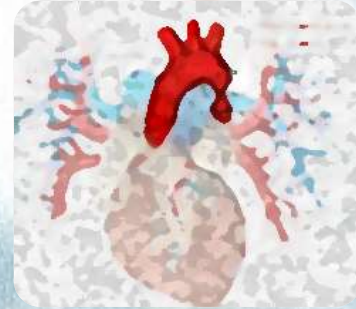


INSIGHTS INTO EARLY VASCULAR AGING IN CHILDREN WITH COARCTATION OF AORTA (CoA)



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INTRODUCTION



Despite the improved survival [1-3] morbidity related to hypertension (AH) persists in 42–70% of CoA patients [4-9]



CoA is classified as one of the highest cardiovascular risk condition [1]. Hypertension and premature atherosclerosis tend to develop early in life even after successful surgical or interventional treatment [10-11]

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THE AIM OF THE STUDY

to define frequency of AH and vascular markers after successful surgical or interventional isolated CoA treatment

METHODS



24 hour ABPM



Non-invasive
oscillometric
central blood
pressure (cBP)



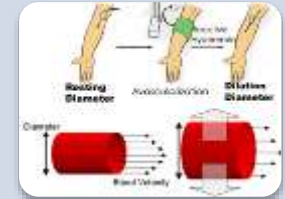
Left
ventricular
mass index
(LVMI)



Carotid
intima-media
thickness
(cIMT)



Femoral
intima-media
thickness
(fIMT)



Endothelial
function by
right brachial
flow mediated
vasodilatation
(FMD)

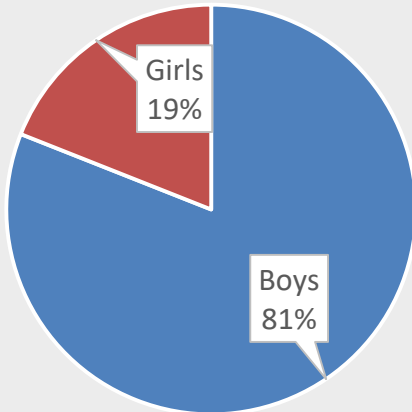
PATIENT CHARACTERISTICS

21 patients

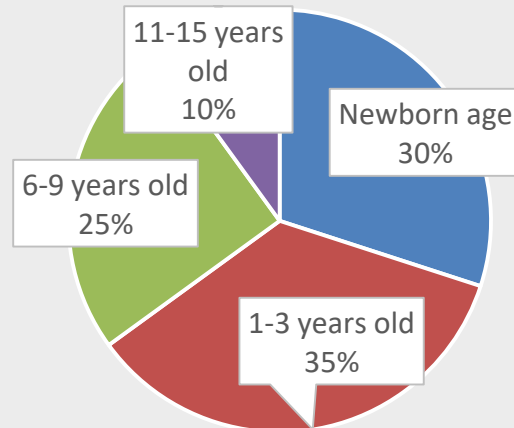
6 - 18 years
old
 12.0 ± 4.2

7.7 ± 5.1
years after
CoA repair

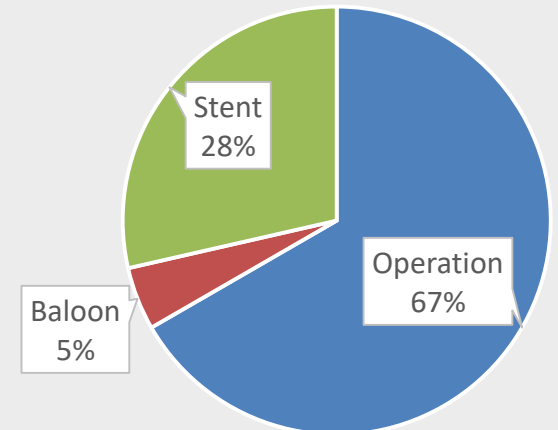
Gender



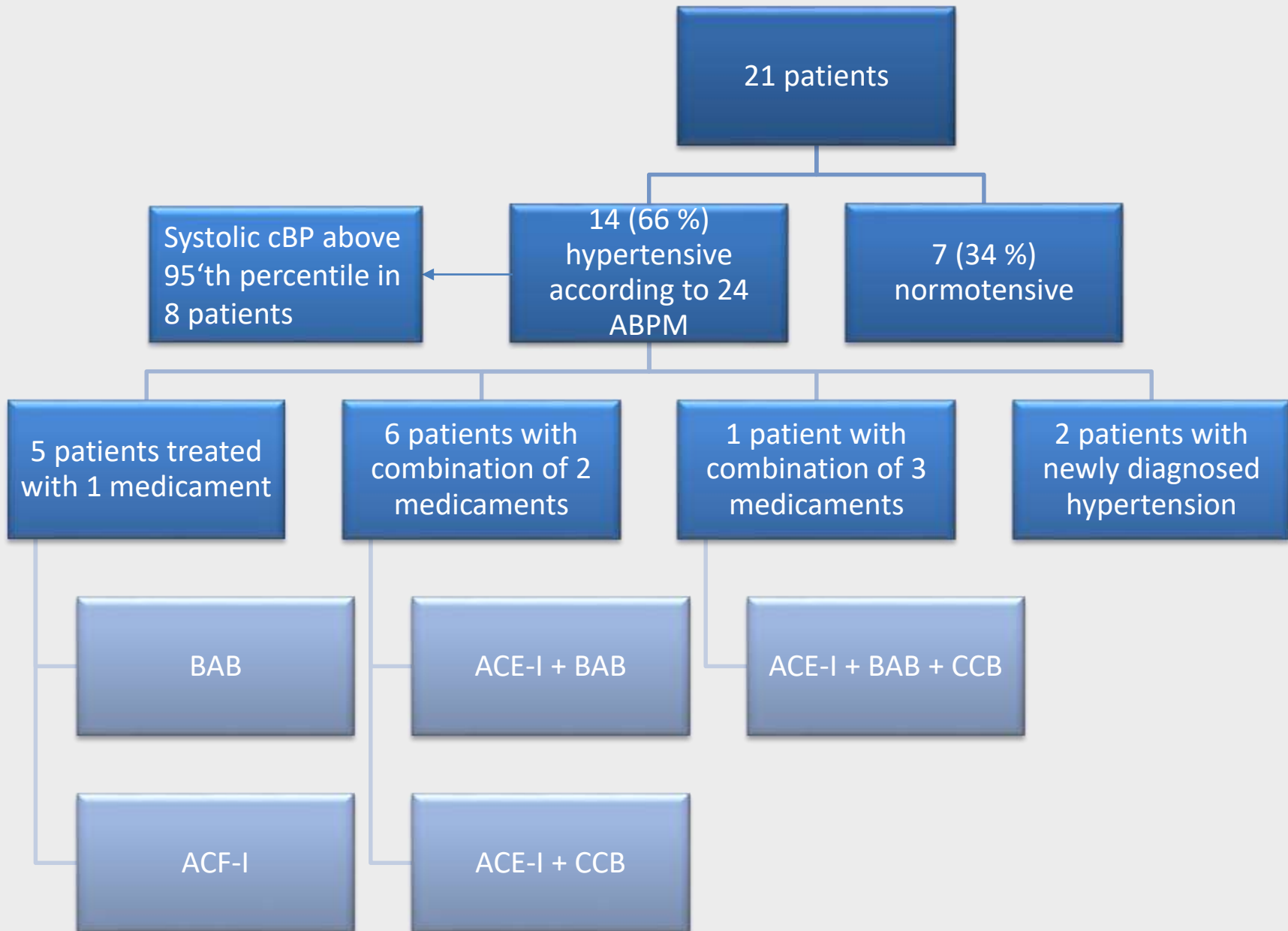
Age at CoA correction



CoA correction type



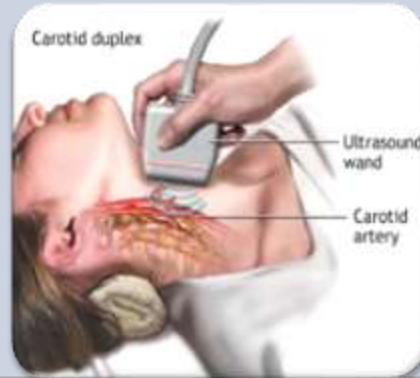
RESULTS 1 (AH PREVALENCE)



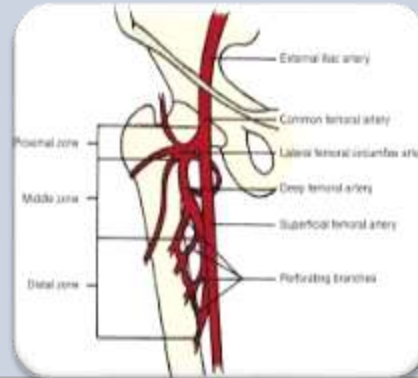
RESULTS 3



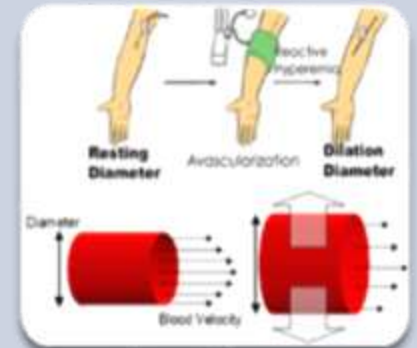
LVH in 6 (43%) of all hypertensive patients



Average right cIMT 0.50mm, CI(0.47;0.52)



Average right fIMT was 0.27mm, CI(0.25;0.32)



Right brachial artery FMD value was 5,5% ± 2,96

Mean normative rcIMT value 0.45mm.
Right cIMT SDS 2.41 ± 1.1

Mean normative fIMT value 0.32mm.
fIMT SDS -1.35 ± 1.43

13 patients (62%) FMD less than 10.0%.
Significant endothelial dysfunction

CONCLUSIONS

Our results indicate high frequency of AH in children after CoA correction in spite of antihypertensive therapy with more than one antihypertensive agent.

Children after CoA repair present signs of subclinical arterial injury and disturbed endothelial function.

Lower flMT in femoral arteries might suggest disturbed pattern of blood flow in aorta despite CoA repair.

to be
CONTINUED
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