

Clinical outcomes in patients with primary arterial hypertension and basal septal hypertrophy after 7 years of follow-up

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Background: Basal septal hypertrophy (BHS) is one of the first signs of concentric left ventricular remodeling in chronic pressure overload such as arterial hypertension (AH)¹. *Aim:* To investigate if the appearance of BHS in the early course of AH correlates with outcomes in the long-term follow-up.

Patients and Methods: A total of 138 patients with primary AH, aged less than 65 years and with no comorbidities were included during 2014-2017. Patients were divided into two groups according to BSH presence on the transthoracic echocardiography. Follow-up was performed by checking patients' hospital data charts and telephone interview. Data concerning antihypertensive drug therapy and cardiovascular morbidity was collected.

Results: Basal septal hypertrophy was found in half of the patients (53.6%). Mean follow-up period was 91.92±7.20 months. At the time of follow-up, mean age was 56.09±11.68 years, patients with BSH were older (p=0.004). In the whole cohort, mean number of antihypertensive drugs at baseline was 2.01±1.29, in the follow up 1.81±1.14 (**Figure 1**). BSH patients were altogether taking more antihypertensive drugs (2.10±1.26 vs 1.53±0.94, p=0.032), more diuretics (p=0.014), angiotensin converting enzyme inhibitors (p=0.007) and beta-blockers (p=0.004). In the follow-up period, hospitalizations, or referrals to emergency department due to cardiovascular events, stroke or transient ischemic attack, intracranial hemorrhage and newly diagnosed coronary artery disease and atrial fibrillation were noted in both groups, **Figure 2**. Even though those outcomes were more frequent in the BSH group, there was no significant difference, probably due to a small number of included patients and relatively short follow-up period.

Conclusion: Appearance of BSH is found to be a macroscopic marker of the incipient regional and global left ventricular remodeling and dysfunction in chronic pressure overload, but it could also be a potential marker of adverse outcomes in the long-term follow-up. Lower total amount of antihypertensive therapy in the follow-up may imply lower patient's compliance.

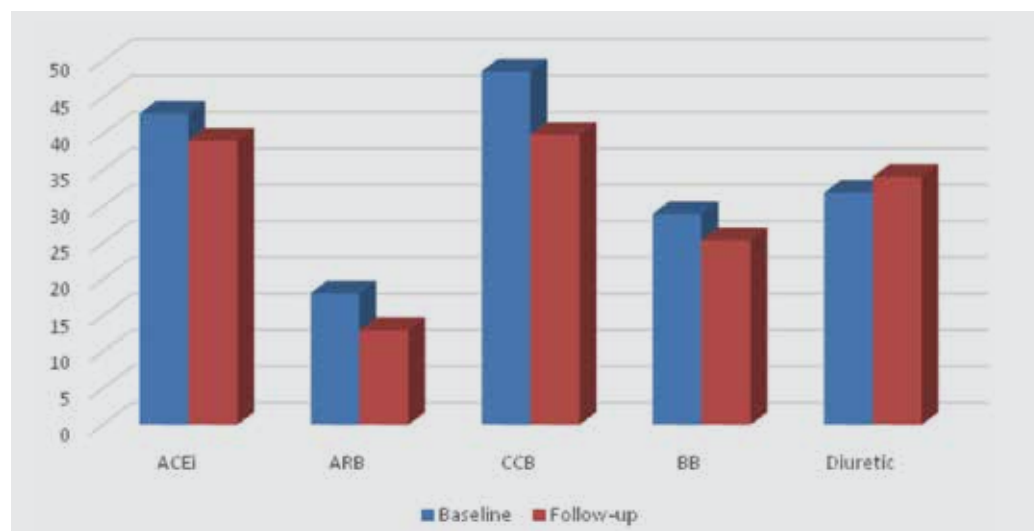


FIGURE 1. Distribution of antihypertensive drug therapy in the whole cohort.

ACEi = angiotensin converting enzyme inhibitors, ARB = angiotensin receptor blockers, CCB = calcium channel blockers, BB = beta-blockers.

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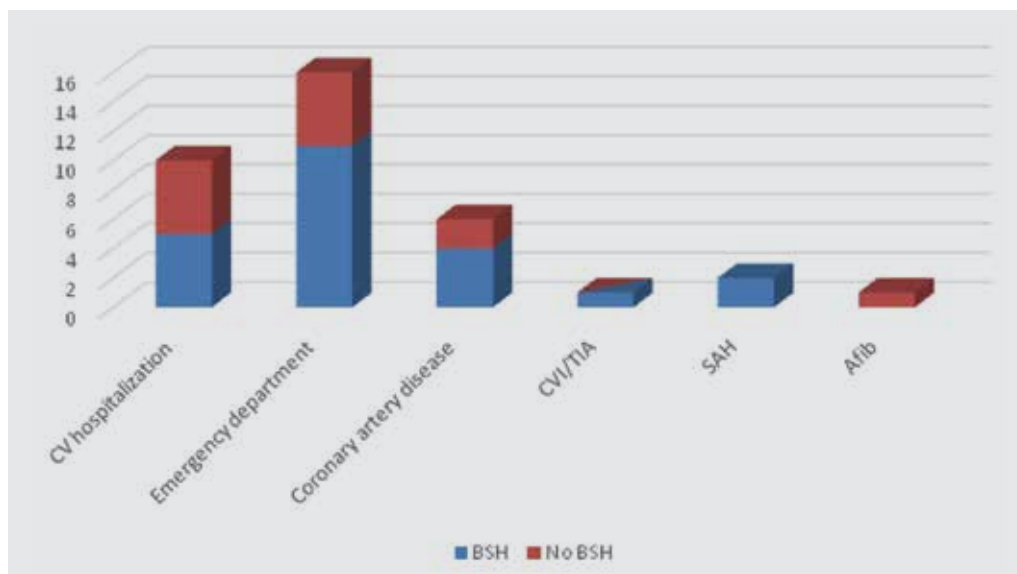


FIGURE 2. Outcomes in patients with and without basal septal hypertrophy.

BSH = basal septal hypertrophy, CV = cardiovascular, CVI = stroke, TIA = transient ischemic attack, SAH = subarachnoid hemorrhage, AFib = atrial fibrillation.

LITERATURE

1. Separovic Hanzevacki J, Reskovic Luksic V. Specific deformation pattern in hypertensive patients with septal bulge and preserved systolic function. *Int J Cardiovasc Imaging*: 2022 Nov;38(11):2323-2331. <https://doi.org/10.1007/s10554-022-02662-4>