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**Title:** Ambulatory blood pressure and respiratory function dynamics under the influence of vasoactive antihypertensive drugs in smokers

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**Body:** Objective. To compare the antihypertensive efficacy of carvedilol, nebivolole and amlodipine in smoking and non-smoking hypertensive patients. Methods. 130 patients with arterial hypertension aged 30-55 years were randomized to carvedilol (n=56), nebivolol (n=44) and amlodipine (n=30) groups. The groups were divided into smokers and non-smokers (or former smokers >1 year) subgroups. In each subgroup office blood pressure (BP), ambulatory BP monitoring (ABPM) and spirometry parameters were evaluated and compared initially and after 8 weeks of treatment. Results. Office BP significantly reduced by the same extent in all groups. At once we did not find the BP dynamics in smokers taking carvedilol unlike non-smokers by ABPM data. In smokers taking nebivolol mean 24-h systolic BP also did not decrease, however the BP variability fell. Amlodipine equally well reduced the mean 24-h, daily and nighttime BP both in smokers and non-smokers. Respiratory function did not change in smokers of amlodipine group (FEV1 – 100.9±9.5 % at the baseline and 103.0±8.5 % at the end of the study), while taking of beta-blockers was followed by its deterioration: the FEV1 decreased from 100.1±9.8% to 98.6±10.7% (p<0,05) under the influence of carvedilol and from 100.8±23.5 % to 97.0±22.7 % (p<0,05) during the treatment with nebivolol. Conclusion. The attenuation of carvedilol and nebivolol antihypertensive efficacy was revealed in young and middle age hypertensive smokers. At the same time the antihypertensive efficacy of amlodipine was high regardless of smoking status.