

Blood pressure in quitting smokers: to when establishing the degree of cardiovascular damage?

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Editorial

The relationship between blood pressure and quitting smoking with regard to the characteristics of arterial damage was not still stably assessed. According to recent reports,¹⁻³ quitting smoking would be followed by a progressive and definite disappearance of cardiovascular damage in a variable time lasting. Basic point of view is to establish blood pressure outcome in hypertensive individuals, who quit smoking. According to our previous observations³ of a retrospective analysis related to 1,232 ever smokers (100%) with arterial hypertension (mean value: 165±18mmHg for systolic and 92±6mmHg for diastolic blood pressure), where 724 patients (pts) (59%) were quitting smokers, while 508 (41%) continuing smokers, very interesting results could be observed.

Chronic smokers usually had hypertension (mean blood pressure: SBP 165±18mmHg and DBP 92±6 mmHg). 265 Pts (52%), who early stopped smoking, displayed a significant reduction in blood pressure, particularly in SBP (mean SBP of 147±11mmHg) and 23 of these pts (9%) developed ischemic heart disease. On the contrary, 243 pts (48%), who stopped smoking several years after (< 22years) their beginning, showed mean SBP of 169±22mmHg and ischemic heart disease (168 pts, 69%). Therefore, two types of response could be clearly documented: reduction and prevention of further vascular damage in the presence of reversible lesions characterized by endothelial changes, consisting of endothelial dysfunction, atherosclerotic inflammatory lesions, and structural harm of endothelial cells in the presence of reduced hypertension. Irreversible firm alterations in arterial wall, primarily caused by carbon monoxide, characterized by formation of atherosclerotic plaque and its complications in the conduit arteries and arteriosclerosis of the microcirculation with progressive organ failure were the result of vessel damage progression even when smoking did not exert its activity.

Conclusion

In conclusion, reduction in pre-existing cardiovascular damage could be documented in the reversible alterations, while its progression was the result of firm vascular changes as an effect of

late quit smoking. An increase in blood pressure and appearance of ischemic heart disease seemed to be typical for those people with irreversible alterations.

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Conflicts of interest

Author declares there are no conflicts of interest.

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