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Epidemiology of arterial hypertension in one of the regions of Russia

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Aim. To study the dynamics of the prevalence, awareness, risk factors (RF) and treatment of arterial hypertension (AH) among men and women according to a survey of a representative sample of the population of the Ryazan region (RR) in 2007-2016.

Materials and methods. In 2002, as a part of the Russian epidemiological "EPOCH" study, a representative sample of the RR population (2098 people, average age 44.8 ± 18.6 years) was formed and surveyed using step-by-step randomization of medical institutions, medical districts and apartments. A repeated survey of the sample was conducted in 2007 (1,760 people, response 83.9%) and in 2016 (1,497 people, response 85.1%). The AH group included persons with blood pressure =140/90 mmHg detected during the double measurement and with normal blood pressure while receiving antihypertensive therapy. In individuals with AH the risk factors were assessed: smoking, alcohol abuse, salt abuse, obesity, burdened family history, low physical activity.

Results. The prevalence of AH over the past 9 years has increased from 39.3% to 43.9%, p <0.001. The age-standardized prevalence of AH among women is higher than among men as in 2007 (42.1% versus 34.8%, p <0.001) and in 2016 (46.9% vs. 41.8%, p<0.05). Women's awareness about having AH increased from 83.9% to 88.9%, p <0.05, in men it decreased (84.0% against 77.4% in 2007, p>0.05). In the group of persons with AH, the more common risk factors are older age (56.8%), hereditary predisposition (58.9%), low physical activity (96.0%) and obesity (34.3%) compared with persons without AH (12.9%, 48.2%, 84.5% and 9.2%, respectively), they smoke less often (10.7% versus 23.2%) and use extra salt less often (29.5% against 38.4%), p <0.001. The number of patients taking antihypertensive drugs reached 91.2% against 84.0% in 2007, p <0.001. There was a decrease in the number of AH patients who: are treated intermittently (from 12.3% to 3.6%, p <0.001), who take drugs only when blood pressure is high (from 16.2% to 6.2%, p <0.001). The most frequently used antihypertensive drugs are still ACE inhibitors (64.8%), beta-blockers (48.9%), diuretics (42.5%), ARBs (29.2%) and calcium channel blockers (21.3%). The ratio of effectively treated AH patients increased in men from 14.6% to 27.8%, p <0.001, in women from 25.0% to 39.5%, p <0.001. A negative influence on the effectiveness of therapy was caused by smoking (RR 1.23; CI 1.11-1.37, p = 0.005), salt abuse (RR 1.11; CI 1.06-1.23, p = 0.04) and obesity (RR 1.16; CI 1.06-1.27, p = 0.003).

Conclusion. Over the past nine years, the prevalence of hypertension in both the men and women has significantly increased in the Ryazan region. Increased treatment coverage and positive changes in drug therapy led to an increase in the number of effectively treated patients (from 21.4% to 35.5%, p <0.001). Obesity, smoking, salt abuse are associated with an increased risk of non-effectiveness of hypertension therapy.