

CONTROL OF HYPERTENSION DURING 10 YEARS PERIOD IN LITHUANIAN MIDDLE-AGED POPULATION

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Aim. The aim of this study was to describe changes in the prevalence, awareness, antihypertensive drug treatment and control of hypertension in middle-aged population.

Material and methods: data of two independent cross-sectional population surveys were collected from Kaunas 35-64 year population according to WHO MONICA project. Two random samples stratified by age and sex were screened in 1992-93 (n=1367) and 2001-02 years (n=1401). Two consecutive BP measurements were performed on the right arm in a sitting position and the mean value of these two readings was used. Awareness of hypertension (AH) was determined by asking "Have you ever been told by doctor that you have high BP?". Antihypertensive drug treatment was determined by asking "Are you taking (in the past 2 weeks) drugs for high BP?". Non-medicament control of AH was determined by asking "Have you been recommended to regulate high BP using non-pharmaceutical means (NM), such as increasing physical activity, relax, controlling weight, restricting salt, alcohol consumption?" and "Do you follow-up these recommendations?". Two definitions of AH were used: SBP \geq 160 mmHg and/or DBP \geq 95 mmHg in the first survey and SBP \geq 140 mmHg and/or DBP \geq 90 mmHg in the second survey. Normotensive (according to the two definitions) subjects who used antihypertensive drugs in the past 2 weeks were classified as hypertensive in both surveys. According to SBP and DBP levels we classified subjects into 4 BP levels groups: normal (SBP $<$ 140 and DBP $<$ 90 mmHg), low (first degree) AH (SBP 140-159 and/or DBP 90-99 mmHg), middle (second degree) AH (SBP 160-179 and /or DBP 100-109 mmHg) and high (third degree) AH (SBP \geq 180 and/or DBP \geq 110 mmHg). Control of total cholesterol (CH) was determined by asking "Was your level of cholesterol measured during past 12 months?" and "Have you ever been told by doctor that you have elevated cholesterol in blood?".

Results: the distributions of two samples data into 4 BP level groups did not differ significantly for both sexes. There were 50% male with normal BP, 27.9% with low AH, 15.8% with middle AH, 6.3% with high AH in pooled samples (60.2%, 21.2%, 12.4% and 6.2% for female accordingly). During the 10-year proportion of subjects for whom BP was measured during last year increased from 60.5% to 79.9% for male and from 67.7% to 86.3% for female (p $<$ 0.001). The statistically significant increase (p $<$ 0.01) was determined in all BP levels groups except high AH group. The awareness of AH increased from 28% to 35.3% (p=0.003) for male and from 27.6% to 35% (p=0.001) for female. The statistically significant increase was determined in normal level BP group for female and in low AH group for both sexes (p $<$ 0.01). The distribution according to the duration of AH (1 year, 2-9, \geq 10 years) didn't differ in two samples for both sexes. The proportion of using antihypertensive drugs who were aware of their AH was higher in female (79.9% in first survey and 81.2% in second survey) than in male (59.7% in first survey and 64.7% in second survey, p=0.001), but there was not significant change in percents of using drugs between surveys. The proportion of using NM means in those who were aware of their AH increased from 48.9% to 57.5% for male (p=0.05) and from 55.4% to 69.4% for female (p=0.002). This increase was significant for male with normal BP level and with low and middle AH (p $<$ 0.05). The proportion of male and female who were aware of their hypertensive status and were on drug therapy in past two weeks increased from 18.3% to 43% for male (p $<$ 0.001) and from 37% to 55.7% for female (p $<$ 0.001). The proportion of effectively treated (normotensive among aware and on drug therapy during 2 past weeks) didn't change significantly (28.6% and 15.8% for male and 21.4% and 19.9% for female, p $>$ 0.05). It is difficult to compare effect of treatment because the different AH definitions in these two surveys. During the last 12 months the level of cholesterol in BP was measured for subjects who were aware for their hypertensive status in two surveys for 9.9% and 22.6% for male (p $<$ 0.001) and for 7.7% and 30.6% for female (p $<$ 0.001). The proportion of male who were told by doctor about elevated level of cholesterol increased (2.1% and 10%, p $<$ 0.01), for female accordingly (3.2% and 17.7%, p $<$ 0.001).

Conclusions: during 10 years period the proportion of population with measured BP (past year) increased. The awareness of hypertension increased too and nonmedicament control improved, and control of cholesterolemia improved in Kaunas MONICA population. Nevertheless, the effective treatment of AH was not detected.

