

Trends of arterial hypertension, morbidity of and mortality from stroke among middle-aged Kaunas population between 1983 and 2002

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Objective of the study was to evaluate dynamics in the prevalence of arterial hypertension, morbidity of and mortality from stroke among middle-aged Kaunas population between 1983 and 2002.

Material and methods. Four independent surveys in 1983-1984, 1986-1987, 1992-1993, and 2001-2002 were carried out in random samples of men and women aged 35-64 involving 2413, 1762, 1231 and 1403 persons respectively. The risk factors were defined within the framework of the WHO MONICA study (Multinational Monitoring of Trends and Determinants in Cardiovascular Disease). The source of stroke mortality data among population aged 25-64 years is the official mortality statistics and morbidity data based on the Kaunas population stroke register. The age-standardized rates were calculated by the direct method using the European population as a standard.

Results. During the past 20 years the mean values of systolic blood pressure decreased among men. Among women decreased both mean values of systolic and diastolic blood pressure, however the prevalence of hypertension has decreased only among women by 11.9% (from 51.3% to 39.4%, $p < 0.001$) with no significant changes among men.

During 1986 to 2000, among Kaunas men aged 25-64 years the average morbidity rate of stroke according to the stroke register data was 221.7/100,000 and it did not change significantly: $-0.4\%/yr.$, $p > 0.05$. The average stroke morbidity rate among women was 126.9/100,000 and was increasing statistically significantly ($2.9\%/yr.$, $p = 0.0000$). Analyses of the data during the two time periods revealed that during the first period (1986-1991), the morbidity rates of stroke were without statistically significant changes both among men and women. While during the second period (1992-2000), the morbidity rates of stroke were increasing by $3.8\%/yr.$ ($p = 0.009$) among women and showed no changes among men ($2.1\%/yr.$, $p = 0.2$).

According to the official mortality statistics data, during the study period (1983-2000), the average rate of mortality from stroke was 53.2/100,000 for men and 27.2/100,000 for women. Trend analysis showed a significant decline in mortality rates from stroke among both men and women (by $-2.9\%/yr.$, $p = 0.004$ and $-3.2\%/yr.$, $p = 0.002$, respectively). During the second part of study period (1993-2002), a steep decline was observed in the mortality from stroke among women (by $-9.3\%/yr.$, $p = 0.002$). The same tendency has been determined among men (by $-5.4\%/yr.$, $p = 0.09$).

In conclusion, the decreasing trend in the prevalence of arterial hypertension has been estimated in Kaunas middle-aged female population during 1983-2002 years. Despite the decreasing trends during the same time period in the mortality rates from stroke among both men and women, the morbidity rates of stroke are increasing among women and no changes among men, therefore programs or strategies targeted to control levels of arterial blood pressure and other risk factors are still needed.