

Prevalence and control of hypertension in Latvia

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“The prevalence of hypertension (defined as a pressure of 140/90 or above, or treatment with an antihypertensive medication) was 27.6% in North America, compared with 44,2% in Europe (55% in Germany ranging down to 38% in Italy)...Only 8% of hypertensives in Europe had their condition controlled, compared with 23% in North America” – such a data was published by R.W.Griffith in “Health and Age” (2003). So, the aims of our investigation were:

1. To assess the prevalence of arterial hypertension (AH), defined as mentioned above among Latvian population ageing ≥ 45 years;
2. To estimate the significance of CVD risk factors (RF) for AH prevalence;
3. To evaluate the control rates of AH (AH CR) in Latvia;
4. To compare the results of monotherapy by 4 main groups of antihypertensive medication: the angiotensin converting enzyme inhibitors (ACEI), the beta – blockers (Bbl), the calcium antagonists (Ca) and the diuretics (Diur).
5. To compare the effect of monotherapy and combined therapy on control rate.

Objects and methods. 3 epidemiological Data bases (Dbases) for analyses were selected:

1. Dbase of randomized urban population of Riga city (908 men and 1235 women, aged 25-64 yrs);
2. Dbase of randomized rural population of Kuldiga region (844 men and 922 women, aged 25-64 yrs);
3. Dbase of “DIASCREEN” population, selected by high risk for diabetes from those visiting their family doctors (3324 men, 1301 women, aged ≥ 45 yrs). The risk for diabetes was accepted as high if: age ≥ 45 years, presence of AH and overweight (body mass index BMI ≥ 25 kg/m²), smoking, hereditary predisposition and additional factor for women whose baby’s bearing weight ≥ 4 kg.

RF of AH have been analysed: overweight (OW); hypercholesterolemia (Hol $\geq 5,18$ mmol/l), hypertriglyceridemia (Trigl $\geq 1,7$ mmol/l), decreased high density lipoproteins (HDL $\leq 0,9$ mmol/l for men and HDL $\leq 1,16$ mmol/l for women) and hyperglucemia (Glu $\geq 6,1$ mmol/l).

Results. 1. The prevalence of AH in urban population was $41.8 \pm 1.4\%*$ (with 61.2 % for persons after age 45), in rural population - $40.5 \pm 1.6\%*$ (with 63.7 % for those after age 45). Among the DIASCREEN population there were 85.2% respondents with AH, 88.8% respondents with OW and 8.2% - with diabetes.

2. The significance of RF for AH prevalence was estimated by odds ratio calculating and is shown in the table:

| | BMI ≥ 25 kg/m ² | Trig $\geq 1,7$ mmol/l | Glu $\geq 6,1$ mmol/l | Hol ≥ 5.18 mmol/l | HDL $\leq 0,9/\leq 1.6$ mmol/l |
|------------|------------------------------------|---------------------------|--------------------------|---------------------------|-----------------------------------|
| Odds ratio | 3.98 | 2.75 | 2.53 | 2.49 | 2.04 |

3. Therapeutic control of high blood pressure for patients over 45 years with regular medicine intake differed significantly in all three samples of population:

| | Riga | Kuldiga | DIASCREEN |
|-----------|-------------------|------------------|------------------|
| AH CR (%) | $17.2 \pm 2.7\%*$ | $9.9 \pm 1.6\%*$ | $6.4 \pm 0.8\%*$ |

4. 41.4 % of “DIASCREEN” population was treated by monotherapy.

1278 persons with monotherapy were analysed to compare the effect of 4 main groups of antihypertensive medicines. The table shows the comparison of AH control rate under this treatment:

| | ACEI | CA | BBl | Diur |
|-----------|----------------|----------------|-----------------|----------------|
| AH CR (%) | $6.9 \pm 0.9*$ | $5.6 \pm 1.2*$ | $12.5 \pm 2.0*$ | $3.8 \pm 1.4*$ |

Conclusion. 1. The prevalence of AH in Latvia is as high as in other European countries.

2. The prevalence of AH depends on region and the presence of RF. The most significant risk factor for AH prevalence in Latvia population is overweight.

3. The control of AH in Latvia is low and does not differ from other European surveys data

4. AH monotherapy with diuretics demonstrated very low control rate.

(*) age standartized by European Standard Population