

Comparative Ten-year Follow-up Study on the Genesis of Hypertension in Nepal

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Summary

[Objective] The purpose of this study is to investigate and specify the factors concerning the genesis of hypertension in Nepal based on the above mentioned suggestions. We particularly focused our attention on changes in the blood pressure level, health status with age and lifestyle. The specific purposes of the present study are to determine any changes in the blood pressure (BP) and health status of the inhabitants after 10-year period, and to identify any changes in the BP and health status of the inhabitants after a transition to an urban and modern lifestyle.

[Subjects and Methods] One of the two survey sites was located in a hilly village (Kotyang: K), where a traditional lifestyle is still common, while the other was in a suburban village (Bhadrakali: B) near Kathmandu, where the changes in lifestyle have been rapid. A comparison of these two sites is expected to help elucidate the crucial factors of the genesis of hypertension. We selected the survey sites and the subjects identical to those of the 1987-study, and conducted in the same season as previous one in 1987. A total of 189 men and 185 women in K and 278 men and 318 women in B, aged from 20 to 86, participated in this study. To compare the results between 1987 and 1996, similar medical, nutritional and anthropometrical procedures were performed on each villager.

[Results] (1) No significant differences in the average height and weight were found between the two villagers. (2) The average %Fat and the appearance rate of obesity for women were also similar among both groups of villagers, while those for men were lower in K than in B. (3) Maximal aerobic powers for both sexes were apparently higher in K than in B for all age-group. (4) Both systolic and diastolic BP were significantly lower in K than in B. (5) The incidence of hypertension (140/90 mmHg or over) was 4.8% for men and 6.6% for women in K and 14% and 8.1% for men and women in B. (6) The estimated average salt intake was 12.8 and 10.6 g/day in K's men and women and 14.1 and 11.6 g/day in B's men and women. (7) Urinary K excretion was higher in K than in B.

[Conclusion] We confirmed that the BP was still low in Kotyang's villagers in spite of consuming a high salt diet and these results suggest that the physical activities in their daily life may substantially differ between Kotyang and Bhadrakali. More detailed analyses are necessary to clarify the relationship between BP changes and the lifestyle changes between the two villagers.