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CORONARY ARTERIOGRAPHY AND LEFT VENTRICULOGRAPHY BEFORE AND AFTER CORONARY ARTERY BYPASS GRAFT SURGERY
-SIGNIFICANCE OF CORONARY COLLATERALS-**

Yoshinori Tanimoto*, Eiichi Hyakuna, Hironori Ebihara, Yoshio Hamada, Kiyoshi Takashiba, Yasuo Matsuda**.

Department of Cardiovascular Surgery*, Dept. of Cardiology, Cardiovascular Center, Saiseikai Shimonoseki Hospital.

Second Dept. of Internal Medicine, Yamaguchi University School of Medicine**.

In the coronary arteriography and left ventriculography before and after coronary bypass graft surgery, we observed the changes of native coronary artery, coronary collaterals and left ventricle.

The study consisted of 44 patients (38 males and 6 females, mean age of 61 ± 7 years). In 44 patients, 92 of 100 grafts were patent. In 92 patent grafts, the stenosis in the native coronary artery were progressed in 19 segments and unchanged in 73 segments. Twenty-nine of 92 grafted arteries received collaterals before coronary artery bypass graft surgery, all of which were disappeared after successful surgery. The regional wall motions of the left ventricles supplied by the 29 grafted arteries were evaluated; 16 regional wall motions were improved and 13 were not after surgery. Eight collaterals in the 16 improved regions were good and 8 of those were poor. On the other hand, 6 collaterals in the 13 unimproved regions were good and 7 of those were poor.

These results indicate that the coronary collaterals promptly disappeared after restoration of coronary blood flow by coronary bypass graft surgery. Furthermore, these collaterals may not be sufficient to preserve the left ventricular wall motion independent to the degree of collaterals.

Chairmen

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STUDIES ON SEASONAL CHANGES OF BLOOD PRESSURE IN THE COLD CIRCUMSTANCES**

Yasuhiro Nakamura, Toshiaki Kijima, Atsushi Konno, Akira Hashimoto, Akira Hayase, Osamu Iimura

The Second Department of Internal Medicine, Sapporo Medical College, Sapporo

To clarify the effect of cold temperature on hypertension, this prospective epidemiologic study was started in 1977. In the present study, the relationship among seasonal changes of blood pressure (BP), the rates of progression of normotension (NT) and borderline hypertension (BHT) to hypertension (HT), and BP in the cold circumstance were investigated.

Subjects and Methods: 996 subjects, aged from 40 to 64 years old were randomly selected and followed up for 6 years in "T" town of Hokkaido, Japan. BP were measured in summer (S-BP), in winter under a room temperature conditions (20°C) (W-BP) and those under a cold circumstance (0°C) (C-BP).

Results: (1) The average of C-BP (153/89 mmHg) was significantly higher than those of S-BP (135/81 mmHg) and W-BP (138/83 mmHg). (2) In 6% of the

whole subjects, an increase of systolic BP over 41 mmHg in C-BP compared to W-BP was observed. (3) The rate of progression from NT or BHT to HT during 6 years of observation was significantly higher in the subjects in which W-BP was more than 5 mmHg higher than S-BP. (4) The number of subjects whose BP increased in the cold circumstance were significantly higher in HT and BHT than in NT. Likewise, 15% of NT and 59% of BHT showed hypertensive BP levels over 160/95 mmHg in the cold circumstance.

Conclusion: Our 6 year observation of seasonal changes of BP shows that the measurement of blood pressure in summer and in winter might be useful for the purpose of the prediction of progression of HT in a cold region. In addition, measurement of blood pressure in the cold circumstance was important to manage subjects having HT or BHT.

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A COMPARISON OF BLOOD PRESSURE IN PARENTS AND THEIR CHILDREN BASED ON THE DATA COLLECTED FROM LONG TERM OBSERVATION**

Minoru Iida, Masamitsu Konishi, Noriyuki Nakanishi, Takashi Shimamoto*, Hiroshi Inada*, Yoshio Komachi*

The Center for Adult Diseases, Osaka

*Institute of Community Medicine, Tsukuba University

In Japan blood pressure is declining with recent changes in lifestyles, especially in farming communities. For a better understanding of environmental influences on blood pressure, a study including a genetic approach is needed.

About 20 years ago the authors first examined people aged 30 years and older in a farming village in Akita (2,509 population), with the response rate being 88.7%, since then our surveys have been continued. We made a comparison of blood pressure in parents and their children there. Analyses were done on condition that many of the offspring were close to the same age their parents were when they were examined about 20 years ago.

The results were summarized as follows:

1. A correlation of blood pressure between parents and their offspring was not strong.
2. Blood pressure was found to be lower in children than their parents, even if the subjects who received hypertensive therapy were removed.

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INTERNATIONAL COOPERATIVE STUDY ON CARDIOVASCULAR DISEASES AND ALIMENTARY COMPARISON (1) URINARY AMINO ACID ANALYSIS AS BIOLOGICAL MARKERS ON DIETARY FACTORS RELATED TO BLOOD PRESSURE**

Yamori Y, Horie R, Nara Y, Mano M, Mori C, Hatano S, Liu L-S, Tao S-C, Huang Z-D, Sun S-F, Zhang H-X, Zhao G-S

Japan-Sino CARDIAC Study Group WHO Collaborating Center for Research on Primary Prevention of Cardiovascular Diseases

Epidemiological relationship between dietary factors and cardiovascular diseases (CVD) in various communities with different dietary customs and CVD mortality rates were analyzed by this