Epidemiology of Insulin Resistance and Hypertension in Adults - MONICA BELLUX - Preliminary Results

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Numerous publications have outlined that insulin resistance, hypertension and obesity are often associated suggesting a common link in the pathogenic mechanisms.

Relations between glycemia (GLY), insulinemia (INS) (fasting and 2 hours after a 75 gr glucose oral load) and blood pressure (BP) have been analyzed in a random sample of 1,949 adults aged 35-64 years living in the province of Luxembourg.

Subjects have been classified according to 2 criteria:

1. Their BP level
2. The presence or absence of antihypertensive treatment.

Computations of mean values of GLY, INS, BMI and major lipids have been done for 3 statuses of BP: normotensive (NT), borderline (BD) and hypertensive subjects (HT).

For both sexes, the respective prevalence in the former BP classes are 77%, 16% and 7% in untreated subjects and 29%, 38% and 33% in treated subjects.

Analysis of variance between these BP classes reveal that mean fasting and 2h.GLY increased significantly with increasing BP in treated ($p<0.05$) and untreated subjects ($p=0.001$).

No such effect appears for INS in treated subjects whereas fasting and 2h.INS increases with BP in untreated subjects ($p=0.001$).

Comparisons between treated and untreated hypertensive individuals do not show any effect of antihypertensive therapy on glycemia, insulinemia and lipids such as cholesterol, HDL and triglycerides since no significant differences arise between means of each group except for systolic and diastolic BP which are significantly higher for untreated hypertensives. Correlation matrix highlights numerous colinearities between BP, GLY, INS and BMI which illustrate the complexity of the physiopathological relations between hyperinsulinemia and hypertension.

These confounding effects will be taken into account at the time of definition of a potential risk profile (hypertension, obesity, hyperlipidemia) according to different cutoff points of insulinemia (which will be chosen after characterization of the insulinemia distribution in that particular population).

Health Status After 65: The BIRNH Follow-up Study

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In 1980-84, 12,000 subjects were screened. Among them 4,000 were 55 years and over.

The objectives of this survey of those 55 years and over at initiation of the study:
1. Assessing incidence of major chronic disease (cardiovascular, cancer and diabetes)
2. Evaluating quality of life at 65 years and over
3. Evaluating degree of invalidity
4. Assessing hospitalization and institutionalization.

All events will be correlated with baseline variables (sociodemographic; bioclinical; nutritional) in order to propose predictive models for heavy medical consumption, invalidity and institutionalization.