in African-Americans. In this study 55 African-American boys and 71 girls aged 15-18 years underwent a 5-hour stress protocol (2 hour baseline, 1 hour stress, 2 hour recovery) after being brought into similar levels of sodium balance. Dual-energy x-ray absorptiometry was performed to determine total percent body fat. Both girls and boys showed significant increases from baseline to stress and significant decreases from stress to recovery for blood pressure and sodium excretion (P<0.01 for all), with greater changes for boys (P<0.01 for all). For girls, blood pressure during stress was related to urinary sodium excretion (r=0.31; P<0.005) but not for boys. For boys, body fat was negatively correlated with the change in sodium excretion from baseline to stress (r=-0.37; P<0.006) and sodium excretion during stress (r=-0.28; P<0.04), which in turn was related to angiotensin II (r=-0.41; P<0.41). Body fat was also negatively related to the post-stress decline in blood pressure (r=-0.24; P<0.04) which was positively correlated with the stress-induced change in angiotensin II. In contrast, body fat was not correlated with sodium handling, blood pressure, or angiotensin II in girls. These results may help to explain how the interactions between salt, stress, and obesity contribute to the increased incidence and prevalence of HTN in African-American males. The mechanisms responsible for the gender difference is unclear, however, we speculate that the natriuretic and vasodilatory properties of the female sex hormones may facilitate stress-induced pressure natriuresis.

Key Words: Obesity, Stress, Gender Differences

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PREVALENCE OF HYPERTENSION IN A BRAZILIAN STATE
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Knowledge on the prevalence of Hypertension (HTN) in Brazil is still restricted to few studies and the information brought to light from studies carried out within a population basis is important to help plan health policies. The aim of our study was to estimate the prevalence of HTN and describe the epidemiological profile of the adult population of a state located in the center-west region of Brazil. Descriptive, observational and transversal study of a population base, substantiated by a home survey of a simple random sample, considered to be representative of the population being studied (>18y), taking as basis a large city and a small one. Standardized questionnaires were used to obtain social and demographic information, and daily habits. Analysis of the BP was done considering the average of two measurements, which were taken with the semi-automatic device OMRO HEM 750CP, and adopting the HTN criterion of BP ≥140/90mmHg (WHO) or the regular use of anti-hypertensive drugs. Data was stored in the software Microsoft Access and was analyzed for hypothesis validation and correlation among the variables with the software Epi Info 6.

Two thousand nine hundred and twelve people were investigated (85% of the intended sample). There was a predominance of females (61.7%), average age 41.5±15.3y (18 to 90y). According to the established criteria, 35.5% (n=1034) of the population can be considered hypertensive. Of these, only 65.6% know about their condition, 43.3% receive treatment and only 15.4% have controlled their blood pressure. Blood pressure control is higher among those with a more schooling (p<0.001) and no relationship with family income was found to exist. The HTN indicators in Goiânia show that there is reason for concern and the level of awareness and control, as corroborated by other studies, is not satisfactory. These data confirm the urgent need to improve the detection and treatment systems for hypertension, especially in the Public Health services, with the aim to decrease the risk for cardiovascular diseases.

Key Words: Prevalence, Hypertension, Risk Factors

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KNOWLEDGE OF HYPERTENSION (HTN) AND ITS CONTROL IN THE ADULT POPULATION OF A BRAZILIAN STATE
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In view of the risk presented by untreated HTN, detection, treatment and control of hypertensive individuals must become a priority. In spite of all the efforts, the number of unidentified and/or inadequately treated hypertensive individuals is significant. The aim of our study was to investigate and analyze the level of knowledge and control of HTN in a significant sample of the adult population of the state of Goiás/Brazil. Descriptive, observational and transversal study of a population base, substantiated by a home survey of a simple random sample, considered to be representative of the population being studied, aged ≥18y (IC 95%), and taking as basis a large city and a small one. Standardized questionnaires were used to obtain social and demographic information, and daily habits. Analysis of the BP was done considering the average of two measurements, which were taken with the semi-automatic device OMRO HEM 750CP, and adopting the HTN criterion of BP ≥140/90mmHg (WHO) or the regular use of anti-hypertensive drugs. Data was stored in the software Microsoft Access and was analyzed for hypothesis validation and correlation among the variables with the software Epi Info 6.

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Key Words: Prevalence, Hypertension, Risk Factors

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STUDY ON THE PREVALENCE OF SOME RISK FACTORS IN THE ADULT POPULATION OF ONE BRAZILIAN STATE
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Knowledge on the prevalence of risk factors (CVRF) is important to help plan health policies, which aim at reversing these risks.
Estimate the prevalence of some CVRF in the adult population of the state of Goiás/Brazil.

Descriptive, observational and transversal study of a population base, substantiated by a home survey of a simple random sample, considered to be representative of the population being studied, (>18y), taking as basis a large and a small city. Standardized questionnaires were used to obtain social and demographic information on daily habits and several measurements were taken, including BP (OMRO HEM 750CP), weight (electronics scale), height (stadiometer), and abdominal circumference with a non-elastic measuring tape. Data was stored in the software Microsoft Access and was analyzed for hypothesis validation and correlation among the variables with the software Epi Info 6.

Two thousand nine hundred and twelve people were investigated (85% of intended sample). There was a predominance of females (61.7%), and the state of Goiás/Brazil. There was a predominance of females (61.7%), and a general trend for a lower ratio of occurrence of females and male patients. There was a downward trend from that age on. The Waist Circumference (WC) was found to be increased or highly increased in 42.5% of the population which was studied. Smoking was another finding, with a 21.1% prevalence, and it was more frequent among men (26.2%) than among women (17.9%). Sedentary individuals represented 61.9% of the population, uniformly distributed between the two genders. Regular consumption of alcohol was a finding for 41.4% individuals, more frequent among men.

In view of the high prevalence of these CVRF, and in particular the high percentage of people whose weight was above the average (45.8%), we must become more alert to the need of urgent measures aimed at changing the current state of affairs, or otherwise prepare ourselves to face an epidemic of CVD.

Key Words: Risk Factors, Prevention of cardiovascular disease, Knowledge of risk factors

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IMPAIRED PRESSURE NATRIURESIS IS ASSOCIATED WITH PRECLINICAL MARKERS OF ABNORMAL CARDIAC STRUCTURE AND FUNCTION

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Impaired pressure natriuresis is associated with hypertension. However, its impact on target organ changes to the heart is not fully understood. Therefore, we evaluated possible associations of LV structure and diastolic function with blood pressure and sodium regulation. Twenty four normotensive African American youth (age 15 to 18 years; mean weight: 76±22 kg) were studied. 2-D guided M-mode and Doppler echocardiographic studies were performed prior to a two hour rest period which preceded a one hour stressor (video game) and subsequent two hour recovery period. Sodium excretion and hemodynamic functioning were measured at rest, during and following extended behavioral stress. Mean relative wall thickness, left ventricular mass (LVM/Ht 2.7 ) and fractional shortening were within normal ranges (39±4%, 36.8±7.3 g/m² and 38±5%; respectively). There was a general trend for a lower ratio of early (E) to late (A) filling velocity to be associated with greater relative wall thickness (r=−19) and higher systolic and diastolic blood pressure and heart rate at rest, as well as during and following stress (r range =−.56 to −.20). Isovolumic relaxation time was positively correlated with systolic blood pressure and heart rate during and following stress (r range =.21 to.40) and negatively with sodium excretion during stress (r=−.33). These findings suggest that behavioral stress-induced increases in blood pressure and sodium retention may contribute to LV remodeling and diastolic dysfunction.

Key Words: Sodium, Stress, Diastolic Function

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THE IMPACT OF HYPERTENSION AND DIABETES ON STROKE HOSPITALIZATION

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The southeastern United States has been recognized for over 50 years as the region with the highest stroke mortality, and South Carolina, with the highest cerebrovascular disease rates, has the unfortunate distinction as the buckle of the stroke belt. While the reasons for the geographic disparity remain unclear. Hypertension and diabetes emerge as leading possibilities, since these conditions and related complications tend to be more frequent and severe in the Southeast. Hospital admissions for stroke were assessed from 1991 - 2000 in South Carolina to estimate the impact of hypertension and diabetes on the trends in stroke rates. Secondary diagnoses of hypertension and diabetes were analyzed with stratification by age groups < 50 and ≥ 50 years.

From 1991 to 2000, hospitalization rates for stroke increased 39.5% (32.8% for < 50 years and 40.1% for 50+ years). In 2000, secondary diagnoses of hypertension were associated with 50.2% of the stroke discharges and secondary diagnoses of diabetes were reported with 29.7% of the stroke hospitalizations. The secondary diagnoses rates of hypertension and diabetes associated with stroke hospitalizations increased by 79% and 38%, respectively, during the 10-year study period. These data suggest that hypertension and diabetes are playing a rapidly progressive role in the rising burden of stroke admissions in an at-risk Southeast population. More effective management of the underlying risk factors emerges as a critical component of an effective intervention strategy aimed at reducing stroke-related health and economic disparities, especially in vulnerable populations.

Key Words: Sodium, Stress, Diastolic Function

% of Stroke Hospitalizations

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ETHNICITY, BLOOD PRESSURE AND ALL-CAUSE MORTALITY IN THE BIRMINGHAM FACTORY SCREENING PROJECT

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To examine the effects of ethnicity on survival in the Birmingham Factory Screening Project, a large epidemiological study of blood pressure in a multiethnic community in Birmingham, United Kingdom, we examined all-cause mortality in 2875 subjects after a mean follow-up period of 18.0 (s.d.4.3) years. Blood Pressures were measured using a Hawksley Random Zero sphygmomanometer.

Key Words: Hypertension, diabetes and stroke hospitalization, hypertension, diabetes stroke hospitalization