

Estimation of blood pressure In adult population in Baiji

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Abstract

Data was collected from 60 cases in age groups from 40-60 years (30 female and 30 male).The cases included in this study was collected randomly in Baiji hospital from June to October 2006 . The data was obtained by using a questionnaire . It was found that the most common cases use Beta blockers as antihypertensive drugs , 12 cases use B-blocker plus Angiotensin converting enzyme inhibitors and 5 cases use B-blocker with diuretics. There are 8 cases use Angiotensin converting enzyme inhibitor only and 7 cases use vasodilator drugs .Regarding the measurement of blood pressure and heart rate , in 36 cases complaining from increase blood pressure above the normal level there is increase in heart rate in 30 cases (heart rate more than 100 beat / minute) , and in 24 cases of normal blood pressure there is increase in heart rate in 5 cases only .The aim of this study is to investigate the prevalence of hypertension in age groups from 40-60 years in Baiji from June to October with some investigations .

قياس نسبة ضغط الدم في الاشخاص البالغين في منطقة بيجي

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المستخلص

تم جمع المعلومات من خلال 60 مريض مصابين بارتفاع ضغط الدم المزمن للأعمار من 40 إلى 60 سنة وهم مقسمون إلى فئتين ذكور وإناث (30 مريض لكل فئة) وتم هذا الفحص العشوائي في مستشفى بيجي العام للفترة من شهر حزيران إلى شهر تشرين أول للعام 2006 . بالنسبة للعلاج المستخدم من قبل هؤلاء المرضى وجدنا بأنه هناك 26 مريض يستخدمون الادوية المثبطة لمستقبل بيتا فقط و 12 مريض يستخدمون هذه الادوية مع الادوية المثبطة لأنزيم الانجيوتنسين و 5 مرضى يستخدمون هذه الادوية مع المدررات . وايضاً هناك 8 مرضى يستخدمون هذه الادوية المثبطة للأنزيم فقط و 7 مرضى يستخدمون الادوية الموسعة للاوعية الدمويه وبالنسبة لقياس ضغط الدم ونبض القلب وجدنا بأن هناك 36 مريض يعانون من زيادة في ضغط الدم وفي نفس الوقت هناك 30 مريض من هؤلاء يعانون من زيادة في نبض القلب . أما بقية المرضى (24 مريض) فإن قياس ضغط الدم ضمن الحد الطبيعي ولكن فقط 5 مرضى منهم يعانون من زيادة في نبض القلب .

Introduction

Hypertension is a common condition that affects > 50 million Americans ⁽¹⁾ and is an important risk factor for cardiovascular disease. Although several risk factors for the development of hypertension have been identified ⁽²⁾, in most cases (more than 95%) its etiology is still not fully unknown ⁽¹⁾. Hypertension is commonly associated with other cardiovascular risk factors such as obesity, diabetes, and dyslipidemia ⁽³⁾. The presence of these cardiovascular risk factors and the resulting endothelial dysfunction may play a role in the pathophysiology of hypertension. Dyslipidemia, a strong predictor of cardiovascular disease ⁽⁵⁾, causes endothelial damage ⁽⁶⁻⁸⁾, and the loss of physiological vasomotor activity that results from endothelial damage may become manifested as increased blood pressure, therefore factors like dyslipidemia that cause endothelial dysfunction may lead to hypertension.

Subjects and methods

Data was collected from 60 cases in age groups from 40-65 years (30 female and 30 male), all cases collected randomly in Baiji hospital from June to October 2006. The data was obtained by using a questionnaire, which includes many questions concerning the disease history and blood pressure was measured by sphygmomanometer.

Results

The cases classified according to sex, age, duration of hypertension and types of drugs which used for treatment of hypertension. About the duration of the disease, in 31 cases the duration of the disease last between 1-5 years, 23 cases between 5-10 years and 6 cases last more than 10 years. Regarding the types of drugs which used by the patients for treatment of hypertension, there are 26 cases use Beta blocker only, 12 cases use Beta blocker with Angiotensin converting enzyme inhibitors, and 5 cases use Beta blocker with diuretic drugs. There are 8 cases of hypertensive use Angiotensin converting

enzyme inhibitors only, 7 cases use vasodilator drugs (Nifedipine), and only 2 cases use centrally acting antihypertensive drugs (Methyldopa). Regarding the measurement of blood pressure and heart rate, in 36 cases complaining from increase blood pressure above the normal level there is increase in heart rate in 30 cases (heart rate more than 100 beat / minute), and in 24 cases of normal blood pressure there is increase in heart rate in 5 cases only (Table no.1). About the investigations which done for these cases including the measurement of serum cholesterol and G.U.C., these are 31 cases present with increase the serum cholesterol above the normal value, and other 29 cases are with normal limits. Regarding the general urine examination there are 12 cases present with albumin, 12 cases with urinary tract infection and 9 cases with crystal and cast.

Discussion

According to the data obtained in this study, it was found that in 31 cases the duration of the disease last between 1-5 years, 23 cases between 5-10 years and 6 cases last more than 10 years. Regarding the types of drugs which used by the patients, these are 26 cases use Beta blocker only, 12 cases use Beta blocker with Angiotensin converting enzyme inhibitors and 5 cases use Beta blocker with diuretic drugs. The data for the drugs shows that 29 (64%) male and 44 (70%) female were on single drug treatment for hypertension. Studies have shown that majority of hypertensive patients from different classes for achieving the recommended target level ⁽⁸⁾. There are 8 cases of hypertensive use Angiotensin converting enzyme inhibitors only, 7 cases use vasodilator drugs (Nifedipine) and only 2 cases use centrally acting antihypertensive drugs (Methyldopa). Most common drugs used was Angiotensin converting enzyme inhibitor (35%) followed by vasodilator (nifedipine) (17%) and B-blocker (15%) ⁽⁹⁾. About the investigation which done for these cases including the measurement of serum

cholesterol, there are 31 cases present with increase the serum cholesterol above the normal value and other 29 cases are with in normal limite, casteli and Anderson⁽¹⁰⁾ found that blood pressure and serum cholesterol were strongly correlated among hypertensive patients, which lead to early recommendations to treat elevated cholesterol in patients with hypertension^(5,10). Gaziano etal⁽¹¹⁾ also noted a potential interaction between elevated cholesterol and

hypertension in the development of myardial infarction. Regarding the general urine examination there are 12 cases present with albumin, 12 cases with urinary tract infection and 9 cases with crystal and cast. The additional tests often include, testing of urine samples for proteinuria to pick up underlying kidney disease or evidence of hypertensive renal damage⁽¹²⁾.

Table (1) show change in blood pressure and heart rate in male and female cases

Cases	Normal	Abnormal
Blood pressure	24	36
Increase heart rate	19	30

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