Prevalence of Prehypertension in Adult Outpatients in Trinidad

The Editor

Sir,

Due to emergence of further data on the lifetime risk of hypertension, the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (USA) has introduced a new classification of blood pressure measurements (1). This classification introduces a new category, termed prehypertension for those blood pressure readings ranging from 120–139 mmHg systolic, and/or 80–89 mmHg diastolic. According to this classification, individuals who were previously considered to have normal/borderline blood pressure are now classified as prehypertensive patients and a recent study has shown overall increased mortality associated with prehypertension (2). With this background, we conducted a prospective cross-sectional study to determine the prevalence of prehypertension in a non-hypertensive patient population and analyzed the relationship between prehypertension and demographic, anthropometric variables such as age, ethnicity, gender, body mass index, family history, social history and co-morbid illnesses.

Subjects included adult clinic outpatients attending the Eric Williams Medical Sciences Complex, Mount Hope, Trinidad and Tobago. Known hypertensive patients and pregnant patients were excluded. A questionnaire was administered focussing on demographics (age, gender and ethnicity); medical history (cardiovascular disease, renal disease, diabetes, thyroid disorders; family history for hypertension); social history (smoking) and occupational history. Specific anthropometric measurements namely body-weight and height were obtained. Blood pressure measurement was taken using a pre-calibrated automated arm cuff gauge with appropriate cuff size for each patient after allowing twenty minutes for the patient to rest and to be calm. Mantel-Haenszel common odds ratio (OR) were calculated for risk factors of prehypertension.

Among the 335 patients studied, 82 (24.5%) had normal blood pressure readings, 212 (63.3%) were prehypertensive and 41 (12.2%) were in the hypertensive range, similar to a report from the United States of America (prehypertension: 60%) (3). The factors associated with a definitive higher risk of developing prehypertension were male gender (OR 3.9, 95% CI: 2.1, 6.4) and overweight (OR 2.7, 95% CI: 1.6, 4.6). Age (41–50 years), ethnicity (African descent compared to Indian descent), diabetes mellitus, smoking and positive family history of hypertension are other factors found to be associated with an increased risk of prehypertension. Identifying this group of people may assist in preventing morbidity by addressing modifiable risk factors (4).

The present study was a basic screening of patients with prehypertension. A cohort study may be conducted in the region to monitor people with prehypertension to record the progression of the disease. Both physicians and patients alike should be more aware of prehypertension. By screening for and detecting prehypertension, physicians can advice patients regarding control of their blood pressure, change of lifestyle and prevention of progression (5).

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