

Country Data

Prevalence of Non-communicable Diseases and its Awareness among Inhabitants of Sokoto Metropolis: Outcome of a Screening Program for Hypertension, Obesity, Diabetes Mellitus and Overt proteinuria

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Abstract

Introduction: Developing countries confront double jeopardy of prevalent infectious disease and increasing Non-Communicable Diseases (NCD) with imminent projected epidemic proportions. Nigeria has witnessed tremendous socio-economic changes and rural to urban migration culminating in emergence of NCD. The impact of these diseases on the lives of people is enormous when measured in terms of outcomes. We initiated a screening program among inhabitants of Sokoto metropolis in an attempt to unravel the prevalence and pattern of NCD.

Methods: This is a descriptive cross sectional study involving 535 participants who were randomly selected during World Kidney Day Screening in Sokoto. Health promotion talk was organized for the participants before commencing the screening. We took anthropometric measurements and calculated body mass index (BMI) and waist/hip ratio for all individuals. We also checked blood pressure and blood glucose levels and performed urinalysis for all participants.

Results: There were 535 participants including 332 males and 203 females with a mean age of 37±17 years. Overweight, obesity and morbid obesity were found in 12.3%, 6.7% and 0.9% of participants respectively. About 11% had waist/hip ratio greater than 1. The prevalence of pre-hypertension and hypertension was 8.5% and 30.2% respectively. Elevated random blood glucose levels were found in 6% of participants while 17.9% had at least 1+ of proteinuria in urinalysis.

Conclusion: Non-communicable diseases are common in our environment and the level of awareness is low. Regular health education and screening programs are necessary in order to reduce the menace.

Key words: Non- communicable disease; Prevalence; Screening; Sokoto

The authors declared no conflict of interest

Introduction

Non-communicable diseases (NCD) are being recognized as an emerging public health problem in developing countries [1]. Nigeria has witnessed tremendous socio-economic changes and rural to urban migration which have led to emergence of NCD [2]. The replacement of our traditional diet rich in fruits and vegetables by a diet rich in calories provided by animal fat and low in complex carbohydrates has lead to increased rates of many NCD [3]. It is on this background that we carried out a screening program among inhabitants of Sokoto metropolis in order to unravel the prevalence and pattern of hypertension, diabetes mellitus, obesity and proteinuria.

Methods

This is a descriptive cross sectional study involving 535 participants who were randomly selected during the world kidney day screening in Sokoto. Anthropometric measurements were recorded and blood pressure was measured twice, five minutes apart, with a mercury sphygmomanometer. Random blood glucose level was measured using an ACCU-check glucometer and urinalysis was performed using combi-screen-7 urine dipstick. Hypertension was defined as blood pressure greater than or equal to 140/90 mmHg while diabetes was defined based on random blood sugar >200 mg/dL.

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Results

There were 332 males (62.1%) and 203 females. The age range was 15 to 80 years with mean of 37 ± 17 years. The mean height, weight and body mass index were 164 ± 1 cm, 62.1 ± 15.3 kg and 22.8 ± 5.3 kg/m², respectively. The mean systolic and diastolic blood pressure levels were 121 ± 13 mmHg and 73 ± 7 mmHg respectively. Over weight, obesity and morbid obesity were found in 12.3%, 6.7% and 0.9% of participants respectively. The prevalence of hypertension, diabetes and proteinuria are shown in Table-1. The pattern of awareness of hypertension, diabetes, obesity and overt proteinuria are shown in Table-2.

Discussion

The prevalence of obesity in this study concurs with Johnson *et al* [4] who reported a rate of 8.3% in an urban population in Lagos and with Bakari *et al* [5] who reported a rate of 13.1% in sub-urban northern Nigeria. Our finding contrasts with a prevalence of 3% among a group of Nigerian university students as reported by Ayodele *et al* [6]. The high prevalence of hypertension and diabetes mellitus is consistent with other reports from Nigeria [7, 8].

The high prevalence of proteinuria in this study concurs with the 19% reported by Ulasi *et al* [9] but contrasts sharply with findings from other parts of the world. Studies have shown that the leading cause of CKD in Nigeria is chronic glomerulonephritis [7, 9] which is consistent with a high prevalence of proteinuria.

Level of awareness about NCD concurs with reports by Ulasi *et al* [10] and Federal ministry of Health [9]. The low level of awareness and poor attitude of our people towards seeking medical attention early, underscore the need for NCD screening as part of routine examination of all persons presenting to any health facility for service; especially people at high risk.

Conclusion

Non-communicable diseases are prevalent in our environment and the level of its awareness is low. Therefore regular health education and screening programs should be conducted for early detection and institution of appropriate management in a bid to subsequently reduce the menace.

Table-1: Prevalence of hypertension, diabetes mellitus and proteinuria among the study population

Parameter	Prevalence
Pre-Hypertension	8.5 %
Hypertension	30.2 %
Diabetes Mellitus	6 %
Proteinuria	18 %

Table-2: Level of awareness of hypertension, diabetes, obesity and proteinuria among the study population

Parameter	Percentage (%)
Hypertension	23.2 %
Diabetes	11.4 %
Obesity	6.7 %
Proteinuria	8.9 %

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