

Study of hypertension among Fayoum university students

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By

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Summary

Hypertension is a public health problem, representing an important worldwide public-health challenge because of its high frequency and concomitant risks for morbidities. It is considered as one of the nation's leading causes of death, responsible for roughly one in six deaths among adults annually. Hypertension has been shown to start in early life.

The study aimed for, helping in prevention of hypertension among young. through identification of the prehypertensive and hypertensive students and the associated risk factors and associated morbidities.

The study was conducted for the students from first and fourth academic year of medicine and social sciences faculties Fayoum University. The study conducted on 3 phases; First phase, cross sectional descriptive study of 954 students, blood pressure was measured for all of them. Second phase, a nested case control study of 139 students. Students in the second phase were assessed by 1-a predesigned questionnaire used to assess socioeconomic condition, lifestyle, feeding habits, family history of diseases and psychological mood 2-tools for measuring weight, height and waist circumference 3- investigation in the form of fasting blood sugar, lipid profile (triglycerides and total cholesterol levels) renal function tests (urea and creatinine levels). Third phase: a case series for 10 male hypertensive students had additional investigations like, Echo, ECG and uric acid blood level.

The current study revealed the following:

- The prevalence of hypertension and prehypertension was 10.3% and 46.9% respectively in the first visit
- The prevalence of hypertension dropped to 5.7% and prehypertension increased slightly.
- The proportions of prehypertensives and hypertensives increased significantly by age ($P=0.000$) and in males more than in females ($P=0.000$), and in medical students than in non medical students ($P=0,000$).

- The proportion of prehypertensives and hypertensives was more in the students of the first year of medicine faculty than in the students of the first year of social sciences with significant difference ($P=0.002$). However the proportion of prehypertensives and hypertensives show insignificant difference among the students of the 4th year of both faculties ($P=0.257$).
 - Diastolic hypertension was more prevalent in both initial and final measurement by 36.7% and 59.3% respectively.
 - There was a significant difference between cases and controls regarding, waist circumference, body mass index and investigation like, total cholesterol level, fasting blood glucose, triglycerides, creatinine and stress score
 - $BMI \geq 25 \text{ kg/m}^2$, $FBG > 100$, $\text{cholesterol} > 200$, Family history of diabetes and presence of stress were the strongest predictors among cases.

Since the prevalence of prehypertension and hypertension became important health problem among youth so, it is recommended to; assess the detected hypertensive students physically and mentally, planning for treatment and health education with the specialist, introducing of early life style modification in the health education directed to the public and in the curriculum of the school and university students and further studies should be designed to assess the role of prehypertension as cardiovascular risk factor and to assess effect of lifestyle modification as intervention to prevent progression to hypertension especially in young.