that reported in previous studies.^{4,5} The small sample size of this study might have prevented some results from obtaining statistical significance. This is a limitation. Nevertheless, the study reflected a similar global pattern, of high prevalence of obesity, and its associated complications in pregnancy among South African adolescents. A larger study that focuses on obesity, and particularly on obesity in pregnant adolescents in South Africa, is necessary.

Declarations

The authors declare no conflict of interest. They have not received any funding from any authority to conduct this study.

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Risk factors for cardiovascular disease in workers at a district hospital

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Certain risk factors play an important role in a person's chances of developing heart disease. The more risk factors a person has, the greater the likelihood of developing heart disease. Proactively addressing the modifiable risk factors reduces the chances for a person to develop a cardiovascular disease or die from its complications. The author wished to establish the prevalence of the risk factors for cardiovascular diseases in workers at a district hospital. From September 2007 to the end of October 2007, workers were invited, on a voluntary basis, to know their 'numbers' (measured levels) as far as the risk for cardiac disease was concerned. A total of 108 participants were recruited. Among them, 6% had a random glucose of between 7.8 to 11.0 mmol/l and 3% had a random glucose of more than 11.1 mmol/l. Of the participants, 12% had stage 1 hypertension, 14 % had stage 2 hypertension and

3% had severe hypertension. Among the participants, 47 % had a body mass index above the norm, hence being at risk of heart disease; 88% did not engage in any form of physical exercises and 7.5% were active smokers. The survey clearly established that the workers employed at a district hospital had risk factors for heart disease. Some of them had established conditions such as diabetes mellitus, overweight and hypertension.

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Introduction

Cardiovascular disease is the leading cause of mortality in almost every developing country in the world.¹ Approximately 14 million individuals died of cardiovascular disease in 1990, and this is projected to rise to about 25 million by 2020.² In a large part, this increase can be explained by major ongoing socio-demographic changes in developing countries, and associated effects on the numbers of individuals at risk and the levels of cardiovascular risk factors.²

Certain factors (risk factors) play an important role in a person's chances of developing cardiovascular disease. The more risk factors a person has, the greater the likelihood of developing the disease. In addition to death, cardiovascular disease also causes many serious non-fatal events and in 1990 they were major causes of disability-adjusted life years (DALYs) – a measure of the total burden of disease caused by premature deaths and nonfatal events combined.²

The author wished to establish the prevalence of the cardiovascular disease risk factors in the workers at a district hospital. The findings would assist the Occupational Health Unit of the hospital in recommending healthy lifestyle habits to the workers.

Methods

From September 2007 to end of October 2007, workers at Middelburg Hospital were invited, on a voluntary basis, to know their 'numbers' as far as their risk for cardiac disease was concerned. A data capture sheet was compiled including the 'numbers' to know, as recommended by The Heart and Stroke Foundation South Africa (HSFSA): blood pressure, weight, blood sugar, height, and age and cholesterol level. Due to hospital cost constraints, cholesterol was not done. Data were collected for 108 individuals who volunteered to take part in the study. The hospital had, at the time of the project, 473 full time workers in all categories.

Results

The following findings are worth reporting:

- Age distribution: among the participants 50.9% were in the active life adult age group (above 40 years). This group

may be at risk of cardiovascular disease as increasing age is an established risk factor.

- Abdominal circumference: The abdominal circumference of the majority of the female participants (55.9%) was abnormal.³ Abdominal obesity is an independent risk factor for cardiovascular disease.³ The effect of abdominal obesity is strongest in the smoker and the unfit.³
- Blood glucose: Of the participants, 6% had a random glucose of between 7.8 to 11.0 mmol/l and 3% had a random glucose of more than 11.1 mmol/l. Blood glucose level is a risk marker for cardiovascular disease among apparently healthy individuals without diabetes.⁴ Increasing levels of blood sugar put the patient at risk of developing cardiovascular disease.⁴
- Blood pressure: Of the participants, 12% had grade 1 hypertension,⁵ 14% had grade 2 hypertension⁵ and 3% had severe hypertension.⁵ An association between hypertension and cardiovascular disease is well established.⁶ Hypertension appears to contribute to risk for cardiovascular disease even in the absence of other risk factors.⁷
- Exercise: Of the participants, 88% did not engage in any form of physical exercise, therefore placing them at the risk of heart disease by not benefiting from the positive effect of exercise on the cardiovascular system. Lack of physical activity in the general population is a public health problem and is recognised as an independent risk factor for the development of coronary disease.⁷
- Smoking: Of the participants, 7.4% were active smokers, and the numbers were equally divided among female and male participants. Active cigarette smoking is one of the most important modifiable risk factors for cardiovascular disease.⁸

Conclusion

The survey clearly established the existence of the risk factors for cardiovascular disease in the workers at the district

hospital. Some of them, who already had a condition that may complicate into a cardiovascular disease, were not aware due to the lack of signs or symptoms. Addressing dyslipidemia (an important risk factor) will go a long way in preventing cardiovascular disease; however, due to cost constraints, lipid profiles were not done in the workers.

The employers are encouraged to recommend regular checks for the employees in their care; at least one annual (periodic) health assessment should be done and the report thereof kept in the employee's file. The availability of an occupational health clinic at the place of work would assist those employees who do not have access to private medical practitioners.

The findings of this survey cannot be generalised due the small sample size and the participants were all volunteers.

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