

Association between short sleep and body mass index, hypertension among acute coronary syndrome patients in coronary care unit.

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Abstract

INTRODUCTION:

Patients with coronary diseases admitted to special care unit often suffer from sleep disorders, which may cause physiological changes and adversely affect patient's health. The relationship between sleep disorders and obesity is an important factor in studies on sleep disorders and other chronic diseases in all groups, including cardiovascular diseases. Understanding this relationship may increase the chance of progress in effective medical interventions in sleep disorders and obesity. This study was designed to evaluate the association between short sleep and Body Mass Index (BMI), hypertension among acute coronary syndrome patients.

MATERIALS & METHODS:

In this descriptive analytical study, 221 coronary patients admitted to coronary care unit and general wards were investigated. Data were collected through a researcher-made questionnaire whose validity and reliability had been confirmed. Data were analyzed with SPSS-16 software.

RESULTS:

A total of 221 patients with acute coronary diseases (including myocardial infarction and angina pectoris) with a mean age of 61.27 years were studied, of whom 61.5% were male and 38.5% were female. A significant association was observed between short sleep and higher BMI ($P=0.000$). About half the patients (49.3%) had a history of hypertension, and sleep disorders were also significantly related to hypertension ($P=0.006$).

DISCUSSION:

In this study, sleep disorders were patients' main complaint. Researchers found that patients with less than 5 hours or more than 9 hours sleep at night were more likely to have hypertension compared to patients that slept 7-8 hours. Lack of sleep affects metabolism, and daily energy expenditure reduces with increased immobility. In this study, a significant relationship was observed between BMI and sleep duration among hospitalized patients in coronary care unit ($P=0.000$), and sleep disorders increased with higher BMI. Short of sleep increases sympathetic tonus, cortisol level, and activation of inflammatory pathways, impairing glucose metabolism and contributing to overweigh, increased visceral fat.

CONCLUSION:

Our findings suggest that poor sleep quality, is related to higher BMI and hypertension among acute coronary syndrome patients.