

ORIGINAL RESEARCH

A CROSS SECTIONAL POPULATION BASED STUDY TO EVALUATE THE PREVALENCE OF NECK DISCOMFORT IN PEOPLE WITH METABOLIC SYNDROME AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Neck pain is a highly prevalent condition that leads to considerable pain, disability, and economic cost. The present study was conducted to assess the prevalence of neck discomfort in people with metabolic syndrome (MetS).

Materials & Methods: The present study was conducted to assess the prevalence of neck discomfort in people with metabolic syndrome. A total of 800 patients with metabolic syndrome were enrolled in the study. Each patient's relevant clinical characteristics were assessed. The symptoms of the patients were recorded. SPSS and Prism 8 were used for all statistical analysis. A p value of 0.05 is considered significant.

Results: MetS was discovered in 44.37% men and 55.62% women who participated in the study. Neck discomfort was reported by 15.62 percent of women and 11.87 percent of men.

Conclusion: The present study concluded that neck discomfort was present in 27.5% people with metabolic syndrome.

Keywords: Metabolic Syndrome, Neck Discomfort, Abnormal Glucose Tolerance.

INTRODUCTION

Metabolic syndrome (MetS), which includes abnormal glucose tolerance and insulin metabolism, obesity and abdominal fat loss, mild dyslipidemia, or high blood pressure, is thought to be a risk factor for serious diseases such as heart disease (CHD), which includes myocardial infarction and stroke¹, and dementia.² MetS is a combination of at least three of

the following five metabolic abnormalities: 1) elevated waist circumference (cutoff for Asians: ≥ 90 cm/35.4 inches in men and ≥ 80 cm/31.5 inches in women), 2) elevated triglycerides (TG; ≥ 150 mg/dL), 3) reduced high-density lipoprotein (HDL; < 40 mg/dL in men and < 50 mg/dL in women), 4) elevated blood pressure (systolic blood pressure [SBP] ≥ 130 mmHg or diastolic blood pressure [DBP] ≥ 85 mm Hg) or hypertensive, and 5) elevated fasting blood glucose level (≥ 100 mg/dL or 5.6 mmol/L) or diabetic.³ MetS and chronic pain disorders were hypothesized to be connected to depression's hypothalamus-pituitary-adrenal axis.^{4,5} It has been suggested that stress is related to both MetS and neck pain.^{6,7} Low physical activity has been found to be associated with MetS⁸ and musculoskeletal pain.⁹ Some studies have found an association between obesity and neck pain.^{10,11} The present study was conducted to assess the prevalence of neck discomfort in people with metabolic syndrome.

MATERIALS& METHODS

The present study was conducted to assess the prevalence of neck discomfort in people with metabolic syndrome. The study was conducted over a period of 1 year. Before the commencement of the study ethical clearance was taken from the Ethical committee of the institute and written informed consent was taken from the patients after explaining the study. Males and females between the ages of 20 and 70 who came to the OPD were included in the study. A total of 800 patients with metabolic syndrome were enrolled in the study. Patients under the age of 20, patients who had surgery for a spinal or pelvic injury, Ankylosing spondylitis, congenital/developmental kyphosis, scoliosis, poliomyelitis, Pott's spine Pregnancy and post-partum injuries to the cervical spine result in reduced mobility in the neck were excluded from the study. Each patient's relevant clinical characteristics, such as age, gender, as well as body mass index (BMI), were assessed. The symptoms of the patients were recorded. SPSS and Prism 8 were used for all statistical analysis A p value of 0.05 is considered significant.

RESULTS

The present study was conducted to assess the prevalence of neck discomfort in people with metabolic syndrome. A total of 800 patients with metabolic syndrome were enrolled in the study. MetS was discovered in 44.37% men and 55.62% women who participated in the study. Neck discomfort was reported by 15.62 percent of women and 11.87 percent of men.

Table 1: Participants with metabolic syndrome

Participants with metabolic syndrome	N (%)
Male	355(44.37%)
Female	445(55.62%)
Total	800(100%)

Table 2: Prevalence of neck discomfort in people with metabolic syndrome

Prevalence of neck discomfort in people with metabolic syndrome	N (%)
Male	125(15.62%)
Female	95(11.87%)
Total	220(27.5%)

DISCUSSION

The metabolic syndrome is a constellation of interrelated risk factors of metabolic origin—metabolic risk factors—that appear to directly promote the development of atherosclerotic cardiovascular disease (ASCVD).¹²

MetS was discovered in 44.37% men and 55.62% women who participated in the study. Neck discomfort was reported by 15.62 percent of women and 11.87 percent of men.

The point prevalence estimate of neck pain was found to be higher in females across all age groups.¹³⁻¹⁵

According to a recent study, workers with neck, shoulder, or back pain have higher levels of stress-related biomarkers. Neck pain is sometimes a sign of depression. Physical inactivity was found to be a major risk factor for MetS in one group in a recent study, despite the absence of perceived stress.¹⁶

A recent study discovered a link between the onset of MetS and a lack of physical activity.¹⁷ Klein et al. examined the relationship between the number of MetS risk factors and the incidence of CVD³². They reported that increasing odds of disease were associated with a higher number of risk factors, four risk factors having double the odds of disease of three risk factors.¹⁸

Nayak P et al conducted a study to look at the link between MetS and neck discomfort and found that MetS was found in 455 men and 550 women in the study. Neck discomfort was linked to BMI and waist circumference in males but not in females. Antihypertensive medicine was used more frequently by neck pain patients than by non-neck pain patients. There were no significant changes in smoking, physical activity, blood pressure, lipids, glucose, or CRP levels. Neck pain was reported by 8.7% (95 percent CI, 4.8 percent to 13%) of male patients without MetS and 17%.¹⁹

CONCLUSION

The present study concluded that neck discomfort was present in 27.5% people with metabolic syndrome.

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