

Section

Psychiatry

Original

Article

Metabolic Syndrome in Patients of Obsessive-Compulsive Disorder: A Hospital-Based Study

Jaya Sharma¹, Jeetpal Singh Rana^{2*}

¹Assistant Professor; ²Associate Professor, Department of Psychiatry, Govt. Doon Medical College, Dehradun

ABSTRACT

Background: The prevalence of OCD is around 2-3% in general population. Some research has found it to be 10%. OCD patients are usually affected by other mental disorders also. In OCD patients, the occurrence of major depressive disorder is about 67%.

Methods: Total 328 OCD cases were enrolled on the basis of inclusion and exclusion criteria. This study was conducted in Department of Psychiatry.

Results: In our study we were included total 328 cases of OCD. The sociodemographic study of the cases showed in this study. In this study, Males were 124 in number and females were 204. Married patients outnumber the unmarried with 56.1% married vs. Prevalence of metabolic syndrome in OCD cases was 32.9%.

Conclusions: Mean score for measuring the severity of OCD found to be more in MS patients and it was significant when compared it with patients in which metabolic syndrome was absent ($p=0.001$).

Keywords: OCD, metabolic syndrome, fasting blood sugar (FBS), triglycerides.

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*Corresponding Author

Dr. (Lt Col) Jeetpal Singh Rana
Associate Professor, Department of Psychiatry, Govt. Doon Medical College, Dehradun.

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INTRODUCTION

It has been estimated by WHO that obsessive-compulsive disorder (OCD) is the tenth leading causes of global disability.¹ OCD patients may have an obsession or compulsion both. The prevalence of OCD is around 2-3% in general population. Some research has found it to be 10%. OCD patients are usually affected by other mental disorders also. In OCD patients, the occurrence of major depressive disorder is about 67%.² Several studies were conducted on whether patients with serious mental illness an increased metabolic syndrome in comparison to the general population have.³⁻⁷ Kato and colleagues used the National Cholesterol Education Program ATP III criteria in their studies. They revealed that 60% metabolic syndrome was found among 63 schizophrenic outpatients, and 75% was estimated among 16 mood disorder patients of Hispanic origin.^{8,9}

The National Comorbidity Survey Replication (NCS-R) US reported that around 68% of subjects with a psychiatric disorder had at least one comorbid general medical condition (GMC).¹⁰

The high prevalence of GMCs in patients with mental disorders can be explained in three ways. First the effect of psychopharmacological treatments, secondly illness-related factors such as the adoption of unhealthy lifestyles linked with the psychiatric disorder itself, and thirdly, inherited biological factors such as hypothalamic pituitary adrenal axis dysregulation. It has been found by Mansur and coworkers that obesity and mood disorders are inherently associated and share a series of clinical, neurobiological, genetic and environmental predisposing factors.¹¹

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Some other studies also observed the incidence of GMCs in patients with bipolar disorder or schizophrenia and revealed that these patients frequently affected by cardiovascular diseases, hypertension, diabetes, endocrine diseases like hypo-hyperthyroidism, respiratory diseases such as asthma or chronic obstructive pulmonary illness, liver and peptic ulcer.¹²⁻¹⁴

The aim of this study was to find out the incidence of metabolic syndrome in drug naive Obsessive-Compulsive Disorder patients.

METHODS

Study population:- Total 328 OCD cases we were included in our study.

Study Area: -This study was conducted in Department of Psychiatry.

Data collection: - Sample were divided according to the presence and absence of MS. Examination was done a thorough physical examination, assessment of vital parameters, anthropometry, systemic examination and mental status examination. Yale Brown Obsessive Compulsive scale was used for assessing the severity of OCD. Metabolic assessment: Body weight (to the nearest of 0.5 kg) and height (to the nearest of 0.001m) were recorded in subjects without shoes and wearing only light indoor clothes. Body mass index (BMI) was calculated and waist circumference was measured midway between the iliac crest and the lower most margins of ribs. Fasting venous blood sample was collected under aseptic conditions to measure the blood glucose (fasting blood sugar (FBS), triglycerides (TG), and high-density lipoprotein (HDL) levels. MS was diagnosed by using the consensus definition for MS.

Data analysis: -Data were analyzed by using Microsoft excel.

RESULTS

In our study we were included total 328 cases of OCD. The sociodemographic study of the cases showed in this study. In this study, Males were 124 in number and females were 204. Married patients outnumber the unmarried with 56.1% married vs. 43.9% unmarried. In education secondary pass constitute 22% of total sample, followed, by intermediate (20.7%), illiterate (19.5%), graduate (14.6%), middle (11.0%), primary (8.5%) and post graduate (3.7%). It was established that 35.4% of cases were from rural areas and 64.6% were from urban areas. 30.5% of study subjects were housewife by occupation, 23.2% students, 18.3% were in govt./pvt. jobs, 11% were self-employed, 9.8% were in agriculture and 7.3% were unemployed. among the family type 65.9% were living in nuclear family while 34.1% were living in joint family. in the total sample 54.9% were Hindu and 45.1% were Muslims. Prevalence of metabolic syndrome in OCD cases was 32.9%.

Table 1: Demographic data of enrolled patients

Gender	No. of cases	Percentage
Male	124	37.8%
Female	204	62.2%
Total	328	100%

Table 2: Distribution of cases according to gender Marital Status

Marital Status	No. of cases	Percentage
Married	184	56.1
Unmarried	144	43.9
Total	328	100

Table 3: This chart showed residential status

Residential status	No. of cases	Percentage
Rural	116	35.4
Urban	212	64.6
Total	328	100

Table 4: This chart showed residential status

Metabolic syndrome	No. of cases
Present	108
Absent	220
Total	328

Table 4: Distribution of cases according to metabolic syndrome

Metabolic syndrome	No. of cases
Present	108
Absent	220
Total	328

Table 5: Distribution of cases according to Components

Component	NO. of cases
Increased Waist circumference	176
Hypertriglyceridemia	64
Low HDL	240
High blood pressure	148
High fasting glucose	72

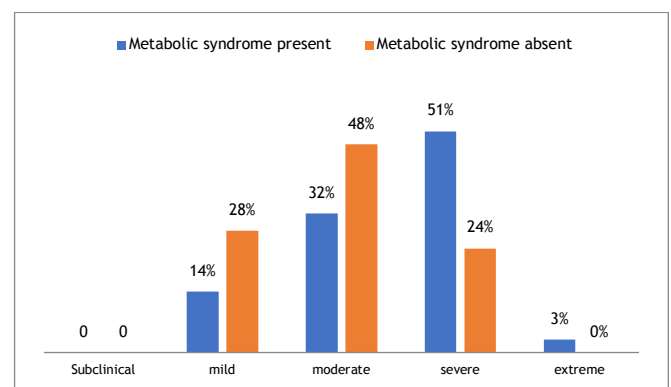


Chart:-1 This chart showed severity of OCD

DISCUSSION

This study revealed that metabolic syndrome was present in 32.9% of sample. Similar results were found by Anna et al which shows high prevalence of metabolic syndrome regardless of the diagnosis and antipsychotic use. Their study also found similar incidence rates of metabolic syndrome in individuals treated with antipsychotics (54%) and those not on antipsychotic medications (46%).¹⁵ Though our finding was in contrast with the study conducted by Giuseppe Maina et al. They found that overweight is significantly prevalent in drug-naive patients with Bipolar Disorder than in OCD patients.¹² In an another study Shiny Jhon et al., (2014) found no relation between any of the psychiatric disorder and lipid profile.¹⁶ This study found low HDL as the most frequent criteria (73.1%), followed by abdominal obesity (53.6%). Hypertension, increased FBS and TG in 45.1%, 21.9% and 19.5% of sample respectively. Anna Gubbins et al., (2012) observed central obesity as the most frequent criteria in 88% of sample followed by hypertriglyceridemia in 43.1%, hypertension in 41%, raised blood sugar in 32% and low HDL-C in 29% of cases.¹⁵ This study found central obesity and low HDL-C are the common component of metabolic syndrome. The reason behind this finding as it has been seen that central obesity plays a central role in the development of MS and appears to precede the appearance of other metabolic component.^{17,18}

Anxiety is also reported as a common factor in OCD patients. It is also an important criterion in the diagnosis of OCD. Anxiety activates the human stress system through behavioural and physiological changes that improve the ability of the organism to adjust homeostasis and increase its chances for survival. These processes appear to adversely affect autonomic and hormonal regulation. It causes metabolic abnormalities, inflammation, insulin resistance and endothelial dysfunction.¹⁹ in other words increased activation of the hypothalamic-pituitary-adrenocortical (HPA) axis could be patho-physiologically involved in the concomitant occurrence of the typical metabolic syndrome risk factors and stress.

CONCLUSION

The present study reveals that 32.9% of the patients with OCD have metabolic syndrome. The prevalence of different component of metabolic syndrome were as follows - low HDL-C was the most frequent criterion met (73.5%), followed

by increased WC (53.6%). High blood pressure, high FBS and hypertriglyceridemia were reported in 45.1%, 21.9% and 19.5% of the sample, respectively. Mean score for measuring the severity of OCD found to be more in MS patients and it was significant when compared it with patients in which metabolic syndrome was absent ($p=0.001$).

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