

## Original Research

### Prevalence of Metabolic syndrome among in people with schizophrenia

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#### ABSTRACT:

**Background:** The present study was conducted for assessing the prevalence of Metabolic syndrome among in people with schizophrenia. **Materials & methods:** A total of 100 patients with schizophrenia were enrolled. Complete demographic and clinical details of all the subjects was evaluated. Metabolic syndrome was diagnosed according to the latest NCEP ATP III criteria. Any patients with the following symptoms were considered to have metabolic syndrome: 1) large waist circumference (102 cm [40 in.] for men and 88 cm [35 in.] for women); 2) elevated triglycerides (150 mg/dL); 3) low HDL-C (40 mg/dL in men and 50 mg/dL in women); 4) hypertension (130/85 mmHg); and 5) impaired fasting glucose (110 mg/dL). Prevalence of metabolic syndrome in schizophrenia patients was assessed. All the results were recorded and analysed by SPSS Software. **Results:** Out of 100 patients, metabolic syndrome was present in 26 percent of the patients. Among these patients with metabolic syndrome, there were 12 males and 14 females. 20 subjects with metabolic syndrome belonged to age group of more than 30 years. While correlating metabolic syndrome and risk factors, it was observed that age and gender were significant risk factors for occurrence of metabolic syndrome among schizophrenia patients. **Conclusion:** The prevalence of metabolic syndrome among patients with schizophrenia is high and is significant associated with age and gender.

**Key words:** Metabolic syndrome, Schizophrenia

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#### INTRODUCTION

People with schizophrenia tend to have a shorter life expectancy than the general population, not only due to high suicide rate but most of the risk is due to cardiovascular events. Metabolic syndrome (MetS) has been related to an increased risk of cardiovascular diseases and diabetes, as well as mortality, and is defined as a cluster of metabolic disturbances including abdominal obesity, atherogenic dyslipidemia, hypertension and hyperglycemia. Although the causes of MetS have not been fully understood, abdominal obesity and insulin resistance were suggested to affect the incidence of MetS.<sup>1-3</sup>

In previous studies, high prevalence of MetS (between 25% and 45%) was reported among schizophrenic patients. Recently, the importance of MetS among schizophrenic patients has been gaining attention as it can result in lower functional outcomes, poorer quality of life and non-compliance.

In addition, diagnosis and treatment of schizophrenia may be associated with a tendency to store excess weight as abdominal obesity.<sup>4-5</sup> Hence; the present study was conducted for assessing the prevalence of Metabolic syndrome among in people with schizophrenia.

#### MATERIALS & METHODS

The present study was conducted for assessing the prevalence of Metabolic syndrome among in people with schizophrenia. A total of 100 patients with schizophrenia were enrolled. Complete demographic and clinical details of all the subjects was evaluated. Metabolic syndrome was diagnosed according to the latest NCEP ATP III criteria (2001). Any patients with the following symptoms were considered to have metabolic syndrome: 1) large waist circumference (102 cm [40 in.] for men and 88 cm [35 in.] for women); 2) elevated triglycerides (150 mg/dL); 3) low HDL-C (40 mg/dL in men and 50

mg/dL in women); 4) hypertension (130/85 mmHg); and 5) impaired fasting glucose (110 mg/dL). Prevalence of metabolic syndrome in schizophrenia patients was assessed. All the results were recorded and analysed by SPSS Software.

## RESULTS

Out of 100 patients, metabolic syndrome was present in 26 percent of the patients. Among these patients

with metabolic syndrome, there were 12 males and 14 females. 20 subjects with metabolic syndrome belonged to age group of more than 30 years. 13 subjects were married while the remaining 13 subjects with metabolic syndrome were unmarried. While correlating metabolic syndrome and risk factors, it was observed that age and gender were significant risk factors for occurrence of metabolic syndrome among schizophrenia patients.

**Table 1: Prevalence of metabolic syndrome in patients with schizophrenia**

Metabolic syndrome	Number of patients	Percentage
Present	26	26
Absent	74	74
Total	100	100

**Table 2: Correlation of demographic variable among schizophrenia patients with metabolic syndrome**

Variable	Metabolic syndrome present	Metabolic syndrome absent
Gender*	Males	44
	Females	30
Age group (years)*	Less than 30	41
	More than 30	33
Marital status	Married	38
	Unmarried	36
Educational qualification	Illiterate	23
	Upto secondary	15
	Graduate	20
	Postgraduate	16

\*: Significant

## DISCUSSION

People with severe mental illnesses (SMI), such as schizophrenia, have a reduced life expectancy compared to the general population. They have a 2-3 fold increased risk of dying, and this mortality gap associated with mental illness compared to the general population has widened in recent decades. People with severe mental illness have nearly twice the normal risk of dying from cardiovascular disease (CVD). In the psychiatric community, this has led in recent years to a growing concern about physical illness in people with SMI, specifically CVD risk. People with SMI are more likely to be overweight, to smoke and to have hyperglycaemia/diabetes, hypertension and dyslipidaemia. With an overall increased risk of somatic comorbidities, patients with schizophrenia have poorer access and quality of physical health care. In part these cardio-metabolic risk factors are attributable to unhealthy lifestyle, including poor diet and sedentary behaviour. But over recent years it has become apparent that antipsychotic agents (AP) can have a negative impact on some of the modifiable risk factors. Part of this negative impact can be explained by the liability of some antipsychotics to induce significant weight gain. A recent study indicates that these metabolic changes are dose independent.<sup>6-8</sup>

Metabolic syndrome (MetS) brings together a series of abnormal clinical and metabolic findings which

are predictive of CVD risk, though there is continuing debate around the use of the term. The causes of MetS are not fully understood, but there is a central role of visceral adiposity and insulin resistance.<sup>8-11</sup> Hence; the present study was conducted for assessing the prevalence of Metabolic syndrome among people with schizophrenia.

Out of 100 patients, metabolic syndrome was present in 26 percent of the patients. Among these patients with metabolic syndrome, there were 12 males and 14 females. 20 subjects with metabolic syndrome belonged to age group of more than 30 years. 13 subjects were married while the remaining 13 subjects with metabolic syndrome were unmarried. Shakeri J et al determined the prevalence of metabolic syndrome in patients with schizophrenia. The study population included all patients with schizophrenia. A total of 280 subjects who met the study criteria were selected according to the census sampling method. The prevalence of metabolic syndrome was 30.4% (20.7% in men and 51.5% in women). The prevalence of metabolic syndrome was greater in patients > 40 years than patients aged 20-40 years. There was a significant relationship between marital status and number of hospitalizations with the prevalence of metabolic syndrome. Given the high prevalence of metabolic syndrome in patients with schizophrenia, healthcare professionals should take measures to identify the risk factors and

timely treatment of affected patients, thereby improving the patient's quality of life and reducing health costs.<sup>11</sup>

While correlating metabolic syndrome and risk factors, it was observed that age and gender were significant risk factors for occurrence of metabolic syndrome among schizophrenia patients. Challa F et al investigated the MetS prevalence among patients with schizophrenia in Ethiopia. They conducted a cross-sectional analysis of baseline data of 200 patients with schizophrenia recruited from Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. Lipid profile and blood glucose levels were measured using Roche Cobas 6000 clinical chemistry analyzer. The overall prevalence of MetS in patients with schizophrenia was 21.5% (17.1% male, 29.6% female) where Low HDL-cholesterol value was the most common metabolic disorders components in both males and females subgroups. In the multivariate analysis, the positive and negative symptoms score (PANSS, AOR=1.03, 95% CI 1.001–1.054) was associated factors with MetS. Patients with schizophrenia were found to have higher prevalence of MetS than the general population.<sup>12</sup>

## CONCLUSION

The prevalence of metabolic syndrome among patients with schizophrenia is high and is significant associated with age and gender.

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