Results: There were 205 patients, including 82 (40%) female and 123 (60%) male. 121 (59%) of the patients were diagnosed with schizophrenia, 74 (36.1%) of patients diagnosed with bipolar disorder and 10 (4.9%) with schizoaffective disorder. In females, the average of HDL was 54.1, triglyceride 166.8, glucose 118, waist circumference 106.2 and systolic-diastolic blood pressure 117.4-77.6, in males, the average of HDL was 43, triglyceride 196, glucose 102.9, waist circumference 103 and systolic-diastolic blood pressure 120-79.1. The most used antipsychotic was olanzapine (23.9%), followed by aripiprazole (19%); the third one was quetiapine (6.6%), the fourth one clozapine (11.2%), the fifth risperidone (10.7%). There were 57 cases (27.8%) of MetS among 205 patients, 26 (45.6%) of them female, 31 (54.3%) of them male.

Conclusion: It has been indicated that MetS is more common in chronic psychiatric diseases than in the community overall. Genetic and environmental factors can cause MetS; its basic physiopathology includes insulin resistance and fatty tissue malfunctions. Patients who are treated with antipsychotics can experience weight gain, glucose metabolism abnormalities, prediabetic formation or diabetes. These adverse effects, individually or jointly, can cause MetS and cardiovascular diseases. Cardiovascular diseases are one of the common causes of early death in psychiatric diseases like schizophrenia and bipolar disorder. It is important to recognize MetS and its changeable components, as it can also be curable. Clinicians treating schizophrenia or bipolar disorder with antipsychotics must be careful about metabolic changes. Metabolic tests such as HDL, triglyceride, blood arterial pressure, glucose, or waist circumference can easily be measure and thus morbidity and mortality of MetS and cardiovascular diseases can be reduced.

Keywords: bipolar disorder, metabolic syndrome, schizophrenia

Thyroid function test abnormalities in treatment-resistant schizophrenia

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Objective: The relationship between thyroid dysfunction and mood disorders is well recognized. Thyroid function abnormalities are bad prognostic factors in mood disorders, and augmentation with thyroid hormone has therapeutic efficacy in treatment-resistant depression and bipolar depression. Several studies have revealed a high prevalence of thyroid dysfunction in patients with schizophrenia. Rajiv et al found that hypothyroidism was observed 25.17%; hyperthyroidism was observed 4.08%; in total, an abnormal thyroid hormonal status was observed in 29.3% of patients with schizophrenia spectrum disorder. This was comparable with data reported in a hospital sample in South-East Asia showing that 36.4% of patients with schizophrenia had thyroid dysfunction. Kelly et al. found that abnormal values were 13% for TSH and 9% for total T4 in treatment-resistant schizophrenia. Baumgartner et al. measures thyroid functions in 31 acutely ill patients with schizophrenia before and after four weeks' treatment. They found that their T4 levels showed a positive correlation with the severity of illness, and there was a significant fall in serum T4 after treatment. The association between thyroid dysfunctions and schizophrenia remains insufficiently understood. There is no literature on the rates of thyroid dysfunction among patients with treatment resistant schizophrenia. The aim of this study was to examine the incidence of abnormal thyroid hormonal status in patients with treatment resistant schizophrenia.

Methods: Schizophrenia patients undertaking two or more treatment trials of at least two groups of conventional antipsychotic for least 4-6 weeks, showing no response to treatment, have been evaluated. A total of 92 cases, 51 male, 39 female were accepted. Serum concentrations of free unbound fractions of triiodothyronine (FT3), free unbound fractions of L-thyroxine (FT4) and thyroid stimulating hormone (TSH) were measured.

Results: Mean age of the patients was 36.1±10.3 years. The duration of psychiatric history was 9.9±7.7 years. Mean hospitalization of the patients was 2.7±1.6 times. Test results of thyroid hormone measurement were normal in 73.9%. The percentage of abnormal thyroid values was 6.5% for serum FT3, 8.6% for serum FT4, and 14.1% for serum TSH. 6 patients showed abnormal FT3; 3 of them had low FT3, 3 of them high FT3. Of 8 patients with abnormal FT4, 1 had low FT4, 7 high FT4. Of 13 patients with abnormal TSH, 11 had low TSH, 2 had high TSH. In our study, the rate of hyperthyroidism was 19.5%; hypothyroidism was 6.5%; total thyroid dysfunction was 26.1% with treatment resistant schizophrenia.

Conclusion: Abnormal thyroid hormonal status was found in 26.1% of patients with treatment-resistant schizophrenia in our study. While thyroid dysfunction in schizophrenia patients generally tends to be hypothyroidism, in our study hyperthyroidism was observed more than hypothyroidism in treatment-resistant schizophrenia. Additional research is needed to investigate the relationship between treatment-resistant schizophrenia and thyroid dysfunction.

Keywords: schizophrenia, thyrotropin, treatment resistant