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PARANOID SCHIZOPHRENIA [ICD-10 – F20.0] BASED ON PANSS AND DSM – 5 CRITERIA WITH UNCONTROLLED TYPE -2 DIABETES MELLITUS: A CASE REPORT

[1]Dr. M. Anusha, [2]L. Sadvika*

India.

***Corresponding Author: L. Sadvika**

India.

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ABSTRACT

Prominent delusions and hallucinations, especially persecutory delusions, are hallmarks of paranoid schizophrenia, a severe, long-term mental illness. A person's thoughts, perceptions, and behaviors are significantly disrupted by the disorder, which can seriously hinder social and professional functioning. Because delusions and auditory hallucinations play a major part in the presentation of the condition, the DSM-5 places paranoid schizophrenia within the more general category of schizophrenia spectrum disorders. However, schizophrenia becomes more challenging to treat, control, and comprehend when combined with co-occurring medical illnesses like Type 2 Diabetes Mellitus (T2DM). People with schizophrenia frequently have type 2 diabetes (T2DM), which is characterized by insulin resistance and hyperglycemia. This is especially true for those receiving antipsychotic medication, which can cause weight gain and metabolic problems. The relationship between PANSS symptom ratings, uncontrolled type 2 diabetes, and paranoid schizophrenia was examined by a comprehensive analysis of clinical research and case reports. The focus was on how uncontrolled blood glucose levels can lead to the development of metabolic and mental symptoms, as well as how doctors should use the DSM-5 criteria and PANSS scale to maximize therapy for this population with multiple diagnoses. To fully comprehend the extent of this complicated illness, literature from the fields of psychiatry, endocrinology, and psychopharmacology was included. A 28years old male patient was admitted in the Malla Reddy hospital at with the chief complaints of hearing voices that others cannot hear (auditory hallucination) from 6months. Reduced social interactions and withdrawal from family. Poor personal hygiene. Difficulty in concentrating and episodes of aggregation. Behavioural changes women. Increased thirst, frequent urination, unchanged weight loss- 3 months. After physical examination and other investigation, he was diagnosed with paranoid schizophrenia with type 2 diabetes mellitus.

INTRODUCTION

Schizophrenia or dementia praecox is an exponentially growing pathology worldwide, with a prevalence of one in 300 adults.[1] The Greek words skein (split) and phren (mind) are combined to get the English word schizophrenia. Symptoms include hallucinations, delusions, disorganized communication, sluggish planning, decreased motivation, and dulled emotion.[2,3] It is a debilitating collection of neurological illnesses. The etiology of schizophrenia caters to genetics (microdeletion of chromosome 22q11), environment, alteration of brain chemistry (dysregulation of serotonin, dopamine, and glutamate), and abnormal brain anatomy (atrophy).[4,5] According to the signs and symptoms, schizophrenia has seven kinds.[6] A characteristic depiction of paranoid schizophrenia usually presents as persistent, frequently paranoid delusions, which in the majority of the cases are auditory or visual in nature, though other modalities can have effects.[7,8] Affect, volition, and speech disturbances, as well as catatonic signs, are not noticeable.[9] It is not just the psychiatrists, instead an efficient plethora of healthcare professionals is essential to treat and manage patients with schizophrenia and schizophrenia-like diseases.[3,10]

ETIOLOGY

Genetic factors, dopamine dysregulation, neuroinflammation, insulin resistance, impaired glucose

tolerance, metabolic side effects, cytokines, C-reactive protein (CRP), tumor necrosis factor-α (TNF-α), interleukin-6 (IL-6), blood-brain barrier, chronic inflammation, lifestyle factors, environmental triggers, cognitive impairment, sedentary lifestyle, genetic susceptibility, brain chemistry and structure, Autoimmune and inflammation, neurotransmitters, psychological and environmental factors.

EPIDERMIOLOGY

Prevalence, Comorbidity, Metabolic Syndrome, Insulin Resistance, Impaired Glucose Tolerance (IGT), First-Episode Psychosis, Genetic Susceptibility, Cytokines, Metabolic Dysfunction, Weight Gain, Schizophrenia and T2DM Link, Global Prevalence, Mortality Rates, Healthcare Utilization, Chronic Illness Burden, Low-Grade Inflammation.

	Abnormalities	Number	Percentage Frequency
1	Paranoid ideas	187	28.3
2	Hearing voices	184	27.9
3	Talking to oneself	135	20.4
4	Insomnia	132	20.0
5	Aggressive	122	18.5
6	Abnormal behaviour	117	17.7
7	Laughing to oneself	99	15.0
8	Disturbed behaviour	99	15.0
9	Crying to oneself	68	10.5
10	Withdrawn	64	9.7
11	Suicide ideas	65	9.5
12	Blunting of affect	62	9.4
13	Ideas of charm	60	9.1
14	Violent	59	8.9
15	Talking nonsense	59	8.9

PATHOPHYSIOLOGY

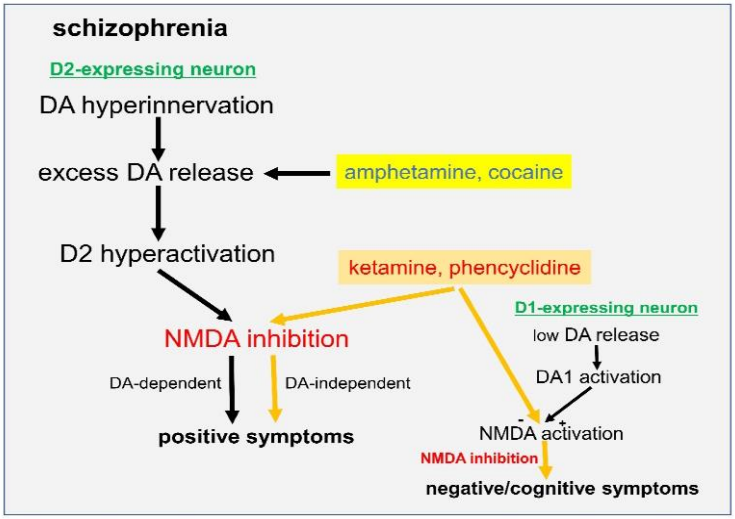

Fig-1

CASE PRESENTATION

A 28years old male patient was admitted in the hospital with the chief complaints of hearing voices that others cannot hear (auditory hallucination) from 6months. Reduced social interactions and withdrawal from family. Poor personal hygiene. Difficulty in concentrating and episodes of aggregation. Behavioural changes women. Increased thirst, frequent urination, unchanged weight loss- 3 months. The patient had diagnosed with Type-2 Diabetes mellitus – 3 months ago but not using any medications. His maternal uncle was suffered with schizophrenia and died.

PHYSICAL AND SYSTEMIC AND LAB EXAMINATION

Patient vitals, complete blood picture, liver function test, are performed and they are normal. In lab investigations all parameters are seems to be normal except in globulin,

FBS, RBS, HbA1c, Glucose are elevated and albumin levels are decreased.

GLOBULIN	**(2.0-3.5) g/dl**	**6.6**	**Elevated**
ALBUMIN	(3.5-5.2) g/dl	2.2	Decreased
FBS	[70-110] mg/dl	180	Elevated
RBS	[110-180] mg/dl	220	Elevated
HbA1c	>5.7	9.2	Elevated
GLUCOSE		++	Elevated

Other Investigation

Psychiatric evaluation- Positive of auditory hallucination paranoid delusion and social withdrawal. PANSS [Positive and Negative syndrome scale]: Score 95 [severe schizophrenia] DSM-5 criteria met [Diagnostic and statistical manual of mental disorder 5th edison]- paranoid schizophrenia.

TREATMENT CHART

S.NO	TRADE NAME	GENERIC NAME	DOSE	ROA	FRQ	INDICATION
1	T. OLIZA	Olanzapine	10mg	PO	OD	To treat the symptoms of schizophrenia
2	T. ARIPRAX	Aripiprazole	15mg	PO	OD	for the treatment of several mental health conditions.
3	T. GLYCOMET	Metformin	500mg	PO	BD	a first-line treatment for type 2 diabetes mellitus.
4	T. JANUVIA	Sitagliptin	50mg	PO	OD	as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.
5	INSULIN LANTUS	Glargine	10 units	SC	HS	to improve and maintain glycemic (blood sugar) control in patients with type 2 diabetes
6	T. CLONOTRIL	Clonazepam	0.5mg	PO	HS	primarily for the treatment of panic disorder
7	T. PROPANOLOL	Propranolol	20mg	PO	BD	to treat and help with some of the symptoms of anxiety
8	T. PAN	Pantoprazole	40 mg	PO	OD	To treating conditions caused by excessive stomach acid.
9	T. NEURBION FORTE	Vit B complex with Vit B12	1 tab	PO	OD	To prevents and treats low levels of vitamin B in your body

DISCUSSION

In this patient is diagnosed with schizophrenia with comorbid type 2 diabetes and anxiety symptoms**,** requiring a combination of psychiatric and metabolic treatments**.** Olanzapine and Aripiprazole are used to control hallucinations, delusions, and mood disturbances. Since Olanzapine can increase blood sugar and weight, the patient is managed with Metformin, Sitagliptin, and Insulin Glargine to maintain good glycemic control. Anxiety symptoms such as palpitations and sleep disturbance are treated with Clonazepam and Propranolol**.** Pantoprazole is added for gastric protection, and Neurobion Forte supports nerve health and prevents vitamin deficiency.

Overall, the therapy is rational and aims to manage both psychiatric symptoms and metabolic complications effectively.

CONCLUSION

Persistent delusions and auditory hallucinations are the main symptoms of paranoid schizophrenia, a chronic mental illness that is frequently accompanied with severe suspicion and poor social functioning. To avoid recurrence and enhance quality of life, early detection and ongoing therapy are crucial. The best management strategy is still a mix of psychotherapy, psychosocial therapies, and antipsychotic drugs. Patients can preserve functioning, achieve good symptom management, and lead stable, productive lives with appropriate adherence, family support, and routine follow-up.

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