



Alcohol and Nicotine Use Disorder with Psychotic Features: A Case Study

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ABSTRACT

The purpose of this case is using an evidence-based medicine, approach to work through an unusual way of treating a common problem we looked at an example of an inpatient with severe anxiety disorder who had gone through the treatment of using anti-anxiety, anti-epileptics, mood stabilizers, sedatives, and hypnotics. Use of alcohol and nicotine substances is very common to observe psychotic features, especially anxiety disorders, to control these anxiety disorders are prescribed. The inpatient is under the observation of nursing staff because of his suicidal thoughts, to maintain his mental stability of the inpatient sedatives and hypnotics are suggested. We study the prevalence of alcohol and nicotine use among psychotic features of inpatient as well as comparing the demographic, diagnostic, and psychopathological profile of patient.



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INTRODUCTION

Alcohol & nicotine are most widely consumed components they share several common features. By consuming alcohol that leads to psychosis & alcohol related psychosis is like schizophrenia. Consuming / smoking nicotine may improve cognitive and sensory deficits of schizophrenia, nicotine was associated with 127% higher risk of schizophrenia [1]. Alcohol and tobacco use may lead to major health risks when used alone and together. In addition to contributing to traumatic death and injury (e.g., through car crashes), alcohol is associated with chronic liver disease, cancers, cardiovascular disease, acute alcohol poisoning (i.e., alcohol toxicity), and fetal alcohol syndrome [2]. Smoking is associ-

ated with lung disease, cancers, and cardiovascular disease. Additionally, a growing body of evidence suggests that these substances might be especially dangerous when they are used together; when combined, alcohol and tobacco dramatically increase the risk of certain cancers, tobacco and nicotine have very different effects and mechanisms of action, Funk and colleague speculate that they might act on common mechanisms in the brain, creating complex interactions [2].

Case Study

A male patient aged 64 years admitted in the department of psychiatry with complaints of Hearing voices, Muttering of self, Seeing visual images of god, Abusing family members Irrelevant talk since 20 days, he also had palpitations, sweating, tremors and sleep disturbances.

He was alcoholic for 40 years and from 3 years he used to have alcohol for 1 week when he consumed alcohol, he used to have sleep disturbances and abstinent for 3 months, he had 4 years history of Diabetes Mellitus, Hypertension and Mental health disorders.

There is a significant information about the drug usage for diabetes mellitus (Glycomet SR 250mg). We didn't find any information about his hypertension medication, so, we recommended Ramipril 5mg

Table 1: Vitals at the time of Hospital Visit

S.No	Vitals	Values
1.	B.P	120/80mmHg
2.	PR	90bpm
3.	RR	22cpm
4.	Temperature	Afebrile

BID, and his allergic conditions are unknown. His younger brother is diagnosed by "Psychosis".

Lab Investigations

When he visited the hospital, patient is conscious and coherent, his vitals are completely normal were tabulated in Table 1, S1 & S2 sound are heard, no focal and neurological deficits are observed.

From Day 1 to Day 5 there are lot of ups and downs. In his vitals mainly Blood Pressure and Pulse rate, from Day 5 blood pressure is constant at 140/80mmhg, pulse rate is stable at 85bpm. B.P and PR chart tabulated in Table 2.

By observing his vitals on Day 4 his vitals are completely high to control his blood pressure level we started Ramipril 5mg tablet after administration of the drug the vitals became stable & controlled, the patient is very anxious he started quarrelling with their family members and he is out of control to maintain his mental stability and to relax the patient sedatives & hypnotics are administered, psychotherapy sessions are started.

By having awareness on the inpatient history and present illness we assessed that he is suffering from "Alcoholic Nicotinic Use Disorder Along with Diabetes Mellitus".

The goal of treatment for this patient is to decrease hallucinations, maintaining the patient stable in alcohol abstinent condition. The increased risk of the disease affected in this patient is due high amount alcohol intake The drug therapies which are used for the treatment are Antipsychotics, Antidepressants, Antianxiety, Mood Stabilizers. Schizophrenia is treated by using these drugs T.Ativan 2mg (lorazepam), Inj. Lora + Serence 1amp (Lorazepam + Haloperidol), T. Quetiapine 500mg (quetiapine), Risperdal 25mg (sertraline)- it is an Atypical antipsychotic drug, also act as Mood stabilizer, it is a 2nd generation anti psychotic, also used to treat Schizophrenia. The main psychotic feature of the inpatient is anxiety to treat that Librium 25mg (Chlordiazepoxide) is used, it is a sedative-hypnotic Benzodiazepine, By using different class of drugs and dosage forms it leads to GIT disorders, heart burns, etc., and to clear the acidity, indigestion,

and constipation problems these drugs are used T.Rabilove 20mg {rabeprazole} – GIT disorders, Syp. Cremaffin-2tps (Sodium picosulphate+ liquid paraffin) for acidity, indigestion, constipation problems, T. Glycomet SR 250 mg (metformin)– used to treat Diabetes Mellitus. The patient is having vitamin B1 deficiency to treat that they administered Thiacroson 100ml IV injection. Due to the composition of Lorazepam + Sertraline, it leads to impairment of motor disorders. Pacitane 2mg used to treat the motor disorders. Non drug therapy – avoiding alcohol intake and other addictive drugs will be helpful [Table 3, Table 4].

Interactions

Here we observed the duplication of drug they are

Ativan + Lora + Haloperidol

Ativan and lora both are having the same composition their main is Lorazepam and when it is administered along with the Haloperidol that leads to increased side effects, by using this combination, we used to have drowsiness generally, but by having them with Haloperidol that increases side effects.

Lorazepam + Sertaline Sertalin

Increases the side effects of Lorazepam a prone to dizziness, drowsiness, confusion, and difficulty in concentrating.

Note

In this In-patient, we observed impairment in thinking, impairment in judgement and impairment of motor coordinators due to these drug interactions.

Quetiapine + Metformin

Quetiapine may interfere with blood glucose control and reduce the effectiveness of metformin. We must monitor the patient blood sugar levels closely. If needed a dosage adjustment of diabetic medications during and after treatment with quetiapine.

DISCUSSION

About disease: alcoholic use disorder is a condition in which the patient experience symptoms like tremors, seizure, hallucinations because of abnormality in neurotransmitters. Hypertension: this

Table 2: Vitals Observed from Day 1 to Day 9

Vital	D1	D2	D3	D4	D5	D6	D7	D8	D9
BP	130/70 mmhg	140/60 mmhg	140/90 mmhg	150/80 mmhg	140/80 mmhg	140/80 mmhg	140/80 mmhg	140/80 mmhg	140/80 mmhg
PR	92bpm	90bpm	76bpm	74bpm	85bpm	85bpm	85bpm	85bpm	85bpm

Table 3: Diagnostic Parameters

S.No	Lab tests	Values
1.	Hb	11.5g/dl
2.	WBC	4,800cells/mm ³
3.	RBC	4.08 million cells/mm ³
4.	Platelets	2.4 lakh cells/mm ³
5.	PCV	34.8%
6.	MCV	85fl
7.	MCHC	32.2g/dl
8.	RDW	13.5%
9.	Sr. Urea	31mg/dl
10.	Sr. Creatinine	0.9mg/dl
11.	Sr. Sodium	139mmol/l
12.	Sr. Potassium	3.8mmol/l
13.	Sr. Protein	5.8g/dl
14.	Sr. Globulin	2.5g/dl
15.	SGOT	29U/L
16.	SGPT	72U/L
17.	HbA1C	9.1%
18.	FPG	191mg/dl
19.	ECG	Normal

Table 4: Treatment Chart

Brand Name	Generic Name	Dosage regimen	Start	Stop
Inj. Thiacors	Mirtazapine	100ml IV TID	D0	
T. Ativan	Lorazepam	2mg PO TID	D0	
T. Tormap	Ferrous furate folic acid	50mg PO BD	D1	D2
T. Risperdal	Sertaline	25mg PO OD	D1	
T.Microliv Forte	Ferrous sulphate	100mg in 100ml	D1	
T. Rabilove	Rabeprazole	20mg PO OD	D2	
T. Librium	chlordiazepoxide	25mg TID	D1	
Inj. Lora+ Inj. Serence	Lorazepam + haloperidol	1amp IM SOS	D2	
T. Glycomet – SR	metformin	250mg PO BD	D4	
T. Pacitane	Trihexphenidyl	2mg PO BD	D4	
Syp. Cremaffin	Sodium picosulphate + liquid paraffin	15ml PO BD	D7	
Protein Powder	Essential amino acids	2tsp PO TID	D7	
T. Quitiapine	Quitiapine	500mg OD	D2	

is a condition in which patient is having increased blood pressure i.e, systolic pressure greater than 140mmHg and diastolic pressure greater than 90mmHg. The main issues observed in the patient are Diabetes Mellitus and Psychotic features in the inpatient. The drug related problems are untreated conditions we can control them by using medication, we must start the counselling sessions based on the patient condition and his symptoms by having counselling sessions, recovery of the patient condition will gradually improve. Sessions are typically conducted three or more times a week. Supportive therapy uses guidance and encouragement, it helps to build self-esteem, reduce anxiety, strengthen coping mechanisms, and improve social and community functioning. Avoiding alcohol is the best thing, Restrict salt intake (< 1.5mg/day) it will help to control the hypertension conditions.

Abbreviations

BP: blood pressure; PR: pulse rate; RR: respiration rate; Hb: hemoglobin; WBC: white blood cells; RBC: red blood cells; PCV: packed cell volume; MCV: mean corpuscular volume; MCHC: mean corpuscular volume concentration; RDW: red cell distribution width; MPV: mean platelet volume; SGOT: serum glutamic oxaloacetic transaminase; SGPT: serum glutamic pyruvic transaminase; ECG: electrocardiography; SYP: syrup; INJ: injection; CVS: central nervous system; IV: intravenous.

CONCLUSION

In this case, we have observed the duplication of drugs, & drug-drug interactions in the patient. Alcohol, nicotine-related psychosis disorder is a secondary psychosis in this state we can observe so many conditions, like we observed in this patient (hallucinations, seizures, mood fluctuations, schizophrenia, anxiety disorders) the treatment is given to reduce these conditions and psychotherapy sessions are taken 2 – 3 times in a week, and these sessions will be continued until the patient comes to normal condition, at the time of discharge

his vitals are stable (BP - 140/80 mmHg, PR- 85bpm, Temperature- normal, CVS – S1, S2) and the patient is alert and oriented. By avoiding the alcohol, nicotine, and other drug addictions we can easily improve the patient mental health condition.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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