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Original Research Article

AUDIT OF ASSESSMENT OF TOBACCO USE DISORDERS IN PATIENTS WITH SCHIZOPHRENIA

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ABSTRACT

Background: Schizophrenia is a serious mental illness that is known to cause morbidity and significantly reduce an individual's quality of life and productivity. Co-morbid substance use disorders are also commonly seen in individuals suffering from Schizophrenia and tobacco use disorders seem to be the most common. The aim and objective is to review if tobacco use disorders were assessed as part of routine assessment in patients who were diagnosed as having Schizophrenia.

Materials and Methods: Retrospective observational study design was used to conduct a chart review of 100 patients who were receiving treatment for schizophrenia in a tertiary care hospital. The patient files were reviewed for: 1) If tobacco use had been assessed in these patients. 2) If assessed, if dependence to tobacco or harmful use was established. 3) In those with established tobacco use disorders, whether brief intervention / nicotine replacement therapy was offered during treatment for schizophrenia.

Results: Tobacco use was assessed in only 52 patients. Dependence pattern of tobacco use was found in 18 patients and 6 were found to have harmful use. Brief Intervention was offered to 5, Nicotine Replacement Therapy to 3 and 16 patients received no intervention at all.

Conclusion: Our study found that assessment of tobacco use disorders in patients with Schizophrenia falls significantly short of standard guidelines for practice. Of the people who were assessed, the absence of interventions still prevailed.

Keywords: Schizophrenia, Tobacco Use Disorders, Nicotine.

INTRODUCTION

Schizophrenia is a serious mental illness, which is often referred to as the "Cancer of the mind", with a prevalence of 2.5 per 1000 population reported from India.[1] People with schizophrenia have a substantially increased risk for medical co morbidities and excess mortality. The mortality risk in this population is over twice that of the general population, resulting in about a 15-year reduction in average life span in people with schizophrenia. Tobacco use is particularly prevalent among individuals diagnosed with schizophrenia and has been proposed as an important modifiable risk factor contributing to excess mortality in people with schizophrenia.[2] Evidence suggests that prevalence of tobacco use in patients with schizophrenia ranges from 49% to 80%.[3-6] Smoking cigarettes seems to be the most common form of self-administration of nicotine. The main components of tobacco smoke are nicotine and tars (various particulate matters from the burning of tobacco).[7] Most, if not all, smoking-related diseases are caused by tars which are carcinogens.[7-9] A puff of smoke delivers Nicotine to the brain in 10-20 seconds.[7,10]

A clear prediction from the Self Medication Hypothesis (SMH) is that, there is greater dependency on the effects of nicotine on the brain of mentally ill people. As a result, patients tend to have considerable difficulty stopping smoking. There is firm evidence that schizophrenic smokers have more difficulty quitting the habit than do healthy smokers.[7,11] Patients with schizophrenia usually have problems with sustained attention, focused attention, working memory, short-term memory,

recognition memory and even processes that are pre-attentive (e.g. reflexes). Studies have proposed that there may be improvements in these areas after treatment with nicotine and that nicotine is a "self-medication" strategy.[12] Faulty sensory gating or the inability to make sense of stimuli in the environment is another proposed deficit in schizophrenia patients. People usually startle the first time they hear a loud noise such as a car horn, but they are able to ignore it, or at least mute their reaction, when they hear it again and again. People with schizophrenia lack this "gating" capacity, which may explain some of the confusion and fear they feel in seemingly harmless situations. Studies show that this deficit is associated with a faulty gene which also happens to be a nicotine receptor gene. It is proposed that tobacco reduces this deficit of sensory gating and thus helps people with schizophrenia.[13] It has also been noted that withdrawal symptoms upon abstinence from tobacco have been more severe in schizophrenia patients than smokers without schizophrenia, thus making smoking cessation in these patients a significant challenge compared with smokers without schizophrenia.[14]

Despite the availability of various studies, co-morbid tobacco use in schizophrenia patients still tends to be a less addressed area, with treatment focused on control of psychotic symptoms, and treatment of tobacco use often takes a backseat. We therefore, attempted to evaluate our current clinical practice in our tertiary care hospital through a random chart review of 100 patients who had previously been diagnosed with and treated for schizophrenia.

Objectives: To review if tobacco use disorders were assessed as part of routine assessment in patients who were diagnosed as having schizophrenia and to review if appropriate treatment for nicotine dependence was offered.

MATERIALS AND METHODS

The audit included patients who were diagnosed with schizophrenia according to the International Classification of Diseases, version 10 (ICD 10) and received treatment in a tertiary care hospital between January 2018 and June 2018. A Retrospective observational study design was used and chart review of randomly selected 100 patients was conducted.

The patients' case files and clinical records were reviewed for the following:

- If tobacco use had been assessed in these patients as part of their routine assessment.
- If assessed, whether dependence to tobacco or harmful use was established or not.
- In those with established tobacco use disorders, whether brief intervention (counselling) / Nicotine Replacement Therapy (NRT) was offered during treatment for schizophrenia.

Simple descriptive statistics were used to analyze the data.

RESULTS

In our study, 100 patients who were diagnosed as having Schizophrenia as per the ICD-10 diagnostic guidelines, were randomly selected. Our study population comprised of 55 (55%) males and 45 (45%) females. Out of the 100 patients, Tobacco use was assessed in only 52 (52%) patients and 48 patients were not assessed for tobacco use. Out of these 52 patients, no tobacco use was found in 28 (53.85%) patients, 6 (11.54%) were found to have harmful use and dependence pattern of tobacco use was found in 18 (34.6%) patients. Of the 24 patients who had either nicotine dependence or harmful use, Brief Intervention Therapy was offered to 5 (20.83%) patients, Nicotine Replacement Therapy (NRT) to 3 (12.5%) and 16 (66.67%) patients received no intervention at all [Table 1].

Among the 55 males, 37 (67.27%) were assessed for tobacco use and 18 (32.72%) were not assessed [Figure 1]. Out of the 37 male patients that were assessed, 18 (48.65%) patients did not have tobacco use disorder, 6 (16.21%) had harmful use and 13 (35.14%) had tobacco dependence. Out of the 19 male patients who had either harmful tobacco use or dependence, brief intervention was offered to 5 (26.32%) patients, NRT to 3 (15.79%) and 11 (57.89%) patients received no intervention at all.

Out of the 45 females, 15 (33.33%) were assessed for tobacco use disorders and 30 (66.67%) were not assessed [Figure 6]. Out of the 15 female patients who were assessed, 10 (66.67%) had no tobacco use disorder and 5 (33.33%) were found to be dependent on tobacco. Harmful pattern of tobacco use was not found in any female patients. No intervention was offered to any of the 5 female patients who had tobacco dependence. Table 2 depicts an overview of the tobacco use patterns and interventions in males and females.

Table 1: Profile of subjects in the study

		Count	Percentage
Gender	Male	45	45%
	Female	55	55%
Assessment Tobacco use	Assessed	52	52%
	Not Assessed	48	48%
Tobacco use pattern (n =52)	No Tobacco use	28	53.85%
	Harmful use pattern	6	11.54%
	Dependence syndrome	18	34.6%
Intervention for tobacco use disorders in schizophrenia patients (n = 24)	No Intervention	16	66.67%
	Brief Intervention	5	20.83%
	Nicotine Replacement Therapy	3	12.5%

Table 2: Tobacco use pattern and intervention in males and females

		Males	Females	Total	P value
Tobacco use (n = 100)	Assessed	37 (67.27%)	15 (33.33%)	52	0.001*
	Not assessed	18 (32.72%)	30 (66.67%)	48	
	Total	55 (100%)	45 (100%)		
Pattern of use (n = 52)	No Tobacco Use	18 (48.65 %)	10 (66.67%)	28	0.213
	Harmful Use	6(16.21%)	0	6	
	Tobacco Dependence Syndrome	13 (35.14%)	5 (33.33%)	18	
	Total	37 (100%)	15 (100%)		
Intervention (n = 24)	No Intervention	11(57.89%)	5 (100%)	16	0.206
	Brief Intervention	5 (26.32%)	0	5	
	Nicotine Replacement Therapy	3 (15.79%)	0	3	
	Total	19 (100%)	5 (100%)		

DISCUSSION

Tobacco use is particularly high in patients with schizophrenia with estimates as high as 80%. According to a study conducted by Hassan Ziaaddini et al,[15] the prevalence of cigarette smoking was 71.6% and severity was estimated at 6.47% among schizophrenic patients. In our study, we found that 46.15% of our patients had tobacco use disorders. However, we were unable to comment on the prevalence and severity of tobacco use disorders as we had assessed for tobacco use in only 52 out of 100 patients.

A meta-analysis of 42 studies across 20 countries showed a clear association between schizophrenia and smoking.[16] This association remained even after controlling for other variables and using severe mental illness as control group. Compared to general population, heavy smoking and severe nicotine dependence was more frequent in people with schizophrenia. Smoking cessation rates were also found to be lower in schizophrenia patients compared to general population. Schizophrenia patients have risk factors that make them more vulnerable to smoking even before the onset of their psychotic symptoms.

The Indian Psychiatric Society Clinical Practice Guidelines (IPS CPG) for the management of schizophrenia, as outlined by Sandeep Grover et al,[17] recommends that co-morbid substance use disorders have to be included in the basic assessment for a patient with Schizophrenia. It also recommends lifestyle modification and abstinence from smoking should be part of the psychosocial interventions in the management of schizophrenia. However, our study revealed that assessment of co-morbid substance use disorders in only about half of our schizophrenia patients was grossly below the expected standard.

A study conducted by Cao XL et al,[18] found that Chinese female schizophrenic patients smoked tobacco much lesser than their female counterparts in other Asian and Western countries. An Indian Study conducted by Prabha S. Chandra et al,[19] revealed that in general, men seemed to have a higher preponderance to use tobacco and also to develop a dependence to nicotine as opposed to women. This study said it could possibly be because of the fact that chewing tobacco among women is more culturally accepted as opposed to smoking tobacco. Despite the fact that chewing tobacco and inhaling snuff powder is common, our study assessed for tobacco use only in one third of the female patients who were diagnosed with Schizophrenia. Of the female patients who had been assessed for tobacco use in our study, one third fulfilled the diagnostic criteria for tobacco dependence syndrome and yet, no interventions were offered to these patients.

Tobacco dependence in people with Serious Mental Illness (SMI) tends to be ignored. About 64% of persons with schizophrenia and 44% of patients with bipolar disorder use tobacco.[6] Most of these patients either die and/or have reduced quality of life because of tobacco-related medical diseases. Tobacco addiction is a common comorbidity in the SMI population and treatment for tobacco dependence is not routinely offered to psychiatric patients.[20] Smoking cessation is known to dramatically reduce mortality,[21,22] and despite this, about two-thirds of our patients with tobacco use disorders were not offered any intervention.

Effective treatment for smoking cessation in schizophrenia include the use of Buproprion and Varenicline with or without NRT and behavior therapy.[23-26] Since clear evidence-based guidelines are available for the treatment of tobacco use disorders in schizophrenia, psychiatrists and care providers should offer comprehensive assessment and treatment care which should include smoking cessation for all schizophrenia patients.

CONCLUSION

Even though treatment guidelines suggest that substance use assessment should be an integral part of the routine assessment in patients with Schizophrenia, there still appears to be discrepancy when it comes to the assessments and treatment of co-morbid substance use disorders. Our study found that assessment of tobacco use disorders in patients with schizophrenia falls significantly short of standard guidelines for practice. Of the people who were assessed, the absence of interventions still prevailed. Schizophrenia itself is a debilitating condition which when treated inadequately, can reduce the quality of life and the productivity of the individual. Co-morbid tobacco use can increase the chances of developing malignancy in the individual, which can add to the disease burden and increase morbidity and mortality.

This study also highlighted the importance of conducting regular audits, which help us critically analyze as to, to what extent we follow prescribed standard guidelines and how best we can improve our everyday practice, to ensure quality care to our patients.

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