ORIGINAL ARTICLE

ASSOCIATION OF GUTKA/CANNABIS MISUSE AND DEVELOPMENT OF MENTAL DISORDERS

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ABSTRACT: BACKGROUND: History of drug abuse which included Gutka/cannabis and not alcohol intake has been found in psychiatric patients attending Psychiatry outpatients. **AIMS:** To find out prevalence of cannabis/Gutka misuse among psychiatric patients, to find out socio-demographic variables, and pattern of psychiatric disorders among cannabis/gutka misusers. **METHOD:** Out of 150 psychiatric patients 18 were identified for cannabis/gutka misuse. These patients were examined and categorized according to socio-demographic characteristics and types of mental disorders diagnosed by using DSM-IV. **RESULTS:** Most of the psychiatric patients who had history of cannabis/Gutka intake were male (96.4%) and 76% were in age group of 15-35 years. 48.6% bipolar type-1, 23% schizophreniform psychosis, 14% had drug induced psychosis and 1.4% psychosis NOS patients were found in this study. **CONCLUSIONS:** Young male patients were more commonly involved in drug misuse and most of them belong to rural area.

KEYWORDS: Cannabis, Substance abuse disorder, drug induced psychosis.

INTRODUCTION: There is wide body of research that has demonstrated the existence of a variety of associations between substance misuse and the development of mental disorders. These relationships are complex, and in all probability involve the mediation of a variety of additional factors (Byrne, et al, 2004). Clenghom et al 1991 found that drug users with schizophrenia, among whom cannabis was the most heavily, used drug[1]. Ransey & Percy 1996 found that 4% of a group of 16-29 years old admitted using cannabis and other drugs in past month, by contrast with 8% who had used only cannabis. The various types of neuropsychiatric disorders have been reported with the misuse of cannabis. The present study was carried out in a prospective manner to study the occurrence of various types of neuropsychiatric disorders in a group of psychiatric patients who were misusing gutka/cannabis, in the backward district of Raichur, Karnataka.

METHOD: Study Site: The present prospective study was carried out in Raichur institute of medical sciences, during the period from Jan 2013 to June 2013. (The recruitment for the study was stopped because there was ban of Gutka sales in Karnataka w.e.f June 2013) This hospital provides admission facilities mostly to acutely ill psychiatric patients.

Study Sample: The study sample consisted of 150 psychiatric patients attending RIMS, Raichur OPD, and was selected irrespective of age, sex and other demographic variables. We excluded patients with primary medical disorders with secondary psychiatric manifestations and those who

were having ICD-10 diagnosable alcohol dependent syndrome and those presenting in acute delirious state.

Assessment: All the 150 patients were subjected for detailed examination and their relevant information were recorded in a specially designed proforma which included details of age, sex, and other socio-demographic variables along with history of present illness, family history, past history, medical history, psychosocial history, personal history, schooling, childhood history, detailed history of drug addiction, pre-morbid personality. Subsequently, all the patients underwent mental status examination and physical examination and some of them were subjected for needful investigations (medical investigation such as complete blood count, liver function test, USG abdomen) as per requirement of the patient. ICD-10 criteria were used to make the psychiatric diagnosis in these patients.

RESULTS: Study sample consists of 150 outpatients in RIMS, Raichur from January 2013 to July 2013 for treatment in which 18 patients had history of cannabis/gutka intake. Socio demographic and clinical characteristics of patients were obtained. Prevalence rate of cannabis/gutka misuse among 150 psychiatric patients was found to be 12%.

Table no. 1: The most striking feature of the study was that 96.4% cannabis/gutka misusers were male whereas, only 3.6% were female. Cannabis/gutka misuse was more common among age group 15-35 years. Further analysis revealed that 38% each in age group of 15-25 and 26-35 years. Among cannabis/gutka misusers 21.7% patients were illiterate however, 78.3% patients were educated, in which 14% were educated up to primary, 29% up to middle, 11.8% up to higher secondary and 23.5 % up to graduation. Furthermore, 68.8% patients belong to rural area whereas, 31.2% were from urban and the majority of the patients were married (66.5%). Another observation of this study was that 33.5% psychiatric patients with cannabis/gutka misuse had family history of mental illness.

Age & variables	No. of patients (n=18)	Percentage (%)
15-25	06	34
26-35	06	34
36-45	03	17
46-55	01	5
56-65	01	5
>65	01	5
Sex		
Male	17	96.4
Female	01	4.6
Marital status		
Married	12	66.5
Unmarried	06	33.5

OCCUPATION		
Employed	13	74
Unemployed	01	2
House wife	02	4
Student	04	20
EDUCATION		
Illiterate	04	21.7
Primary	03	14
middle	05	29
High secondary	02	11.8
Graduate	04	23.5
HABITAT		
Urban	06	31.2
Rural	12	68.8
Family history		
Present	06	31.2
absent	12	68.2

Table 1: Socio demographic variables

Table no. 2: This table demonstrates that the occurrence of different types of mental disorders among cannabis misuse patients. Most common mental disorder was found to be bipolar type -1 (48.6%) and schizophreniform psychosis (23%). Drug induced psychosis was diagnosed in 14% patients and psychosis NOS in only 1.4%. Out of 18 patients with gutka/ cannabis misuse psychiatric patients, 5.2% depressive disorder and 6.8% developed induced anxiety disorder. In the current study none of the patients received the diagnosis of dementia.

DISCUSSION: Demographic variables: In this study it is found that 96.4% patients indulged in cannabis/gutka misuse were male and only 3.6 % were female this is comparable with the study of Malik & Chakraborty Calcutta 1999[2], who found that 90% addicts were male and 10% were female misusers. In the present study 76% patients was age group of 15 -35 years. Hall W et al 1999[3], Von Sydow K et al 2001[4] found that 40-60% of young people aged 18-25 years in the U.K., the U.S.A, Australia, New Zealand and some European countries have some experience of cannabis use, where they do not use gutka.

Mental Disorders: In this study 48.6% patients of cannabis misuse developed bipolar type -1 disorder. There were 38.5% cases of drug - induced psychos including schizophreniform type. Wing et al 1974 also reported increased psychotic symptoms in cannabis abuse as compared to control. Another finding of the present study is that 23% of the cannabis misuse patients were diagnosed schizophreniform psychosis by DSM-IV. Voruganti LNP et al 2001[5], also reported that cannabis can cause a schizophreniform psychosis in normal individual and may precipitate

schizophrenia in predisposed persons apart from exacerbating positive symptoms in schizophrenics. A large body of research indicated that cannabis/gutka use and psychotic symptoms, schizophrenia or schizophreniform disorder co-occur more often than what can be expected by chance (Degenhardt, et al 2001 Fergusson, et al 2003)[6,7]. In analogy with the psychotic disorder, almost all studies indicate that there exist a significant association between cannabis use and depressive disorders (Degenbardt et al 2001, Chen et al 2002,)[6,8]. In this study 5.2% patients with cannabis use had depressive disorder. The association of cannabis is not as strong as it is the case between cannabis use and psychotic disorders. Similar

Types of illness	No. of Patients	Percentage
Drug induced Psychosis including schizophreniform	05	38.5
Bipolar type-1	08	48.5
Drug induced Depression	02	6.5
Drug induced anxiety	02	6.5
Dementia	00	00

Table 2: Distribution of mental illness in cannabis/gutka users

Observations has been made by Arseneault et al 2002, Bovasso 2001, Brook et al 1998 m, Patton et al[9,10,11]. DSM-IV diagnosable cannabis induced anxiety disorder was observed in 6.8% patients. Thomas et al 1996[12] observed similar association between cannabis misuse and occurrence of anxiety disorder, and he reported higher percentage of anxiety disorder (22%) as compared to this study. As most of the references are only to do with cannabis and not with combined cannabis and gutka, drawing a conclusion if it was because of gutka or is it because of cannabis is difficult, because among the 18 patients we analysed 80% of them had used gutka and cannabis in combination and only 20%were purely Gutka abusers.

CONCLUSION: In our study, Prevalence rate of cannabis/gutka misuse was found to be 12% of mental illness. cannabis/gutka misuse was very much common in males (96.4%). Most of the people were married.

Cannabis/gutka misuse was common among young people with 78% patients were in age group of 15 to 35 years and most of the patients belong to rural area (68.8%). Most of the patients of mental disorder with cannabis/gutka misuse were educated. In which 23.5% were graduates and 29% were of middle education level and only 21.7% were illiterate. Among all type of mental illness with cannabis misuse bipolar type -1 was the most common (39.1%). 14% patients had drug induced induced psychosis and only 1.4% had psychosis (NOS). Schizophreniform psychosis was diagnosed in 23% patients.

In the study group 5.2% patients had major depression, 6.8% had anxiety disorder and there were no cases of dementia. It is very difficult to come to know whether it was cannabis or gutka, causing mental and behavioural disorders. Further study is needed to know the ingredients of gutka and an analysis with the help of drug and chemical establishments is very much essential in the back ground of this study. Recently in 2014 as there is a ban on Gutka sale in few

states in India, a joint study by WHO, India office and john Hopkins Bloomberg school of public health institute published in the HINDU newspaper on 17th December 2014, points out to reduction in Gutka habit in Indian population. In light of this publication further studies are needed as this will throw light on studying only cannabis induced mental health disorder in Indian population.

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