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RESEARCH ARTICLE

EVALUATION OF CANNABIS ADDICTION IN PSYCHIATRIC DEPARTMENT IN UNIVERSITY HOSPITAL OF TOAMASINA MADAGASCAR

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ABSTRACT

Our study highlights the alarming rate of cannabis misuse prevalence (23%) in the department of Psychiatry in Toamasina Hospital during the first half of 2017. Men between 20 and 30 years old are the most consumers (32%), followed by those between the ages of 30 and 40 (31.82%). There is the presence of women consuming (4.55%). The criteria for cannabis addiction by the DSM-5 of American Psychiatrist Association was used. Thus, most cannabis users in our study (40.90%) develop medium dependence with score between 5 and 6. However, 27.30% are dependent with a score higher than 6. Even our numbers remain less important compared to the literature, it is important to raise awareness of population to prevent its consumption. Furthermore, the sources of income of cannabis users of our research come especially from their families or friends in 40.90%. 31.82% of our patients are in joblessness and 9.09% depended on social assistance. Thus, the fight against idleness and the encouragement of young people to not to stay in joblessness would constitute strategies to keep them away from this drug use. Finally, for the treatment of cannabis addiction, we should also take care off, at the same time, the underlying depression (31.80% in our case) and psychiatric comorbidities as alcoholism (13.63% in our case), schizophrenia (9.09%) and borderline and psychopathic personality disorders which would constitute cannabis use perseverance factors.

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INTRODUCTION

Psychiatric disorders due to acute Tetrahydrocannabinol intoxication are recently one of the major diagnoses of hospitalized patients in the only department of psychiatry in Toamasina Madagascar. They almost induce legal issues such as scam, vandalism, rule offenses, rape.... But self-killing and crime constituted the ultimate dangers of this dependence. So, it seems important to us to assess this dependence and to determine their risk factors to improve the management of future Malagasy patients. Thus, the Diagnostic and statistical Manual of mental disorders Fifth Edition or DSM-5 by the Association of American Psychiatrists in 2013 is one tool for psychiatric assessment of cannabis dependence [American psychiatry Association, 2013]. After responding to a series of 11 questions, the scale allows us to distinguish if patients are not yet addicted (score less than 2) and, in contrary, to determine the level of addiction: low (score between 2 and 3), mild (score between 4 and 5) or severe dependence (over than or equal as 6).

MATERIALS AND METHODS

We conducted a descriptive prospective study by filling anonymous questionnaire for a period from January 01st to

May 30th, 2017 in the Department of Psychiatry in Toamasina, Madagascar. Have been included all admitted patients taking cannabis in their story of the disease. Have been excluded patients admitted for other psychiatric addictions and disorders. The cannabis dependency score was evaluated by the DSM-5th, as well as the socio-clinical parameter such as the prevalence of cannabis intake, gender, age, income sources, living conditions, family conflicts, physical abuse and forensic problems and psychiatric comorbidities of patients who have taken cannabis.

RESULTS

Among 92 patients in hospital, we had 22 cases (23%) corresponding to our study criteria. 40.9% of consumers have an average addiction while 27.3% are dependent on cannabis. 22.73% have only a light addiction and 9.09% do not have addiction, as shown on Table 1.

On table 2, men between the ages of 20 and 30 are the most consumers (32%) followed by those between 30 and 40 years (31.82%). One female consumer 28 years old. 13.64% of male consumers are between 40 and 50 years old. The table 3 demonstrates that the most sources of income of cannabis users, as shown on table 3, come from their families or friends in 40.90. 31.82% of them are in joblessness. 13.64% have works, while 9.09% depend on social assistance. The table 4 shows that 27.26% of cannabis users live with their parents and 18.18% with their families. Some live alone or with their partner (18.18% each other), while 9.09% live with their neighbours or friends. Among cannabis users, almost conflicts were against the neighbourhood in the last 30 day, observed in 31.83% and especially against the father in 27.26% of cases, conflict against the mother in 18.18% of cases, against the partner in the same proportion and against their children in 4.55% of cases, on Table 5.

Table 1. Cannabis dependency score according to DSM - 5 (1)

	DSM-5 score	n	Percentage
No addiction	< 2	2	9.09%
Light Addiction	3 - 4	5	22.73%
Medium Addiction	5 - 6	9	40.91%
Severe Addiction	> 6	6	27.27%

Table 2. Type and ages of patients with a notion of cannabis intake

	< 10 years old	10 - 20 Years old	20 - 30 Years old	30 - 40 Years old	40 -50 Year sold	> 50 Years old	Total
Men	0 (0%)	4 (1.18%)	7 (32%)	7 (31.82%)	3 (13.64%)	0 (0%)	21 (95.45%)
Women	0 (0%)	0 (0%)	1 (4.55%)	0 (0%)	0 (0%)	0 (0%)	1 (4.55%)
Total	0 (0%)	4 (18.18%)	8 (36.36%)	7 (31.82%)	3 (13.64%)	0 (0%)	22 (100%)

Table 3. Patient income sources

Sources of income over the last 30 days	n	Pourcentage
Working	3	13.64%
Unemployment	7	31.82%
Social assistace	2	9.09%
Pension	0	0%
Family and relatives assistance	9	40.90%
No answers	1	4.55%
Total	22	100%

Table 4. Patients living conditions

Living conditions	n	Pourcentage
Alone	4	18.18%
Withpartner	4	18.18%
Withchildren	1	4.55%
Withpartner and children	1	4.55%
With parents	6	27.26%
Withfamily	4	18.18%
Withneighbours and friends	2	9.09%
Total	22	100%

Table 5. Family conflicts of the patients

Family conflicts over the last 30 days	n	Pourcentage
Against the father	6	27.26%
Against the mother	4	18.18%
Against theirpartner (s)	4	18.18%
Against theirchild/children	1	4.55%
Against their neighbours or friends	7	31.83%
Total	22	100%

Table 6. The forensic problems encountered

Legal issues	n	Pourcentage
Highway code offenses	1	4.55%
Public disorders	9	40.90%
Vendalism and scam	2	9.09%
Agression	8	36.36%
Rape	1	4.55%
Prostitution	1	4.55%
Total	22	100%

Table 7. Psychiatriccomorbidities

Psychiatriccomorbidities	n	Pourcentage
Alcohol-addiction	3	13.63%
Depressive mood disorders	7	31.83%
Anxious troubles	4	18.18%
Post Traumatic Stress Disorders	1	4.55%
Schizophrenia	2	9.09%
Borderline personality	3	13.63%
Antisocial or psychopaticpersonality	2	9.09%
Total	22	100%

On table 6, 40.90% of cannabis users committed public disorders, 36.36% committed aggressions, 9.09% did acts of vandalism and swindling, 4.55% did rape and same percentage prostitution. The table 7 shows that users of cannabis have also depressive mood disorders in 31.83%, anxiety disorders in 18.18%, a borderline personality in 13.63%, schizophrenia in 9.09%, and alcoholism in 13. 63% of cases.

DISCUSSION

The prevalence of patients hospitalized because of problems related to the misuse of cannabis in our study is estimated at 23%. In Canada, in 2011, about 1 600 psychiatric hospitalized patients were mainly disorders related to cannabinoid products, against 20 000 related to alcohol misuse [Young, 2011]. So, cannabis-related psychiatric disorders appear universal. Throughout DSM-5 dependence scale of American Psychiatrists Association, most cannabis users in our study (40.90%) develop medium dependence with scores between 5 and 6. But 27.30% of them are dependent with a score higher than 6. However, our statistical results are less important compared to the literature. In the Netherlands, in 2013, a study (3) of young adults at risk and declaring a high consumption of cannabis, revealed that 40% of them had really developed an addiction. So, youth cannabis addiction in Toamasina is alarming. A mass awareness campaign is needed. Our study suggests that men between 20 and 30 years old are the most cannabis users (32%), followed by those between the ages of 30 and 40 (31.82%).

We notice the existence of women consuming (4.55%) and 13.64% of male consumer between 40 and 50 years old. Our study seems the same as on literature. For instance, in Canada, in 2015 [Statistique Canada, 2013], 22.4% of youth aged 15-19 years said taking cannabis in the last year before the research; This rate was 26.2% in young adults 20 to 24 years. Then, the rate of cannabis users in young people is 2.5 times higher than people over 25 years, which stood at 8.0% in the last year before this Canadian research. So, in Toamasina, youth between 10 to 40 years old should be trained and educated about harmful effects of cannabis use. According to our study, in 40.90%, the cannabis consumer's income sources provided especially from their families or friends. 31.82% of the users did not even work and 9.09% depended on social assistance. Only 13.64% of cases worked. Moreover, we have also seen that 27,26% of cannabis users live with their parents and 18.18% with their families. Some users lived alone or with their partners (18.18% each other's), while 9.09% lived with their neighbours or friends. These observations have been found in some studies of the literature. More recently, in 2013, Van der Pol and col. [2013] followed a sample of cannabis users, without dependence and aged between 18 to 30, in order to find what elements are used to predict the transition of no-use into addictive behaviours as the criteria of the DSM-IV. Then, researchers highlighted several predictors factors of cannabis addiction, such as the number and type of recent negative events (desperation, financial problems). Thus, the fight against idleness and the encouragement of young people to search for job, would constitute strategies to keep them away from this drug use. According to our research, the main consequences of cannabis use are especially public disorders (40.90%), assault (36.36%), 9.09% of acts of vandalism and scam, 4.55% of rape and same percentage for prostitution and highway code offenses. That is different from some research done in developing countries. In Canada in 2013, according to Hartman and Huestis [2013]: "Although the evidence seems to indicate that cannabis use is not as dangerous as drinking and driving, it nevertheless associated with higher risk of injuries", and "risk is even higher when the driver is under the influence of both alcohol and cannabis". The police in Toamasina but also generally in Madagascar are then really solicited to well implement the application of the law prohibiting the use, sale and ownership of cannabis in the Malagasy territory. Finally, cannabis consumers in Toamasina have underlying depression in 31.83%, anxiety disorders in 18.18%, a borderline personality in 13.63%, schizophrenia in 9,09% and alcoholism in 13% of cases. Through an epidemiological research [Regier, 1990] conducted in developed countries, like the Epidemiology Catchment Area (ECA), the National Comorbidity Survey (NCS) or the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), depressive disorders are frequently associated with drug addiction, including cannabis (25.3%). That is similar as our study. In addition, more recently, in 2015. in London, Di Forti and col. [Di Forti, 2015] suggested that regular use of cannabis with a high Tetrahydrocannabinol content increases significantly the risk of schizophrenia. Moreover, Clough et al. (9) in 2006 in Australia demonstrated that the severity of the anxiety symptoms corresponded to an increase of the cannabis consumption. Thus, in view of the epidemiological data from our study, the treatment of cannabis addiction should include those of underlying depression and other psychiatric disorders comorbidities like alcoholism, schizophrenia and personality disorders (especially borderline and psychopathic types) which would constitute risk factors of perseverance cannabis use.

Conclusion

Fighting against idleness and encouraging young people to search for job, would constitute strategies to keep them away from this drug use. The police in Toamasina but also in Madagascar are really solicited to implement the application of the law prohibiting use, sale and ownership of cannabis in the Malagasy territory.

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