

Prevalence of *khat* chewers among primary health clinic attenders in Kenya

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ABSTRACT - In a rural district hospital in Kenya, the authors screened 100 randomly selected outpatients for *khat* (miraa) chewing. A surprisingly high number of them admitted chewing *khat* leaves. The implications of this finding and the controversy about whether or not *khat* is a harmful drug are discussed.

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During colonial times, *khat* was considered a harmful substance, and hence it was strictly controlled by law (1) mainly to ensure that *khat* was not readily available to people living outside the *khat* growing areas. However, in 1977, the legal restriction was lifted by a Presidential decree leading to easy access to *khat*; and consequently, to its wider availability in many parts of Kenya. Since then, various reports and letters to the editors have appeared in the local press blaming *khat* for its "harmful" effects on the young, on the family and its other social evils. Some correspondents have urged the Government to ban cultivation of *khat* and once again restrict its free availability.

Kenya grows high quality *khat* and earns substantial amounts of foreign exchange by exporting it to North Africa and certain rich Arab countries. A ban would certainly mean losing a considerable amount of money and hence as far as is known, no definite plan exists on banning its cultivation, sale and export. Furthermore, there is no solid scientific evidence to show a definite harmful effect attributed to its use. In 1945, the East African Medical Journal (2) wrote an editorial, advocating a ban on *khat* as it supposedly led to grave complications. Another report blamed *khat* as a cause

of toxic psychosis in a mental patient (3). It was almost 40 years later, Dhadphale et al. speculated a causal relationship between excessive chewing of *khat* and paranoid psychosis but blamed the latter on chewing of massive quantities of *khat*, thus absolving the mild and moderate chewers.

Khat has an amphetamine-like effect and is mainly used as a psychostimulant. This effect is partly due to (-) norpseudoephedrine component of its alkaloids. People chew *khat* for various reasons; important among these are: social, traditional, ceremonial and more importantly to postpone fatigue, keep awake at night and work longer hours. Whether or not it contributes to any definite physical disorders is not known, but Maitai (5) believes that it may be a contributory factor in gastro-intestinal ulcers seen in rats fed on *khat* leaves.

The authors believe that patients in *khat* growing areas such as Meru chew variable quantities of *khat*, but routine medical history does not include any questions directed at estimating quantities chewed. They also speculate wide prevalence of *khat* chewing among outpatients who may have physical or psychological problems related (or unrelated) to *khat* chewing. To test the first aim, the authors undertook this

study. They wished to estimate the prevalence of *khat* chewing among the outpatient clinic attenders.

Methods

Meru District Hospital outpatient clinic is a primary health care facility and here patients with physical illness seek help from the clinical officers and doctors. Normally, no one requests assistance on *khat* chewing which is widely prevalent in this rich *khat* growing countryside.

Every twentieth patient standing in the adult queues to see a doctor or clinical officer was included in the study. After explaining the purpose of the interview and if he/she consented to participate, one of us (O. E. O.) interviewed all the participants. The rest of the patients were seen by the clinical officers or doctors. The study was conducted over a 2-week period in 1983 and exactly 100 patients were interviewed.

Using a semi-structured research instrument the demographic and personal data of each participant was collected. Duration of drug use, quantity consumed and any relevant information on substance use/abuse was noted. The participant was also subjected to a 15-minute psychiatric interview which was followed by a physical examination. Any investigations were requested if indicated. The patient was given a prescription for the necessary drugs. All collected data were manually analyzed. The χ^2 test was employed for comparisons.

No attempt was made to follow up any cases.

For the purpose of the this study, *khat* chewers were divided into the following categories:

- i) *Mild chewers* - any patient who had chewed a small amount of *khat* during 30 days preceding the interview.
- ii) *Moderate chewers* - those taking less than 2 "kilos"* per week.
- iii) *Heavy chewers* - were those using 2 "kilos"* or more per week.

* A "kilo" of *khat* is the commercial retail exchange unit. It is not related to the metric weight measure of kilogram.

Table 1
Age and degree of *khat* use

| Age (years) | Heavy users (> 2 "kilos"/week) | Mild and Moderate users (< 2 "kilos"/week) | Non users | Total |
|-------------|--------------------------------|--|-----------|-------|
| -19 | - | 6 | 4 | 10 |
| 20-49 | 4 | 17 | 56 | 77 |
| 50- | 2 | - | 11 | 13 |
| Total | 6 | 23 | 71 | 100 |

$\chi^2 = 13.25$; $df = 4$; $P < 0.001$.

Results

Out of a random sample of 100 patients consisting of an equal number of men and women, 29 % were chewers. Only one of them was a woman.

More *khat* chewers were in the youngest age group; less than 19 years, while in the most elderly age category there were only two both of whom were heavy users. Significant difference was noticed between the upper two age groups of users and non-users ($P < 0.05$).

Frequency and amount used is displayed in Table 1. Most patients were in the < 2 "kilo" category.

A highly significant correlation was seen between the degree of abuse and age groups. Mild and moderate chewing was significantly more often seen in the youngest age group as compared with the > 20 years groups.

Discussion

An overall prevalence rate of 29% is surprisingly high. In the course of normal clinical enquiries, none of the medical staff asked about *khat* chewing. Consequently speculations arise regarding the contribution of *khat* to some of the patients' physical symptoms, for example constipation, irritability, sleeplessness, poor appetite, weight loss, etc. All of these could be due to *khat* abuse. Patients would often receive only symptomatic treatment which is likely to have little effect if *khat* is a contributory factor in producing patients' complaints. This may be especially true for those aged < 50 years. This age group seems

to contain a significant number of chewers. In an extremely overcrowded outpatient clinic with very limited facilities for investigations especially endoscopy, the authors were unable to comment on a causal relationship between some physical conditions and heavy *khat* chewing. It is possible that endoscopy could have produced evidence for or against gastro-intestinal ulcerations as seen in rats fed on *khat* leaves (5). Such an important finding would have wider implications especially in Meru and adjoining areas of Kenya.

Khat chewing also seems to be quite prevalent in young people as was observed in a recent study in Kenya (6). It appears that *khat* chewing is a predominantly male prerogative as seen in this as well as the present work which found many *khat* chewers in the age group under 19 years. Dhadphale et al. (4) have queried a causal link between excessive *khat* abuse and paranoid psychosis similar to that of amphetamine psychosis (7). To investigate this possibility, we subjected the entire sample to screening for psychiatric disorders and the results will be published soon.

However, the fundamental question which has been discussed in the press and other media in the Republic of Kenya and other *khat* growing areas as to whether or not *khat* produces ill effects on young men, families or leads to any form of psychosis remains unanswered. And therefore, its use need not be banned, at least not at present. According to the current state of our knowledge excessive abuse of *khat* could conceivably be considered a possible risk factor in causing psychosis similar to amphetamine psy-

chosis, but evidence regarding *khat* as an aetiological factor in G.I. tract ulceration needs to be carefully studied before condemning it as a dangerous drug like alcohol or cannabis.

Finally, the primary health workers in Meru district need to know that *khat* chewing occurs in nearly 30% of men standing in their outpatient queues, hence, appropriate questions should be asked to explore the amount of *khat* used. Such information would certainly help in better management of patients who are *khat* chewers and have physical symptoms due to *khat* consumption rather than an organic illness.

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