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Bhang Psychosis

By V. R. THACORE

The abuse of cannabis and its consequences to mental health have been a subject of much debate in recent years. While the literature is replete with reports of mental disturbances following acute intoxications (1, 4, 7, 15), the mental health implications of long-term abuse of cannabis remain speculative (9, 13). Since the drug possesses psychotomimetic and hallucinogenic (8) properties, prolonged experimentation with cannabis on human subjects is undesirable. The clinical manifestations of disturbed mental functioning due to chronic abuse of cannabis can therefore be best observed in societies where the drug is taken as a pastime, generally to enjoy pleasant euphoria. Such a situation is found in India where the use of cannabis has become woven into the general philosophy of life over the years. The drug is particularly used at religious ceremonies, and sweets and non-alcoholic beverages containing varying quantities of cannabis are traditionally offered and consumed during the colour-throwing festival of Holi.

In India, cannabis is available in three forms. Bhang, the mildest preparation, contains up to 15 per cent of the resin and is ingested. The active principles, the cannabinoids, are contained in the resin. Information regarding the actual ratio of THC to other resins is not available. Fresh bhang is highly intoxicating, but after 2–3 years of storage is only mildly stimulating and pleasure-giving, and it is this preparation which is generally used in an unadultered form. Preparation of bhang in a copper vessel, however, enhances its potency. Ganja and charas contain 15–25 per cent and 25–40 per cent of the resin respectively, and are smoked with varying quantities of tobacco in earthen 'chillum' or hookah.

Cannabis preparations are freely available in Indian cities and villages. In Lucknow city alone several thousand bhang 'pills', each weighing about one ounce, are sold daily at various centres, and the clientele is representative of all classes of the population (16).

This communication describes four instances where a temporal relationship was observed between the long-term abuse of bhang and the subsequent development of psychosis. Some aspects of bhang dependency and its clinical implications are also discussed.

Case 1

A 30-year-old married male, engineer, attended the clinic with the desire to break his habit of consuming large quantities of bhang daily. He first took bhang at the age of 22 years during the festival of Holi. At that time he felt sick and 'went out of my mind'. The effect wore off after 4–5 hours of sleep. But he continued to take the drug occasionally. Four years later he started taking it regularly three times a week, in the evenings, one 'pill' at a time. He found that taking the drug helped him to relax and freed him from worries. It brought on a 'pleasant dullness'. He steadily increased the consumption of the drug until when first seen he was taking 30 'pills' (put together equal to the size of a tennis ball in volume) daily. But this quantity of intake also ceased to produce the desired effect, and any further increase led to the development of a feeling of anxiety, apprehension, suspiciousness, ideas of reference and auditory hallucinations, but never disorientation or disturbance of memory. He retained insight and reduced his consumption of the drug. This resulted in quick remission of symptoms. This had occurred on several occasions during the preceding 12–18 months. The experiences frightened him and led him to seek help.

The patient had always had strained relations with his father. His elder brother is also dependent on bhang, and a cousin is an alcoholic. At school the patient played truant, but his scholastic achievements had always been above the average. While at college he led a 'fast' life and drank heavily. After graduation he took up an engineering job in which he finds 'obstacles at every step'. It was after about a year of

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marriage that he had to switch to bhang, as his drinking created family disharmony. He could conceal his dependency on bhang for some time, but lately this was also creating unpleasantness in the home. He gradually started suspecting his wife of having affairs with others and struck her on several occasions. They have two children.

Mental examination revealed that he was tense and apprehensive. He communicated freely, however, and discussed his problem showing fairly good insight. He was correctly orientated and did not manifest any memory disturbance nor any signs of disturbed thinking or perception. He related the development of mental disturbances to 'bhang habit' and his inability to maintain a constant dose. Except for slight conjunctival congestion, physical examination was unremarkable.

Follow-up was irregular. He could give up taking bhang for about one week on two occasions but contact was lost after six months.

Case 2

A 42-year-old married male, businessman, brought his nephew who was suffering from schizophrenia for treatment. During enquiry into the family history it was revealed that the businessman himself had suffered from episodes of abnormal behaviour, but that these were related to excessive consumption of bhang. Subsequently at a later date he sought consultation for feelings of depression with lack of interest in work, lethargy and laziness and 'not feeling fresh' for the past few years.

His parents had died before he had attained the age of six; he therefore could not continue his studies and joined his elder brother in business. He married at 22 and has a daughter.

He started taking alcohol two years before his marriage. Soon he was taking it in excess and since it proved to be expensive and was unacceptable to his family members he gave it up and started taking bhang. Initially he took it 2–3 times a week, 1–2 'pills' at a time, but soon he was taking 8–10 'pills' daily. On several occasions he felt the need to increase the quantity of intake, but this invariably led to his developing fear of people, a paranoid outlook and auditory hallucinations. His consciousness remained clear and memory intact. Reduction of the dose led to remission of these disturbing symptoms. During one such episode he quarrelled with and separated his business from his brother whom he falsely accused of cheating him. A few months prior to being seen he quarrelled with a good friend of many years because he suspected this friend of performing witchcraft on him. He developed fear of him, lost sleep and became violent. He showed emotional lability, developed delusions of 'group persecution' and experienced auditory hallucinations. This episode again was precipitated by excessive bhang abuse. As his sickness prevented him from obtaining further supplies of the drug the condition settled down spontaneously in 7–10 days. His presenting complaints were now that he was unable to maintain sustained 'euphoric dullness' with an optimum dose of bhang and unable to ward off fatigue, without developing psychotic disturbances.

Mental status examination revealed only a mild depression. Findings of physical examination were within normal limits. The patient did not attend for follow-up after the first consultation.

Case 3

A 22-year-old single male, businessman, was brought for treatment with a six weeks' history of disturbed behaviour in the form of anxiety, irritability, losing temper easily, fearfulness, and tendency to run away from people and home.

Family history revealed nothing of clinical importance. He was introduced to bhang at the age of 17 and occasionally took charas as well. Two years ago he took excessive bhang at Holi and became violent with persecutory delusions and auditory hallucinations. He was confined to a room and restrained from obtaining the drug, following which the abnormal behaviour subsided spontaneously after 7–10 days. Nonetheless, he continued taking bhang regularly but in small doses. Last year again at Holi he consumed the drug in excess and developed a similar psychosis which subsided within 10 days without treatment. Since then his intake of cannabis has steadily increased to 'unlimited proportions', and on several occasions he has developed emotional lability, visual and auditory hallucinations, persecutory delusions and a tendency to violence. These symptoms, which were related to periods of excessive bhang abuse, always subsided within a few days when the patient was restrained physically and prevented from obtaining his supply. The present episode was again precipitated by heavy ingestion of bhang at a festival. As he did not recover in the usual manner psychiatric help was sought.

Mental status examination revealed that his consciousness was clear and memory intact. He harboured suspicions and delusions of persecution. He felt people were after his life and heard voices telling him to run away. Rapport was fairly good, but he was reluctant to discuss his drug problem. Physical examination revealed no abnormality.

He was given chlorpromazine 150 mg. daily and

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showed rapid recovery. Long-term follow-up was not possible as the patient hailed from Nepal.

Case 4

An 18-year-old single male, high school student, was brought for treatment with a two-month history of abnormal behaviour. The first signs of disturbance were that he became argumentative and irritable with a tendency to violence. Four weeks before being seen he was involved in an accident with a police van. He was put in jail, where he 'talked nonsense' and became violent. He was brought for treatment while on bail.

Family history revealed nothing of importance. The patient had started taking bhang and occasionally ganja at the age of 12. Prior to his illness he was indulging in excessive use of bhang.

Mental examination revealed that he was extremely fearful and paranoid, but fully orientated with memory intact. He had delusions of persecution and experienced auditory hallucinations. He showed increased psychomotor activity, bizarre behaviour and was hostile to his relatives. But rapport could be established and he cooperated during examination. Physical examination revealed no abnormality.

He was treated with chlorpromazine 400 mg. daily and ECT × 5. He showed almost complete recovery after ECT × 3. He recalled his accident and vividly described how he was returning home after purchasing a supply of bhang and ganja, felt police were after him (the thought was reinforced at the sight of the police van really following him) and attacked the van on command of hallucinatory voices and tried to run away when he was apprehended. He related the whole episode to excessive abuse of bhang which 'went to my head'. The patient remained well for three weeks, when vigilance was relaxed and he slipped out of his house unnoticed. He was brought back in a psychotic state precipitated by drinking bhang at a festival celebration. ECT × 2 brought the situation under control. He continued with the above dose of chlorpromazine and remained well for four weeks, when another psychotic episode was precipitated by excessive bhang indulgence. On this occasion only physical restraint was resorted to, and he recovered in 7 days. Another episode occurred a month later following bhang abuse and was handled in a similar manner. The psychotic episodes were characterized by violence and persecutory delusions in a state of clear consciousness. Then suddenly and surprisingly the patient decided to stop all medication and abstain from taking cannabis. It is now 24 months since and he has remained symptom free and is gainfully employed. He has sworn not to touch bhang again.

Discussion

Abuse of cannabis has long been regarded as an important cause of psychosis and mental deterioration in India (3, 5). Recent reports substantiate these observations, as long-term abuse of marihuana has been shown to be an aetiological factor in the development of psychosis (14) and possible cerebral atrophy in young smokers (2). While there are numerous reports of mental disturbances resulting from marihuana smoking, effects on mental functioning due to long-term abuse of bhang have not been adequately reported. This may be due to the fact that the use of bhang is peculiar to this country. There is also a tendency to equate bhang with marihuana. It may be pointed out that while marihuana is inhaled, bhang is ingested, and the amount of resin contained in them may also vary. Since the mode of consumption is an important variable in the type of clinical picture produced (6, 17) the long-term effects may also vary.

The four cases described here serve to demonstrate the varying grades and intensity of behavioural disturbances which may ensue from chronic bhang abuse. The clinical data strongly suggest a causal relationship between excessive bhang abuse and the development of psychosis. The behavioural disturbance is characterized by a hostile perception of the environment, fearfulness, delusions of persecution, auditory and visual hallucinations and a tendency to run away from the frightful situation or attack in self-defence under the influence of hallucinatory voices. There is no clouding of consciousness, as seen in acute intoxications following marihuana smoking (15), nor disturbance in memory. Amnesia, however, was found by Spencer (14) to be a prominent feature of psychosis induced by long-term marihuana smoking. The clinical picture is thus likely to be confused with that of paranoid schizophrenia. Insight as to the cause of the disturbance is maintained in the early stages but is lost as the disturbance progresses. A similar observation was made in an experimental situation by Ames (1) who on administration of cannabis orally to volunteers found that disturbance of consciousness was not obvious and reality contact and insight were maintained, while at the same time most of the

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subjects manifested schizophrenia-like features. Case 1 and Case 2 were to some extent able to maintain an 'optimum euphoric dose' until this became difficult and psychotic symptoms emerged, necessitating reduction in the quantity of bhang consumed. Case 3 demonstrated an increasing susceptibility to developing psychosis of increasing duration due to bhang abuse. Case 4 showed intense craving for the drug to the point of risking relapses. The tendency to increase the dose to obtain the desired effect indicates development of tolerance until a certain 'saturation' is reached, further increase leading to psychotic manifestations. Such a tolerance to effects produced by marihuana has also been observed by Meyer, Pillard, Shapiro and Mirin (11). The inability to cease taking the drug and intense craving for it has come to be regarded as physiological in nature (12). Complete recovery ensued on withdrawal of bhang, although in one case (Case 4) anti-psychotic treatment had to be instituted and another (Case 3) needed small doses of phenothiazines. Both these patients had also recovered when their supply of bhang was stopped on different occasions. All the cases showed remarkable mental clarity when well and without reservations, and often humorously, attributed their illness to bhang abuse.

While some consumers of bhang may also indulge in alcohol and opium, this was not the case in the patients described above. Indeed two of the patients substituted bhang for alcohol as the effects of the former were initially less disruptive socially. However, ganja and charas may frequently be used by those taking bhang regularly (Cases 3 and 4).

It is therefore concluded that prolonged abuse of bhang by susceptible persons may produce tolerance and dependency and induce a schizophrenia-like psychosis which may be designated as 'bhang psychosis' to be categorized with other such psychoses produced by drugs.

Summary

Four cases are described where long-term abuse of bhang, the mildest of cannabis preparations available in India, has been seen to be responsible for causing a schizophrenia-like psychosis. Disturbance in thinking and perception occurs in a state of clear consciousness with little disturbance in memory. The development of tolerance and dependency on bhang and its clinical implications are discussed.

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