

(¹) Langdon-Down, "On some of the Mental Affections of Childhood and Youth," *Journal of Mental Science*, 1887.—(²) Walter Channing, *Journal of Mental Science*, 1897, p. 72.—(³) Clouston, *Neuroses of Development*, 1891, pp. 42—45.—(⁴) Talbot, *Irregularities of the Teeth and their Treatment*, Philadelphia, 1890.—(⁵) Peterson, "The Stigmata of Degeneration," *States Hospital Bulletin*, 1896, vol. i, No. 3.—(⁶) Charon, *Thèse de Paris*, 1891.—(⁷) Goodall, *Journal of Mental Science*, October, 1897.—(⁸) Bolton, *On the Histological Basis of Amentia and Dementia* (in press).

Insanity from Hasheesh.(¹) By JOHN WARNOCK, M.D.,
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BEFORE describing this disease as it occurs in Egypt at the present day, let me give a few historical notes of the use of *Cannabis Indica*, of which hasheesh is the local preparation. For this, and much other information contained in this paper, I am indebted to the report of the Indian Hemp Drugs Commission of 1893. This valuable report was drawn up by a committee appointed by the Government of India, and in its pages a very full account of the use of hemp drugs in India is to be found. Unfortunately it appears that no lunacy expert sat on the Commission, and in my opinion its findings as to the relations between hemp drugs and insanity are not conclusive.

Mr. Grierson quotes references to hemp drugs in Sanskrit literature as early as 1400 B.C., *i.e.* 3300 years ago, or about the time of Rameses I in Egypt. In the tenth century of the Christian era, hemp drugs are mentioned as having medicinal properties.

In the *Makhzan-el-Adwiya*, *Cannabis Indica* seeds are spoken of as "stimulant and sedative, imparting first a great heat and then a considerable refrigerant effect. The leaves make a good snuff for deterring the brain; the juice of the leaves, applied to the head as a wash, removes dandruff and vermin; drops of the juice thrown into the ear allay pain and destroy worms and insects. It checks diarrhoea, is useful in gonorrhoea, restrains the seminal secretions, and is diuretic." As to evil effects, the writer says:—"Afterwards the sedative effects begin to preside; the spirits sink, the vision darkens, and weakness and madness, melancholy, fearfulness, dropsy, and such like distempers are the sequel, while the seminal secretions

dry up." Its habitual use causes "weakness of the digestive organs, followed by flatulency, indigestion, swellings of the limbs and face, change of complexion, diminution of sexual vigour, loss of teeth, heaviness, cowardice, depraved and wicked ideas, etc."

Ibn Beitar first recognised an insanity from its use, A.D. 1235. Makrizi, writing in the fourteenth century on Egypt, states that in 780 Hegira very severe ordinances were passed in Egypt against the use of the drug. The famous garden in the valley of Dijoncina was rooted up, and all those convicted of the use of the drug were subjected to the extraction of their teeth; but in 799 Hegira the custom re-established itself with more than original vigour. Makrizi writes:—"As its consequence, general corruption of sentiments and manners ensued, modesty disappeared, every base and evil passion was openly indulged in, and nobility of external form alone remained in these infatuated beings."

No doubt many other references to hasheesh might be found in Arabic literature, and perhaps its popular use in Egypt may be traced back further than 540 years.

So much for the historical aspect of the subject. Let us now consider the use of hasheesh in the present day, especially in Egypt.

Besides contrasting hasheeshism and alcoholism, I propose to compare the effects produced by the use of *Cannabis Indica* in Egypt with Indian experience, as reported by the Indian Hemp Drugs Commission. As to the physiological action of *Cannabis Indica*, the following experiments are noteworthy:

Dr. Marshall, of Cambridge, records as symptoms (Allbutt's *System of Medicine*):—Dryness of the mouth, paræsthesia and weakness in the legs, an inhibition of self-control; the subject wandered about and felt very happy, the time-sense became impaired, "minutes seemed like hours." The subject laughed and seemed to see the comic side of things; there were lucid intervals which occasionally seemed voluntary; the speech was slurring and the gait ataxic; there was no sleepiness observed. The pulse increased in rate, sensibility was lessened, the face became ashy pale, the pupils reacted and were somewhat dilated; there were no hallucinations.

In other experiments there was sickness, loss of time-sense, debility, and increase of appetite.

In the *Indian Report on Hemp Drugs*, 1894, I find the following:

O'Shaughnessy records the effects of *Cannabis Indica* on dogs, chiefly stupor and paralysis.

Lauder Brunton describes:—Delirium, hallucinations, sleep, gaiety, restlessness, loss of space- and time-senses, anæsthesia and paræsthesia, dilatation of pupils, increase in the amount of the urine.

Experiments on cats by Dr. Evans are also quoted:

Small doses of the drug were given by the mouth to cats. Ataxic and paretic phenomena resulted, tremors, rocking movements, and alterations in the muscular sense.

Dr. D. D. Cunningham made interesting experiments on a monkey, which was compelled to inhale smoke from *Cannabis Indica* habitually for eight months with the following results:

The animal plainly suffered from hallucinations of sight, and it acquired a positive liking for the drug. Although its appetite decreased, it put on fat. The inhalation usually made the animal drowsy and unsteady in gait; occasionally convulsions and unconsciousness resulted. It is important to note that the hallucinations persisted after the other symptoms of intoxication had disappeared.

At the autopsy a deposit of fat was noticed in the abdomen and pericardium. As this deposition of fat occurred in spite of loss of appetite and loss of body-weight, it appeared that *Cannabis Indica* actually caused a diminution in the waste of the body tissues, and thus had a dietetic value.

There seems reason for believing that *Cannabis Indica* has a peculiarly toxic action on certain individuals. In the *British Medical Journal* of October 3rd, 1896, the case is mentioned of a boy of twelve years of age who suffered from grave toxic symptoms after a dose of ten minims of the pharmacopœial tincture of *Cannabis Indica* thrice daily; yet similar doses from the identical preparation given to another child produced no bad effects. Other similar cases have been recorded from time to time, and one wonders whether this peculiar susceptibility of certain individuals to the toxic action of moderate doses of *Cannabis Indica* may not partly explain why in this country, where many thousands smoke hasheesh, only a comparatively few suffer from grave toxic symptoms.

Let us now examine the results of the use of hasheesh in

Egypt, where large quantities are used by the inhabitants of the towns, although the importation of the drug is prohibited by law. The fact that about sixteen tons of hasheesh were confiscated during the year 1901 gives some indication of the extent of its use. Most of the drug is consumed by smoking in the gozeh and in cigarettes, but a considerable amount is eaten in pill form and in sweetmeats, magoon, etc.

The usual reason given by patients for using hasheesh is that it induces a general feeling of pleasure and content. It is also alleged that it increases the appetite for food, also the sexual appetite, and relieves feelings of lassitude and depression. When eaten in pills and sweetmeats it seems to be taken chiefly for aphrodisiac purposes.

Probably, as in the habit of opium, alcohol, coca and tobacco, etc., hasheesh is primarily employed on account of its euphoric effects on the nervous system. The need for some such agent exists in almost every race of human beings, especially among the males; local conditions of climate and topography, race traditions, etc., cause variations in the agent selected.

Popular opinion disapproves of the use of hasheesh. Even its moderate use is condemned by the better class of Egyptians; the habit is considered as degrading as secret drinking is with us. The low associations of the habit are partly responsible for the ill-favour with which it is regarded, but without doubt the real reason for its condemnation is the fact that hasheesh users degenerate morally, and therefore all decent people feel bound to hold up the habit to reprobation. From a religious point of view the use of hasheesh is prohibited just as much as alcohol by the Mohammedan creed (Koran, chapters ii and v).

Hasheesh appears, nevertheless, to be used by certain Mohammedan religious teachers (fikkis) as largely as by laymen.

The diagnosis of insanity from hasheesh depends on the history of the case and the patient's statements. The police certificate frequently gives information as to the existence of the habit; but unless this is confirmed otherwise, such evidence is disregarded in making the diagnosis of hasheesh insanity.

The discovery of hasheesh in the patient's clothing, or concealed in his ears or mouth, occasionally betrays the nature of the case. On admission every male patient is questioned with regard

to hasheesh, and a report made on the amount he takes and his attitude towards the charge; excited protests and denials of the habit are known by experience to indicate a hardened hasheesh smoker. As the mental state of the patient improves, he is again questioned about hasheesh, and before discharge he is invited to give full details of his habit. By comparing the repeated statements and by noting his knowledge or ignorance of the various details of hasheesh smoking, such as the price of the gozeh, the different qualities of the drug, etc., it is not difficult in most cases to form an opinion as to whether the case is one of hasheesh. The evidence of relatives is occasionally of use, but is less reliable than the repeated cross-examination of the patient; numbers of the Cairo cases are known to be frequenters of hasheesh cafés from being seen there by hospital employés.

Insanity from hasheesh belongs to the toxic group of insanities, and, like insanity from alcohol, opium, cocaine, etc., has an exogenous toxic cause.

The clinical types of hasheesh insanity vary, but before describing them it will simplify matters to enumerate those met with in alcoholic insanity as follows:

1. *Ordinary alcoholic intoxication*, short in duration; with symptoms of excitement and violence, stupor, exaltation, and various ataxic and parietic phenomena; occasionally real transitory mania.

2. *Delirium tremens*, of longer duration; numerous hallucinations, especially visual; oblivious restless delirium, melancholic in tone; delusions of fear; motor phenomena, tremors, etc.; usually curable.

3. *Alcoholic mania* of various degrees of acuteness; no complete delirium, hallucinations chiefly auditory; maniacal, changing delusions of exaltation or persecution, restlessness and violence; no tremors usually; often curable.

4. *Chronic alcoholic mania*, including alcoholic mania of persecution; suspicion, jealousy, hallucinations of hearing and taste; delusions about tortures, machines, conspiracies, poisoning, wires, etc.; there may be ideas of grandeur or altered personality; often suicidal and homicidal impulses; motor and sensory phenomena occur; usually incurable.

5. *Alcoholic dementia*, often with gross organic brain-lesions, or with hemiplegia, paresis, etc.; loss of memory, mental

facility, loss of interest, dull, apathetic demeanour; various motor and sensory phenomena occur.

6. *Dipsomania*.—This term is used to express the craving for alcohol, and nearly all the foregoing types occur as the results of giving in to this craving. Between his outbreaks of mania or delirium tremens, the dipsomaniac usually shows some mental and physical impairment, especially in the direction of blunted moral feeling. He is usually a practised liar, reckless in his methods of obtaining money to gratify his craving, careless of the claims of relations on him, lazy, dishonourable, often shameless, and often incurable.

Non-nervous results of alcohol.—Almost every organ in the body shows pathological results of alcoholism which need not be enumerated here. Now let us consider the result of using hasheesh. Insanity from hasheesh gives the following types:

1. *Temporary intoxication*.—The smoker of hasheesh becomes dull and drowsy, he feels pleasantly exalted, and the worries of life are temporarily blotted out; fatigue is no longer felt; he is at peace with the world. The drug acts as a stimulant and sedative. This state is to be observed among the *habitués* of hasheesh cafés; such cases do not come to the asylum, though patients recovering from the graver forms of hasheesh insanity often describe what were their feelings during temporary intoxication. Pleasant half-waking dreams, not unlike those of the opium taker, gently occupy the mind, and often the individual feels that he is temporarily some important personage. The active excitement of alcoholic inebriety is uncommon, but if the hasheesh smoker is annoyed or interfered with during his dreams he is liable to become irritable and excited, and to show loss of self-control. A staggering gait makes the condition not unlike that of alcoholic intoxication, while the pleasant, dreamy state approaches that of the opium smoker.

Contrasting the three intoxications, one may say that the mental pose of the hasheesh smoker is more “subjective” than that of the alcoholic, and less so than that of the absorbed opium user. The alcoholic is the most “objective” and demonstrative of the three.

2. *Delirium from hasheesh*, which is accompanied by hallucinations of sight, hearing, taste, and smell, often of an unpleasant kind. Delusions of persecution often occur. The idea that the subject is possessed by a devil or spirit is common. Great

exaltation and the belief that the individual is a sultan or prophet may occur. Suicidal intentions are rare. The restlessness and sleeplessness of these cases are marked features, but usually they do not approach the unending chatter and continual busy movements of the subject of delirium tremens, nor is the absorption in delirious ideas and hallucinations as complete as in the latter. The motor phenomena of delirium tremens, tremors, and ataxy are absent; although some staggering is occasionally noticeable, usually the patient is active and quick in movements. The physical exhaustion and gastrointestinal and hepatic disorders of delirium tremens do not occur. Hasheesh delirium is a less grave state both physically and mentally. Some cases are stuporous in type.

3. *Mania from hasheesh*.—This varies in degree of acuteness from a mild short attack of excitement to a prolonged attack of furious mania ending in exhaustion or even death. Most cases are exalted, and have delusions of grandeur or of religious importance; persecutory delusions occur frequently, and provoke violence towards others, but not suicide. Restlessness, incoherent talking, destructiveness, indecency, and loss of moral feelings and affections, are all ordinary symptoms. A certain impudent dare-devil demeanour is a characteristic symptom. Hallucinations are not so marked as in alcoholic mania, but those of hearing and taste are not uncommon; delusions of being poisoned are often based on the latter variety. A few cases are more melancholic than maniacal in demeanour, and exhibit extreme depression and terror with hallucinations of hearing (threatening voices, etc.). There is no pathognomonic symptom of hasheesh mania, but the transitory nature of many cases is often a guide.

4. *Chronic mania from hasheesh*, including a form of mania or persecution. Many of these cases are not distinguishable from ordinary chronic mania. Hallucinations are not so frequent as in alcoholic chronic mania. The patient is a happier, less worried individual than the alcoholic chronic maniac. The morose, suspicious, jealous demeanour of the alcoholic, his belief in machines, invisible wires, and mysterious tortures are absent, also his motor and sensory troubles. His suicidal and homicidal tendencies are also usually wanting.

5. *Chronic dementia from hasheesh* describes the final stage of the preceding forms. We find no motor or sensory symptoms,

as in alcoholism ; there are loss of memory, apathy, degraded habits, and loss of energy, as in ordinary chronic dementia.

6. The term *cannabinomania* may be employed to describe the mental condition of many hasheesh users between the attacks of the above forms. The individual is a good-for-nothing, lazy fellow, who lives by begging and stealing, and pesters his relations for money to buy hasheesh, often assaulting them when they refuse his demands. The moral degradation of these cases is their most salient symptom ; loss of social position, shamelessness, addiction to lying and theft, and a loose, irregular life, make them a curse to their families. While in the asylum they are notorious for making false charges, refusing to work, and quarrelling. Some deny using hasheesh, but others boast of its stimulating effects. They often have an inordinately high opinion of themselves. They are loud in their complaints of oppression by the police, and emphatically protest their innocence of any misdeeds. Irritability, unconcern as to the future, loss of interest in family, malingering, continual demands for cigarettes, urgent petitions for release, fervent promises of reform, emotional outbreaks when refused their demands, garrulity, abusive threats alternating with extreme servility, are all marks of this state. These patients do not often ask for hasheesh while in the asylum, but occasionally procure it by stealth, though the craving for it does not appear to be so keen as that of a dipsomaniac or a morphinomaniac. No phenomena of "deprivation" are noticeable, as in the latter disease, and therefore the cessation of the habit should be easier than in the case of alcohol or opium, and I believe that it is actually easier.

In the early stages these individuals are usually regarded as criminals, and their moral lapses land them in gaol. Later on, when their intellectual impairment becomes more marked, they are sent to the asylum.

The similarity between this condition and that of the dipsomaniac is evident ; many of the differences are probably due to racial peculiarities.

Contrasting generally hasheesh insanities with those produced by alcohol, the following points stand out :

1. Suicidal intentions are common among alcoholics, rare among hasheesh cases. How far this may be explained by differences in race and religion one cannot say, but it is to be

borne in mind that suicide is rare among the insane of the Arab race and Mohammedan religion.

2. Hasheesh, in Egypt, seems to be a more important factor in the production of insanity in that country than alcohol is in England.

3. As a cause of crime, hasheesh appears to be as important in Egypt as is alcohol in England.

4. The use of hasheesh, unlike that of alcohol, is not followed by any characteristic anatomical lesions, and no physical disorders are known to result from it. I have not found asthma and bronchitis to be specially common among hasheesh smokers; only the physical disorders and lesions met with in the idiopathic insanities occur in insanity from hasheesh. The only exception to this rule being the staggering gait of hasheesh intoxication and delirium.

Let us now consider how far the hasheesh habit is affected by Government regulations:

In Egypt the drug was totally prohibited in 1868, then allowed to be imported on paying duty in 1874. In November, 1877, all hasheesh was confiscated.

In March, 1879, the importation and cultivation of hasheesh were prohibited by Khedivial decree.

In March, 1884, a decree prohibited the cultivation, sale, or importation of hasheesh under penalty of a fine of two to eight pounds Egyptian per oke, the drug to be confiscated and sold for export within fifteen days, a quarter of the price so obtained to be divided among the informers and seizers of the hasheesh. The decree of May, 1891, modified the preceding:

The cultivation of hasheesh was prohibited under a penalty of £E50 to £E100 per feddan. The mere possession of hasheesh became an offence, and the penalty was raised to £E10 to £E50 per kilogramme, with a minimum fine of £E2.

In June, 1892, the Court of Appeal of the Mixed Tribunals decided that the preceding decrees did not apply to foreigners.

In April, 1895, the Native Appeal Court decided that the fine inflicted might be less than £E2.

In January, 1895, an *arrêté* was promulgated, by which the keepers of public establishments (cafés, etc.) were prohibited the sale of hasheesh under a fine of 25 to 100 *p.t.*, the drug to be seized and confiscated. Three condemnations of a café

keeper within six months were to entail the closure of the establishment.

In May, 1900, the preceding *arrêté* was modified by the addition of one to seven days' imprisonment to the fine. The judge in every case will order the confiscation of the hasheesh seized, as well as the apparatus employed in its use. When the offence is the permission of hasheesh smoking on the premises, the shop must be in every case closed for a month. After two convictions the shop will be permanently closed. For the offences of selling hasheesh or providing it for smoking, one conviction is to be followed by permanent closure of the shop.

Numerous convictions are obtained under these *arrêtés*, and the importation of hasheesh along the Mediterranean coast is carefully watched, many tons of the drug being annually confiscated; yet the use of hasheesh still continues on a large scale, though not so openly as in former years, and every one who wants to smoke hasheesh seems to have no difficulty in obtaining it. The number of hasheesh cases admitted into the asylum shows an annual diminution, and one hopes that the strenuous efforts now being made to suppress the habit will gradually reduce the asylum admissions from this disease to a small figure.

It is to be noted that the abuse of hasheesh, like that of alcohol, is sometimes only a symptom of incipient insanity.

It has been suggested that if the use of hasheesh were entirely prevented in Egypt its place would be taken by another euphoric agent, probably alcohol. Would this change be for the better? I am inclined to answer in the negative. Alcohol is in other countries such a fertile cause of crime and insanity that its substitution for hasheesh in Egypt would probably result in a worse state of things. Alcohol also seems to have a specially deleterious effect in warm climates and on Oriental races. Probably the wisest policy in Egypt will be to keep the use of hasheesh within bounds without entirely preventing it.

The present system of nominally prohibiting hasheesh, while a large amount is smuggled into the country and smoked in spite of the decrees, may eventually bring about the necessary amount of restriction by raising the price of hasheesh, and rendering its immoderate purchase beyond the means of the majority of habitual hasheesh smokers.

Opium, which is so largely used in India, apparently with little evil effect, is taken to some extent in Egypt; but I have seldom met with insanity among the lower classes attributable to its use. Probably the substitution of the opium habit for that of hasheesh would be an improvement.

In the *Report of the Royal Commission on Opium*, 1895, the conclusion is reached that "the temperate use of opium in India should be viewed in the same light as the temperate use of alcohol in England. The use of opium does not cause insanity. It does not appear responsible for any disease peculiar to itself."

The popular use of hemp drugs is known to exist in Turkey, Greece, Egypt, India, and some of the tropical parts of America, Trinidad, British Guiana, and probably elsewhere.

In most of these countries it is used chiefly as a euphoric agent, but in India the hemp plant is considered to be holy by the Hindoos. Mr. J. M. Campbell, of Bombay, gives interesting details of the worship of the plant.

The Ascetic Mahadev is believed to inhabit the leaf of *Cannabis Indica* (called bhang in India). The preparation of bhang is a religious process accompanied by prayers and incantations. Its use cleanses from sin and atones for evil deeds. It destroys disease and keeps off evil. It brings luck, and is therefore used at weddings, on going a journey, etc. Bhang is much used in temple rites as an offering to Shiva. Vishnu worshippers drink bhang before Baladev. The goddess of smallpox, Shitaladevi, is propitiated by libations of bhang.

The North Indian Mohammedans show much respect for bhang, the spirit of the plant being that of Elijah or Khizr.

Certain Indian sects are devoted to the use of bhang, and drink it at their festivals, believing it to cure all diseases and to bring the user into harmony with the infinite.

Indian policy in regard to hemp drugs has been directed towards "restraining the use and improving the revenue by the imposition of suitable taxation;" "discouraging the consumption by placing restrictions on the cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices;" "limiting the production and sale by a high rate of duty, without placing the drug entirely beyond the reach of those who will insist upon having it." The Commission approve of this policy, and con-

demn the proposal to prohibit the use of the drug in India. They formed the opinion that there is a legitimate use of the drug, generally among the poorest of the population, and this use should not be rendered impossible. As to Burmah, they find that prohibition has been a failure; that the drug is largely smuggled into the country; that all who want it (chiefly Indian immigrants) can get it illicitly; and that the Burmen do not take to the habit, though they evidently have many opportunities to do so. The Commission say that the present illicit traffic in Burmah is demoralising to the Indians and to the Government servants, who are powerless to deal with it. It would be better to license this use of the drug under proper control and taxation than to maintain an unworkable prohibition; however, the sale of the drug should be restricted to Indians, Burmen being still prohibited its use.

The actual restrictions on the use of hemp drugs vary in the different provinces of India; they include the control of the cultivation, manufacture, and taxation of the drug.

Retail and wholesale vendors are licensed, and the possession of more than a certain amount of the drug is illegal.

The Commission, discussing the various provincial systems, approves of a combination of a fixed duty with licence fees for the privilege of vend; the control of cultivation; and the limitation of the number of licensed shops.

Let me now briefly quote from the Indian Hemp Drugs Commission's Report in 1894:

Vol. i, p. 186: "On the whole, the weight of evidence is to the effect that moderation in the use of hemp drugs is not injurious.

"The temptation to excess is not so great as with alcohol."

Vol. i, p. 263: "In regard to the physical effects, the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all. The excessive use does cause injury, but does not cause asthma. It may indirectly cause dysentery, and may cause bronchitis."

Vol. i, p. 264: "The moderate use of hemp drugs produces no injurious effects on the mind.

"The *excessive use* indicates and intensifies mental instability; it tends to weaken the mind; it may even lead to insanity. It has been shown that the effect of hemp drugs in this respect has hitherto been greatly exaggerated, but that they do sometimes produce insanity seems beyond question.

“Moderate use produces no moral injury whatever. For all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime.”

Page 239: “Out of 1344 admissions to the asylums of British India during 1892, there are shown to be only ninety-eight cases (or 7·3 *per cent.*) in which the use of hemp drugs may be reasonably regarded as a factor in causing the insanity.”

Let us compare the evidence of other observers :

In *British Guiana*, Dr. T. Ireland reported (*British Medical Journal*, September 10th, 1893) that insanity from Indian hemp is common there ; that it causes asthma, and results in acute mania, melancholia, and chronic dementia.

In the *Journal of Mental Science*, January, 1892, Dr. W. S. Barnes, formerly superintendent of the Lunatic Asylum of British Guiana, is quoted as stating that the smoking of hasheesh is a common cause of insanity, often combined with alcohol. “These patients are the most acutely insane amongst the inmates of the public asylum. The mania is fierce, and they are recklessly violent and regardless of consequences, recalling frequently to one’s mind the furor of epilepsy. When the form of the disease is melancholia their mental distress is profound, and they require careful watching. The earlier attacks are usually very curable ; but they return again and again unless the drug is given up, and at each recurrence recovery becomes less likely. In most cases hallucinations are a very marked feature, and appear to occupy the patient’s mind so fully and vividly as to render him almost unconscious of his actual surroundings.”

In the *Journal of Mental Science*, January, 1894, “Return East Indies, Consumption of Ganja,” Blue Book, is described the use of Indian hemp in India. It is said to produce pleasant excitement, torpor, depression. Large doses cause mania with hallucinations and delusions. Its use is a serious evil, and is a great cause of insanity in Bengal.

In the *Journal of Mental Science*, January, 1894, Surgeon-Captain J. H. T. Walsh, Superintendent of Calcutta Lunatic Asylum, relates two experiments with hasheesh on men. One on swallowing large doses became a little excited, and felt very happy, laughing ; the other became drowsy and giddy.

He quotes Indian Asylum Reports from 1862 to 1892, show-

ing that Indian hemp is credited with causing a large amount of the insanity occurring in India.

Dr. Hutchinson, of Patna Lunatic Asylum, India, 1868, thus describes hasheesh cases:—Conjunctivæ congested, pupils generally contracted, peculiar leery look, gait unsteady, great volubility, much laughter or singing. There may be a tendency to rush onwards blindly. No unpleasant after effects. He also describes the maudlin intoxication of ganja smokers, and notes their dark purple lips.

Dr. Wise, of Dacca Asylum, 1872, mentions religious mendicants called Rumawat, who smoke much ganja without ill effect. Between 1882 and 1892 Indian hemp caused 25 to 35 *per cent.* of the insanity in Bengal asylums.

Dr. Walsh thinks that hemp drugs produce only a temporary insanity. If insanity lasts more than ten months he thinks hasheesh was only a contributing cause.

In the report for the year 1899 of the Bengal asylums, it is stated that 45 out of 220 cases admitted were due to the use of *Cannabis Indica*.

In Egypt, statistics are available since the year 1895. During the six years 1896—1901, out of 2564 male cases of insanity admitted to the Egyptian Asylum at Cairo, 689 were attributed to the abuse of hasheesh, *i. e.*, nearly 27 *per cent.* Very few female patients used hasheesh, and it is noteworthy that insanity is more than three times as common among the hasheesh-using sex as among women, who, comparatively, seldom use the drug.

I think this difference in the insanity rate between the sexes is significant, and goes a long way to prove the importance of hasheesh as a cause of insanity among Egyptian men. Let it also be remembered that in England insanity is more frequent among women than among men (35 to 31).

My experience does not confirm the Indian Commission's belief that *Cannabis Indica* only *sometimes* causes insanity. In Egypt it *frequently* causes insanity. As to whether excessive use of hemp drugs is commoner here than in India I can give no opinion, but many thousands use it daily here. Probably only excessive users, or persons peculiarly susceptible to its toxic effects, become so insane as to need asylum treatment. Whether the moderate use of hasheesh has ill effects I have no means of judging, and this paper is now read to elicit the

opinions of my colleagues in Egypt, whose daily practice must give them opportunities of studying the effects of the ordinary use of hasheesh. I should be grateful for information on this question.

I have never met with dysentery or bronchitis as the direct result of the use of hasheesh.

Again, in my experience, I find that persons insane from hasheesh have a proneness to commit crimes, especially those of violence, and I have a strong suspicion that much disorderly conduct results from hasheesh smoking, just as alcohol among Europeans leads to such misconduct.

To sum up, the use of *Cannabis Indica* in Egypt seems to have graver mental and social results than in India, and is responsible for a large amount of insanity and crime in this country.

(¹) Extracts from this paper were read at the Egyptian Medical Congress at Cairo in December, 1902.

Clinical Notes and Cases.

A Case of Cysticercus Cellulosæ Causing Insanity.(¹)
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TENIA SOLIUM is common enough in this country in man, but its cystic stage is, I think, met with very infrequently; that is the reason I bring this short paper before the meeting in order to elucidate whether cases of the following kind are met with in any frequency in South Africa.

The so-called cysticercus is, of course, the cystic stage of the *Tænia solium*, its larval condition, which, before developing into the adult sexual tapeworm, must be taken into the alimentary canal of an animal. How does the cyst or bladderworm get to those inner parts of the body in which it is found, so to speak, imprisoned? It is believed that the outer shell of the ovum is digested by the gastric fluid, and that the emergent

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