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Pentazocine Abuse - Medical and Psychiatric Complications

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Abstract

Twenty three cases of pentazocine abuse are studied. A steady increase in the number of abusers is found. In contrast to their western counterparts, all of them used only injectable form, only 13% preferred combining it with an antihistaminic, only 26% were polydrug abusers, depression, suicidal attempts and decrease in libido are more common in them, only one developed hallucinations and pentazocine did not precipitate withdrawal symptoms in narcotic abusers. A racial difference in the effect of the drug is suggested. A more discriminate use of pentazocine is advocated.

Key words -

Pentazocine,
Abuse,
Complications

Pentazocine was introduced in the west in 1967 as an effective, synthetic, non-addicting analgesic. Chambers et al. in 1971 reported that this drug has definite abuse and addiction potential and that most of the abuse occurs in a 'medicine - medical' context. The current style of abuse in the west of a combination of pentazocine and tripelennamine (Pyribenzamine) is called "T's and Blues" [2]. Lahmyer and Steingold [3] reported a 7 fold increase in the incidence of pentazocine abuse from 1973 to 1979 from a drug detoxification unit in Chicago. Of late there have been a number of reports on the medical any psychiatric complications of pentazocine use [4], [5], [6], [7], [8]. Parenteral pentazocine was introduced in India in 1975 and oral form in 1984, and is available under the trade names Fortwin, Pentawin and Sosegon as 30 mg per ml ampoules and 25 mg. tablets. Channabasavanna et al [9] reported one case of pure pentazocine dependence and two with concomitant abuse of promethazine hydrochloride. The steadily increasing number of pentazocine abusers especially those with medical and psychiatric complications provoked us to conduct this study.

Material and Methods

The present sample comprises of 23 patients who had sought treatment in the National Institute of Mental Health & Neuro Sciences, Bangalore for pentazocine abuse / dependence from 1978 to 1984. Information regarding the sociodemographic features, family history and past history of mental illness

and the details of drug use were collected and analysed. The diagnosis were offered as per DSM III [10].

Results

Among the 23 patients all expect one were males. The age ranged from 22 to 41 years (mean 30.2 years). Fifteen of them were medical practitioners, two each were businessmen, students and unemployed, one was medical representative and the only female was a staff nurse. Thirteen patients had family history of mental illness among the first degree relatives, the commonest being alcohol/drug abuse. Seven had been dependent on other narcotics before starting on pentazocine.

Details of Drug Use

(a)Current Drug Use :

Among the 23 patients 8 were pentazocine abusers and 15 were dependents [10]. The former group included 4 pure pentazocine abusers, 3 polydrug abusers and one who was dependent on pethidine. Among the pentazocine dependents, 10 were pure pentazocine dependents, 3 concomitantly abused promethazine hydrochloride, one abused multiple other drugs and another one was dependent on multiple drugs.

(b)Reasons :

Reasons for the initial use is shown in table-1. Curiosity was the commonest reason (26% of cases). It is worth mentioning that in the 4 iatrogenic cases pentazocine was the only analgesic prescribed and they continued to use it even though it was prescribed only for a period of 7 to 10 days. Among the 4 cases of self-treatment 3 were for insomnia and one was for toothache. In the patients who changed over from other narcotics to pentazocine the main reasons were the easy availability and the low cost.

Table I - Reasons for Initial use of Pentazocine by Occupation

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(c)Dosage, duration and route of administration :

The amount of drug consumed ranged from 60 to 1200 mg. per day (mean 300 mg. per day). The mean duration of pentazocine use was 3.2 years, the range being six months to six years. Fifteen patients were taking pentazocine only intravenously and four only intramuscularly throughout. The other 4 started with intramuscular but later switched over to intravenous route. None used tablets. Regarding the sterile precautions, only two were meticulous, while 12 were irregular and the remaining 9 patients were seldom bothered.

(d)Source of pentazocine and milieu of use :

Eight patients secured the drug from their own clinics, while 3 were stealing it from the hospitals where they worked. The remaining 12 patients used either genuine or forged prescriptions. Even though 18 of them started taking the drug with friends later all expect two took it only in solitude.

While only one patient took the drug only at home and 8 only in their place of work, the other 14 patients took it wherever they got a chance.

(e)Perceived effects of the drug :

A wide range of effects were described by the patients viz, a pleasant cold sensation in the body especially on the scrotum, a feeling of total relaxation, clearness of the mind and numbness of the body and relief from worries, tension, pain and withdrawal symptoms. Euphoria followed by apprehension and sadness, and drowsiness at higher doses was universal. Two patients used alcohol and diazepam to counter the apprehension, while another one used Dextro amphetamine to counter the drowsiness.

(f)Withdrawal symptoms :

In the hospital all expect 3 patients developed withdrawal symptoms. The commonest symptoms were insomnia, muscle cramps, lethargy, sadness, tremulousness, irritability, tachycardia and gooseflesh in decreasing order of frequency. On an average the symptoms persisted for 5 days (range 3 to 7 days). Eighteen patients exhibited craving and drug seeking behaviour which persisted up to a period of one month.

(g)Complications :

(see table II). All except 3 patients had medical or psychiatric complications of pentazocine abuse. Minor problems like insomnia and tremulousness are not included in the list. Many had more than one complication. In most cases they were the immediate reasons for seeking help.

Table II - Complications of Pentazocine Use

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Treatment and follow up :

Pentazocine was withdrawn either gradually over a period of 4-7 days or immediately under cover of tapering doses of diazepam or clonidine for 7-10 days. After detoxification Relaxation therapy and Faradic Aversion therapy were given. Other appropriate psychosocial modes of treatments were adopted as and when indicated. Despite requests only 8 patients turned up for follow up, and all except 3 among them had relapsed within one year.

The prevalence rates :

The number of drug abusers, narcotic abusers and pentazocine abusers who sought treatment in NIMHANS from 1977 to 1984 are shown in table III. There is a significant increase in the prevalence of pentazocine abuse both in relation to the number of narcotic abusers, and the total number of drug abusers. But there is no significant increase in narcotic drug abuse.

Table III - The Prevalence of Drug Abuse from 1977 to 1984

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Using the test of significance of the linear proportions, 3 in relation to 1 and also 2 are significant ($P < .05$) while 2 in relation to 1 is N. S.

Discussion

These patients present certain interesting, contrasting findings compared to their counterparts in the west.

Whereas most of the patients in the west used powered tablets [3] intravenously all our patients were using only injectable form. This is because the oral form was introduced in India only in 1984 and is sparingly used as compared to the parenteral form.

While most of the patients in the west prefer to combining pentazocine with tripelennamine (Pyribenzamine) an antihistaminic, antiemetic, only three of our patients found a similar combination (with promethazine hydrochloride) preferable to pentazocine alone. It is worth mentioning that 4 other patients who had been exposed to this combination found nothing special in it and opted for pentazocine alone.

It is well documented in the west that pentazocine can precipitate withdrawal symptoms [11] in patients who had been receiving opioids on a regular basis. It is interesting to note that none of our patients had experienced any withdrawal symptoms and that they could comfortably use them interchangingly depending on the availability.

The incidence of complications in our sample also differ markedly from those reported from the west [3] as shown in table - II. Excluding the two cases of psychosis only one of our patients had experienced hallucinations. This is in sharp contrast with the western reports of occurrence of hallucinations in upto 37.5% cases in normal doses [8]. Depression, suicidal attempts and decrease in libido are highly significantly commoner in this sample.

Lahmeyer and Steingold [3] reported that most pentazocine users are polydrug users. But in our sample only six patients (26%) used other drugs excluding those three who used promethazine concomitantly.

Thus compared to the western patients, the Indian patients showed a lesser preference for combining pentazocine with an antihistaminic. They, reportedly had no withdrawal symptoms when morphine was substituted by pentazocine. They had a significantly different pattern of complications and a lesser rate of polydrug abuse. The differential effects of alcohol e.g. :the flushing response [12], [13] blood acetaldehyde levels [14] and the resultant regulation of alcohol consumption and abuse [15], and the rate of eliminations of alcohol from the blood [16] across ethnic groups have been reported. Keeping this in mind the authors propose that the differential findings in the Indian patients compared to their western counterparts indicate ethnic differences in the effects of pentazocine. This hypothesis needs further validation.

Based on the earlier claims of being non-addictive and because of the analgesic efficacy, the low cost and the easy availability, pentazocine is widely and rather indiscriminately used in clinical practice. It is the latest addition to the list of drugs abused in India especially in the 'medicine-medical' context. It is evident that the abuse is not confined to these limits and that the number of abusers is increasing year by year.

The purpose of this paper is to caution the medical practitioners towards the potential complications and to highlight the need for a more discriminate use of pentazocine. It is advisable that the hospital authorities and the drug control agencies take special precautions in this regard, for example restricting the prescriptions of pentazocine and including this drug under schedule X like the other addicting drugs rather than under the current schedule H.

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