

Crack Cocaine - a two-year follow-up of treated patients

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Abstract

Aims: To investigate the 2-year outcome of the first 131 crack cocaine users who had been admitted for a period of inpatient treatment. *Design:* Follow-up study of consecutive patients admitted between 1992 and 1994. *Setting:* Inpatient detoxification unit of a public general hospital in São Paulo City, Brazil. *Participants:* 131 consecutive crack cocaine users. *Measures:* Reported crack use during last 12 months, incarceration and death. *Findings:* After 2 years, 50 patients reported crack use in the last 12 months, 29 said that they had not used it during this period, 9 were in prison, 13 had died, 2 had disappeared and no information was available on 28. *Conclusions:* Crack cocaine use seems to be associated with a high mortality rate and criminal involvement but about one third of patients give up using the drug within 2 years of inpatient treatment.

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Introduction

Important follow-up studies have been undertaken of alcohol¹ and heroin² users which show that in the long-term the majority of patients achieve stable abstinence but there is a considerable mortality rate, in particular among those who continue to use. Very little is known about the medium or long-term outcome of patients who use cocaine whether it be snorted, injected or smoked in the form of crack. Murphy et al.³ followed-up a network of 27 cocaine snorters for 11 years, but this group had been deliberately chosen to represent "social" cocaine users rather than the more dependent patients that tend to present to hospital treatment services. Carroll et al⁴ undertook a one year follow-up of 298 cocaine abusers who had undergone outpatient or inpatient treatment, but only presented data on the 94 patients who were interviewed one year later. Furthermore, they did not report which routes of administration their patients were using.

A Medline search from 1980 to April 1997 revealed only one study in which a group consisting primarily of crack users had been followed up for one year after treatment⁵. However, this study was a clinical trial, using a randomized design, aimed at assessing the efficacy of various psychosocial interventions among 184 cocaine users. Faced with the scarcity of follow-up studies of cocaine and in particular crack users, this study was designed with the objective of looking at broad outcome measures for crack users who had been admitted for detoxification to a new inpatient unit in São Paulo.

Methods

Setting

There is a lack of dedicated, public, inpatient treatment services for drug users in Brazil, consequently patients tend to be admitted briefly for detoxification after which they return home. Some services offer outpatient follow-up or refer patients on to private or charitable therapeutic communities for long-term rehabilitation. Well-off patients, who usually have health insurance plans, tend to use private treatment facilities and, therefore, would be under represented in public health services.

This study was undertaken at a public general hospital situated in the north of São Paulo City. The hospital has no defined catchment area and accepts patients from all over the city. The Hospital Geral de Taipas, which was opened in 1982, has a 16-bedded inpatient unit and offers a 15-day residential detoxification service for patients with drug or alcohol problems.

Subjects

The case notes of the first 131 crack users who had been admitted to the unit for detoxification between late 1992 and the end of 1994 were identified. All patients were diagnosed as having cocaine dependence using ICD-9 criteria (code 304.2). Patients who had used only cocaine powder, either snorted or intravenously, were not included in the study.

Procedure

Because the unit operates a waiting list, prospective patients have to give a contact telephone number prior to admission. Between December 1995 and March 1996, this

number was used to contact the patient and/or his or her family. Patients or families who could not be contacted by telephone were sent a telegram asking them to phone the unit (n=44). A search was made at the São Paulo Municipal Records Office for the death certificates of all patients for whom no current information was available.

Interviews

Interviews were conducted by telephone by one of three researchers (two doctors and a psychologist), who had been involved in the patients' original treatment, using a structured questionnaire that had been designed for the study and consisted of demographic data and a series of closed questions about specific outcomes, including death, incarceration and cocaine use. Outcome categories for cocaine use were defined dichotomously as "off" (no reported use during the last 12 months) and "using" (reported use during the last 12 months).

Results

Information was obtained on 103 patients (79%) (22 directly from the patient, 80 from a family member only and 1 from the death certificate only). The mean time to follow-up was 23 months (range: 13 - 35 months). Patient characteristics and the main outcome findings are shown in Table 1. Thirteen patients were reported to have died, the majority of deaths were violent, with the relatives stating that the patient had been shot, either by drug dealers or the police. The mean length of time from admission to death was 14 months (range: 6-34).

Table 1

Discussion

This follow-up study gives some of the first indications of what happens to crack users within the first two years following treatment. One of the most striking findings is the large number of deaths, 13% of this group of young adults had died within two years of follow-up. The true mortality rate may be even higher as no information could be obtained on 28 patients and a further 2 were said by their families to have disappeared without trace. Also we only checked death certificates of patients dying in Greater São Paulo (it being possible that some patients had died in adjacent cities or States). The mortality rate is much higher than those reported in other follow-up studies of drug users and even higher than the rates reported in studies using considerably longer follow-up intervals. For example, Vaillant⁶ reported an annual mortality rate of 1% for New York opiate addicts whilst Ghodse *et al*⁷ found a 5 year mortality rate of 7.5% for notified, UK, opiate addicts.⁷ In Murphy *et al*'s³ 11 year follow-up of cocaine snorters, a final mortality rate of 8% was reported. Carroll *et al*⁴ do not report the one-year mortality rate of their 298 cocaine abusers.

According to family reports, five of the patients' deaths were AIDS-related. Previous studies have reported an association between crack use and HIV infection, which seems to be related to a higher prevalence of sex-for-money/drugs transactions among crack users^{8,9}. We have no information as to whether this was the means by which our patients became infected with HIV or whether the sample contained some ex-cocaine injectors.

Another disturbing finding was that nine patients were in prison at the time of follow-up, which taken together with the number of violent deaths gives further evidence of the high level of criminal involvement among crack users.

Despite a preoccupation that crack may cause a greater degree of dependence than

even intravenous administration of cocaine⁸, our results suggest that up to 30% of patients become abstinent within two years of treatment - the same percentage reported by Carroll *et al* after one year. Our figure is based on either patient or family report with no laboratory confirmation and could, therefore, be an overestimate. Clearly more rigorous investigation of this question is necessary, ideally using urine testing.

Due to the lack of published data on the medium or long-term outcome of crack cocaine use, it is difficult to know how typical our findings are. For example, the high mortality rate that we observed may in part be related to the high homicide rate seen in young men in São Paulo - highlighting the urgent need for similar follow-up studies to be undertaken in different cultures and in different settings. The study by Hoffman *et al*⁵ showed that patients with poorer outcomes (more post-treatment drug use and more time spent incarcerated) had attended fewer treatment sessions, suggesting that more intensive and pro-active follow-up of patients may produce additional gains.

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Table 1. Characteristics and two-year outcome of 131 treated crack users.

Characteristic	Number
Age - median (range)	23 yrs (13 - 45)
Male	121
Female	10
Civil status:	
single	99
married	25
div/sep/wid	7
"Using"	50
"Off"	29
In prison	9
Disappeared	2
Dead:	13
HIV/AIDS	5
Violent	7
Overdose	1
Not contacted	28