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Sexual Dysfunction in Male Alcohol Addicts: Prevalence and Treatment

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Study 1 examined the prevalence of sexual dysfunction in 101 male alcohol addicts. Inpatients at a clinic for alcoholism were investigated by questionnaire about their sexual functioning and by hormonal data. Three-quarters had erectile dysfunction, loss of libido, and premature or delayed ejaculation. A follow-up study was done 9 months after the end of treatment. No significant differences in the prevalence of sexual dysfunction were found between the two points of measurement. All patients had normal levels of plasma testosterone at the beginning and end of inpatient treatment. These findings suggest psychological causes for the sexual problems and a need for therapeutic intervention. Study 2 reports on a group of addicts with sexual dysfunction who were treated by a behavioral treatment format. Follow-up results indicate that the treatment group showed significantly less sexual dysfunction than an untreated control group.

KEY WORDS: sexual dysfunction; treatment; sex therapy; alcoholics.

In experimental studies, negative affects of alcohol consumption on sexual responsiveness have been found (Bridell and Wilson, 1976; Farkas and Rosen, 1976; Keane and Lisman, 1980). Increasing doses of alcohol show greater impact on sexual arousal (Wilson and Lawson, 1976). These studies used social drinkers as subjects. Consistent results were found for alcohol dependents (Rubin and Henson, 1976; Wilson, Lawson, and Abrams, 1978). Although alcohol abuse is known as a frequent cause for sexual dysfunction (Kaplan, 1974; Masters and Johnson, 1970), prevalence studies on sexual dysfunction in alcohol dependents are few, contradictory, and limited by methodological problems.

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Lemere and Smith (1973) studied alcohol dependents. Eight percent suffered from erectile dysfunction but had no loss of libido. Stankvshev, Protic, and Shishkov (1974) found sexual dysfunction in 50% of 373 alcohol dependents. Whalley (1978) compared the sexual responsiveness of 50 alcohol dependents at Scottish inpatient facilities with 50 social drinkers. The alcohol dependents had significantly more sexual dysfunction (54%) than the control group (28%). Jenson (1979) studied 100 alcohol dependents during ambulatory treatment. Nearly two-thirds had sexual problems, mainly erectile dysfunction and loss of libido. The largest number of alcohol dependents with sexual dysfunctions is reported by Vijayasenan (1981). Over two-thirds of 97 inpatients in a facility for alcohol dependents suffered for more than 1 year from a sexual dysfunction.

A review of the literature reveals a variety of exploratory theoretical concepts concerning the relationship between alcohol abuse and sexual dysfunction. Biological concepts stress neurological damages or endocrinological abnormalities (e.g., Burger and Rose, 1979; Spark, White, and Connolly, 1980; Van Thiel and Lester, 1979; Vijayasenan, 1981), whereas psychological concepts detail the importance of partnership conflicts and other psychological mechanisms which generally maintain sexual dysfunction (e.g., Jensen, 1984; Bühringer *et al.*, 1981; Arentewicz and Schmidt, 1983). There are only a few reports concerning therapeutic intervention with sexually dysfunctional alcohol dependents (Gallant, 1968; Paredes, 1973; Gad-Luther and Dickman, 1979). For example, it is unknown if sexual problems disappear by themselves after a successful treatment of the alcohol dependence. In the two studies presented in this paper, the following questions have been asked; (i) What is the prevalence and the type of sexual dysfunction of alcohol dependents? (ii) Do the sexual dysfunctions continue after successful termination of the treatment of the alcohol dependence? (iii) Given the conditions of an inpatient treatment facility, is it possible to implement sex therapy? If so, what are the treatment results?

STUDY 1: PREVALENCE

Method

One-hundred-sixteen male patients with the DSM III diagnosis of alcohol addiction at an inpatient clinic for alcohol dependents were studied. Table I shows some characteristics of the sample: only 13% are under age 30, 58% are married, 14% are divorced, 72% are employed in the working

Table I. Characteristics of the Sample of Alcohol Dependents (N = 116)

Variable	n	%
Age (years)		
20–29	15	13[a]
30–39	52	45
40–49	48	42
Profession		
Employee	19	16
Worker	84	72
Others	13	12
Civil status		
Single	31	27
Married	68	58
Divorced	16	14
Widowed	1	1
Length of alcohol dependence (years)		
1–5	25	22
5–10	45	39
> 10	45	39

[a]No response: 1.

class. The sample consists of heavy alcohol dependents: 40% have been dependent for more than 10 years, and nearly 80% for more than 5 years.

Procedure

Six weeks after entering the treatment facility, each patient completed a questionnaire with 60 standardized questions about the following topics: partnership, sexual behavior, drinking behavior, and sociodemographic data. Sexual dysfunctions were assessed by a set of questions with rating scales describing in detail the erectile and ejaculatory behavior, the strength of libido, sexual satisfaction, etc. The full questionnaire was validated by interviews showing high correlations between the ratings of the patients and the judgment of the interveiwers (Fahrner, 1985). Similar findings are shown by Sobell and Sobell (1974; 1975; 1978). A follow-up study was one 1 year after the end of treatment by mailed questionnaires. Studies by John (1979) and Koester (1981) indicate high reliability with such mailed questionnaires.

In order to test the hypothesis that sexual problems were caused by hormonal dysfunctions, serum concentrations of testosterone were measured. Blood samples were drawn at the 10th and at the last day of

Table II. Number of Patients with Sexual Dysfunctions (Loss of Libido, Erectile Dysfunction, Premature or Delayed Ejaculation, Dyspareunia)

No dysfunction	1 dysfunction	2 dysfunctions	2 dysfunctions	Total
29	36	25	26	116
25	31	22	22	100

treatment between 8 AM and 9 PM. The 10th day was chosen for the assessment to insure that all patients were equally alcohol withdrawn.

Results

Hormonal Data

Serum concentrations of testosterone were analyzed by the method of Pirke (1973). Only one patient had a significantly low level. He was excluded from the study because of known hypogonadism independent of his alcohol abuse. All other subjects had serum concentrations of testosterone within the normal range.[2] The mean level of the first assessment was 695 ng/100 ml, with a standard deviation of 206, and of the second assessment was 686 ng/100 ml, with a standard deviation of 186. These data show that alcohol consumption did not produce irreversible cellular damage reducing testosterone level.

Sexual Dysfunctions

Only 25% of the patients had no sexual dysfunction in the 6 months preceding alcohol treatment. The remaining 75% showed erectile dysfunction, loss of libido, and premature or delayed ejaculation. Forty-four percent indicated two or more problem areas (Table II). Two percent had a sexual dysfunction for more than 5 years.

Table III presents the types of sexual dysfunction. Loss of libido (31%) and erectile dysfunction (22%) are the most frequent. Remarkably high is the number of patients with premature ejaculation (18%), as this is not a typical alcohol-type dysfunction. The occurrence of retarded ejaculation and dyspareunia is low.

The question whether the sexual dysfunction was dependent on the amount of alcohol consumed was answered affirmatively by 45% of the pa-

[2]Normal range of the laboratory of the Max-Planck-Institut, Munchen: 315–965 ng/100 ml.

Table III. Types of Sexual Dysfunctions (Multiple Responses Possible)

	Never/seldom (< 25% of situations)		frequent (25–50% of situations)		Very frequent always (> 50 to 100%)		Total (N = 116)	
Dysfunction	n	%	n	%	n	%	n	%
Loss of libido	59	53	18	16	34	31	111	100
Erectile dysfunction	65	57	23	20	26	22	114	100
Premature ejaculation	63	57	28	25	20	18	11	100
Delayed ejaculation	86	78	16	15	8	8	110	100
Dyspareunia	105	95	6	5	0	0	111	100

[a]No response accounts for difference from 116.

tients. Their sexual dysfunctions occurred during high consumption levels of alcohol. Only 17% of patients reported dysfunction in periods of no or a low level of consumption. For the last group and the group who reported that the sexual dysfunction occurred independently of the amount of alcohol consumed (38%), it is possible that their problems became functionally independent of alcohol dependence.

During the follow-up study 1 year after the first investigation (9 months after the end of the 4 months inpatient treatment) 80 patients (69%) were contacted. In relevant characteristics (e.g., age, civil status, frequency and kind of sexual dysfunctions, length of alcohol dependence) the follow-up sample shows no significant differences from the total sample (Fahrner, 1985).

No significant differences in the prevalence of sexual dysfunctions were found between the two points of measurement (Table IV). On follow-up, 66% of the patients still had sexual dysfunctions; 48% of these indicated two or more problem areas. Of the several types of sexual dysfunctions, erectile dysfunctions were slightly decreased and premature ejacula-

Table IV. Number of Patients with Sexual Dysfunctions in the Follow-Up groups (N = 80, Assessment 1 and Follow-Up)

	No sexual dysfunction		Sexual dysfunction		Significance (McNemar test, 2-tailed)
	n	%	n	%	
Assessment 1	22	28	58	72	$\chi = 0.762$ df = 1
Follow-up	27	34	53	66	$p = 0.382$ ns

Table V. Sexual Dysfunction in Relapsers and Abstinent Patients (N = 80; Follow-UP)

	Relapsers (n = 22)		Abstinent patients (n = 58)		Total (n = 80)		Significance (2-tailed)
	n	%	n	%	n	%	
No sexual dysfunction	7	(32%)	20	(34%)	27	(34%)	χ = 0.00 df = 1
Sexual dysfunction	15	(68%)	38	(66%)	53	(66%)	p = 0.968 ns

tion increased. These changes are not significant. The results reveal that sexual dysfunctions continue after the "usual" treatment program for alcohol addiction.

The hypothesis that patients who relapse after discharge from the clinic have more sexual dysfunctions than patients who abstain from alcohol was tested. Patients who did not consume alcohol during the entire period were counted as "abstinent." Additionally, all patients who abstained from alcohol for at least 2 months after relapsing were classified as abstinent. Results indicate that 68% of the patients who relapsed and 66% of the abstinent patients report sexual dysfunctions. This indicates no significant difference (Table V). There were also no significant differences between the different types of sexual dysfunction (Fahrner, 1985).

STUDY 2: TREATMENT

Method

Subjects

For the experimental group, all patients with sexual dysfunctions according to the DSM III (n = 16) were selected by a diagnostic interview from the group of patients in the 2nd month of inpatient treatment (n = 37). The experimental group of 16 alcohol-dependent patients was treated by a behavioral treatment program during their clinic stay. Three months later a random control group of eleven patients was recruited from the same clinic according to the criteria described for the experimental group. These patients with sexual dysfunctions received 1 h of nonspecific counseling. There are no significant differences concerning the demographic variables between the groups (age U = 57.5, p = 0.14; education F = 83.4, p = 0.16; civil status F = 78.1, p = 0.21; length of partnership U = 28.0, p =

0.79). The demographic data of the two groups correspond to those of the sample of study 1 (see Table I). The average duration of sexual dysfunction is 6.7 years for the treatment group and 6.6 years for the control group. The dysfunctions reported both groups are not significantly different: loss of libido ($F = 73.9$, $p = 0.26$), erectile dysfunction ($F = 83.7$, $p = 0.17$), premature ejaculation ($F = 61.8$, $p = 0.38$). Two patients in the treatment group never had sexual contacts.

Procedure

The 16 patients in the experimental group were treated in two groups with two therapists for each group. The sex therapy program consisted of 10 sessions, 90 min each. This treatment was administered in addition to the usual inpatient program for alcohol dependence which is based on single and group behavior therapy (Schneider, 1982). The goals of the treatment are sex instruction, change of negative attitudes toward sex, increase of skills in sociosexual behavior, and improvement of sexual dysfunction. The program took into consideration the fact that female partners of the treated patients cannot be involved in treatment because of the distance between the clinic and home. Role-playing was used to practice new social behavior, and masturbation training was used to rebuild effective and satisfying sexual functioning (patterned after Zilbergeld, 1978, and Barbach and Flaherty, 1980). Instructions by the therapists, groups discussions, and homework assignments were also considered important elements of the therapy. The total program is described elsewhere (Fahrner, 1985).

Treatment outcome was evaluated by questionnaires administered at the beginning and end of therapy. After a follow-up period of 5 months (3 months after the patients' discharge from the clinic) a third assessment was made by a mailed questionnaires. The control group was assessed at the same time intervals. Two of the questionnaires had been developed in order to measure sexual knowledge (SEW) and sexual attitudes (SEE; Fahrner, 1985). The sociosexual behavior was evaluated by the FUSS (Fragebogen zur soziosexullen Selbstsicherheit; Fahrner, 1983) and sexual behavior by the questionnaire administered in Study 1.

Results

At the first assessment the treatment group and the control group showed inadequate sexual knowledge, negative sexual attitudes, and deficiencies in sociosexual assertiveness. The questionnaires measuring these

Table VI. Treatment Group: Mean Questionnaire Scores

		Pretreatment (n = 16)	Posttreatment (n = 15)	Significance (Wilcoxon test)
SEW: Sexual	M	27, 1	23, 5	T = 1, 0
knowledge	SD	3, 1	3, 3	p = 0.001 s.s.
SEE: Sexual	M	31, 5	27, 4	T = 26, 5
attitudes	SD	5, 9	4, 3	p = 0.03 s.
FUSS 1: Social	M	22, 2	16, 2	T = 16, 0
assertiveness	SD	16, 4	13, 7	p = 0.07
FUSS 2: Sociosexual	M	16, 2	12, 0	T = 24, 5
assertiveness	SD	11, 1	7, 6	p = 0.04 s.

areas showed no significant differences between the two groups (SEW: U = 67.5, p = 0.5; SEE: U = 72.0, p = 0.6; FUSS 1: U = 64.5, p = 0.6; FUSS 2: U = 86.0, p = 0.9). The data from the treatment group showed significant improvement from pretreatment to posttreatment concerning sexual knowledge and sexual attitudes. Significant improvement in sociosexual behavior was found only on the scale that measured social assertiveness in sexual situations (Table VI). The patients in the control group showed no significant changes in questionnaire scores. (SEW: T = 16.0, p = 0.49; SEE: T = 18.0, p = 0.37; FUSS 1: T = 13.5, p = 1.6; FUSS 2: T = 21.5, p = 1.0).

Table VII shows the number of patients with sexual dysfunction in the treatment group before sex treatment and at follow-up. At the beginning of the treatment 88% (14) indicated sexual dysfunction and 12% (2) never had sexual contacts. Sexual dysfunctions decreased significantly: Only 33% (5) of the patients had dysfunctions at follow-up. In the control group there was no significant change in the number of sexual dysfunctions: 75% (6) continued to suffer from sexual dysfunction (Table VIII). Differences between the two groups in the number of relapses were not found. No one in the control group or in the experimental group relapsed in the 3 months after clinic discharge.

Table VII. Treatment Group: Number of Patients with Sexual Dysfunctions at Pretreatment and Follow-Up

	Pretreatment (n = 16)		Follow-up (n = 15)		Significance
Sexual dysfunction	n	%	n	%	(McNemar test)
Never of seldom	2[a]	12	10	67	p = 0.007, s.
Frequent or always	14	88	5	33	

[a] These patients never had sexual contacts.

Table VIII. Control Group: Number of Patients with Sexual Dysfunctions at Assessment 1 and Follow-Up

	Assessment 1 (n = 11)		Follow-up (n = 8)		Significance
Sexual dysfunction	n	%	n	%	(McNemar test)
Never or seldom	0	0	2	25	p = 0.5, ns
Frequent or always	11	100	6	75	

DISCUSSION

Results of the first study support the hypothesis that sexual dysfunctions are very frequent in male alcohol dependents. Three-quarters of patients in an inpatient treatment facility for alcoholism had sexual dysfunctions in the preceding 6 months; 44% reported two or more sexual problems, mostly erectile dysfunction and loss of libido.

Sexual dysfunctions continued 9 months after treatment of the alcohol dependence has been completed. On follow-up, 66% still had a severe sexual dysfunction. Comparable data from the literature are unknown as none of the previously mentioned publications have studied this aspect. Of interest is that there is no significant difference in the number of sexual dysfunctions between abstinent and relapsed patients. One explanation might be that organic damage caused the continuation of the sexual dysfunction, but the data on plasma testosterone do not support this hypothesis. A second explanation for the maintenance of the sexual dysfunction would stress psychogenic factors, especially the fear of performance. If one follows the latter argument a psychological-based treatment would reduce the sexual dysfunctions. This was carried out in Study 2. The patients in the experimental group treated by a behavioral short-term sex therapy program during inpatient treatment of their alcohol dependence had significantly less sexual dysfunction than the untreated control group on follow-up. Patients in the control group showed a similar pattern of sexual dysfunction as the patients of Study 1 on follow-up.

Because of the small number in the treatment group the results of Study 2 are preliminary. The major purpose of this pilot study was (i) to find out whether or not sex therapy can be implemented in an inpatient treatment facility for alcohol dependents, and (ii) to test if sexual dysfunctions can be treated by an additional psychological-based behavior therapy treatment program. Study 2 shows promising results which require — keeping in mind the high prevalence rate of sexual dysfunctions in alcohol dependents — further research with larger numbers of treatment groups.

Treatment facilities for alcohol dependents should implement counseling and treatment for sexual dysfunctions in their usual treatment program.

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