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REVIEW

PSYCHOTROPIC DRUGS IN THE TREATMENT OF PARAPHILIC BEHAVIOUR

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A b s t r a c t

A review of the literature dealing with the use of lithium and high-efficacy depot neuroleptics in the psychopharmacotherapy of paraphilic disorders is presented. The optimal pharmacological treatment should result in the control of deviant sexual activity while preserving socially acceptable/adequate sexual activity, and have a low effect on fertility and few adverse side effects. Assessed by these criteria, the literature data showed that deviant activity was best controlled by antiandrogens and adequate sexual activity was least affected by lithium and depot neuroleptics. These drugs also had the lowest effect on fertility and lithium alone had the fewest adverse side effects.

K e y w o r d s

Paraphilic behaviour, Lithium, Depot neuroleptics

INTRODUCTION

Therapeutic programmes for individuals with paraphilic behaviour can generally be characterised as those combining psychotherapeutic and pharmacotherapeutic methods. Although the essential part of the treatment is psychotherapy, we generally start with pharmacotherapy to make the patient more open and to prepare the ground for establishing a better patient-therapist relationship.

The antiandrogenic therapy, which is used most frequently, is beset by a number of side effects, frequent disorders of sexual functioning as well as radically lower fertility. For these reasons, other drugs for control of paraphilic activities that have smaller or other ranges of undesirable effects have been sought; these requirements have been met by some psychotropics, especially thymoprophylactics and neuroleptics. The criterion of treatment efficacy is the lowest possible rate of deviant behaviour relapses combined with a minimum of undesirable side effects.

Table 1

Review of the studies published on deviant sexual behaviour therapy

Author, year	No. of patients	Duration of therapy	Design of the study	Drug, dose	No. of patients with side effects	No. of relapses
Bartholomew 1968	26	6 months	Open	FLU 25 mg/2 weeks	23	0
Bártová et al 1978	12	4 months	Open	FLU 12,5 mg/2 weeks	12	0
Bártová et al 1980	28	6 months	Open	OXY 12,5 mg/2 weeks	18	2
Burešová et al 1986	51	15 months	Open	OXY 16 mg/3 weeks	33	11
Bártová et al 1986	34	6 months	Intra-individual comparison	Li plasma concentration up to 0.40 mmol/l	18	3
				CYP 100 mg/day		1
				OXY 12.5 mg/28 days		2
Zbytovský et al 1989	20	10.7 months	Open	HAL 37.5–75.0 mg/4 weeks	4	
Burešová et al 1990	11	6 months	Double-blind intra-individual comparison	MDPA 286.4 mg/2 weeks	6	0
	10			OXY 10.4 mg/2 weeks	8	1
	21			DES 14.2 mg/2 weeks	17	1

Li, lithium; DES, diethylstilbestrole; CYP, cyproteronacetate; OXY, oxyprothepine decanoate; HAL, haloperidol decanoate; FLU, flufenazine decanoate; MDPA, medroxyprogesteronacetate

Table 2

Lithium therapy. An interindividual comparison with other psychotropic drugs

Author, year	No. of patients	Duration of therapy (average)	Drug, dose	No. of relapses
Bártová et al. 1979	40	8 months	Li plasma concentration up to 0.6 mmol/l	3
		17 months	DES 2.5 mg/day	3
Bártová et al. 1986	34	6 months	Li plasma concentration up to 0.4 mmol/l	3
			CYP 100 mg/day	1
			OXY 12.5 mg/28 days	2

Li, lithium; DES, diethylstilbestrole; CYP, cyproteronacetate; OXY, oxyprothepine decanoate.

DEPOT NEUROLEPTICS

The use of depot neuroleptics has been described by *Bartholomew (1)* who administered 25 mg doses of flufenazine enanthate to 26 patients at 14-day intervals; however, 23 of them reported undesirable side effects. The studies by *Bártová et al. (2, 3 ,4)* and *Burešová et al. (5)* have confirmed therapeutic success of administration of depot neuroleptics (flufenazine decanoate, oxyprothepine decanoate) in treatment of deviant sexual behaviour (paedophilic patients, exhibitionists, sexually aggressive patients), but only a few patients tolerated the treatment without side effects. To treat paraphilic behaviour, *Zbytovský et al. (6*) used haloperidole decanoate, which he administered to 20 patients for an average of 10.7 months at a dose of 37.5 to 75.0 mg every 4 weeks. Four patients reported undesirable extrapyramidal effects. The studies are characterised in *Table 1*.

LITHIUM

The high incidence of adverse effects produced by depot neuroleptics has stimulated further search for other medications to control deviant sexual behaviour. The efficacy of lithium was first demonstrated in clinical studies at the

Department of Psychiatry in Brno in 1979 *(3)*. *Bártová et al.* treated 40 outpatients who suffered from a sexual deviation (exhibitionists, paedophilic and sexually aggressive patients) and were committed to compulsory therapy.

These patients had been treated with diethylstilbestrole, which was subsequently replaced with lithium in order to reduce undesirable side effects. Three relapses occurred after 8 months of lithium therapy. Their number was the same as when the patient group had been treated with diethylstilbestrole but there were fewer side effects with lithium (*Table 2*).

CONTROLLED STUDIES

These preliminary results led to a controlled study (involving simultaneous spermiological and phalloplethysmographic examination) based on an intraindividual comparison of the effects on paraphilic behaviour of cyproteronacetate, lithium and oxyprothepine decanoate in 34 patients (exhibitionists and paedophiles); variation in the relapse rate did not reach the level of statistical significance (*7*). Requirements for the optimal treatment of paraphilia were postulated as follows:

1. maximum control of deviant sexual activity
2. low effect on socially acceptable/adequate sexual activity
3. low effect on fertility
4. few side effects of treatment.

Considering these requirements, lithium was included in the compulsory treatment of sexually deviant patients and has been used till now. While two open intraindividual studies and several case reports have been published on the efficacy of lithium in treating sexually deviant behaviour in the Czech Republic (*3*,*7*,*8*), in the foreign literature of the 1970s and 1980s, the efficacy of lithium was reported only in the form of sporadic case studies (*9*). In 1990, Dwyer and Myers published a study on the long-term monitoring of paraphilic (mainly sexually aggressive) patients who were involved in a therapeutic programme consisting of psychotherapy and lithium and fluoxetine administration. They monitored 153 patients and registered a 3.7% relapse rate of deviant behaviour. This study, however, states neither the number of patients taking lithium nor the values of lithemia (*10*). At the time of this paper preparation (January 2002), the electronic database Medline did not include any other data on lithium studies in paraphilic patients; out of 13 papers referred to here, nine are by Czech authors.

The above-mentioned criteria were used in the double-blind study published by *Burešová et al.* in 1990 and served to evaluate and compare the effects of medroxyprogesteronacetate and oxyprothepine decanoate on 21 sexually deviant patients (exhibitionists, fetishists, paedophilic and sexually aggressive patients); the reference substance was diethylstilbestrole. The study included the monitoring

of spermatogenesis and that of phallic activity by phalloplethysmography. The relapse rate variation was not at the level of statistic significance (*11*). The results led to the following conclusions: deviant activity was best controlled by antiandrogens, socially adequate sexual activity and fertility were least affected by lithium and oxyprothepine decanoate and the fewest side effects were observed when lithium alone was administered.

Those studies were initiated by the fact that not enough modern antiandrogens were available and that diethylstilbestrole had unpleasant side effects; therefore, new options of treatment were sought *(12)*. However, with antiandrogens, lithium and neuroleptics can be reduced in use, as demonstrated by the present situation when these drugs are administered only if treatment with antiandrogens fails or complications arise. At present, cyprotenoacetate is the most widely used drug in the Czech Republic. Selective serotonine reuptake inhibitors (SSRI antidepressants) are prescribed only occasionally, usually for the treatment of deviants who are under court treatment order, because paraphilic behaviour is not listed as an indication for treatment with SSRI antidepressants.

As for the foreign literature, *Kafka* reported 24 paraphilic patients who were administered 100 mg daily doses of sertraline for an average of 17.4 weeks. A clinically significant effect was observed in half of these patients. Nine men with insufficient therapeutic responses were converted to fluoxetine at a daily 50 mg dose; the therapy was successful with six of them. The author concludes that 17 out of 24 patients treated by sertraline or fluoxetine for 1 year showed a good therapeutic response (*13*).

It can be concluded that, in patients with certain types of deviant behaviour not dangerous to society, administration of lithium or small doses of depot neuroleptics is the method of choice. The efficacy of these drugs has been demonstrated by the results of the studies reviewed here.

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PSYCHOFARMAKA V LÉČBĚ SEXUÁLNĚ DEVIANTNÍHO CHOVÁNÍ

S o u h r n

Práce podává přehled o studiích s užitím lithia a depotních neuroleptik,které se osvědčily při léčbě parafilního chování. Dle kritérií postulovaných Bártovou a kol.(1986) by ideální lék pro léčbu parafilií měl co nejvíce potlačovat deviantní sexuální aktivitu, málo ovlivňovat společensky únosnou/adekvátní sexuální aktivitu, co nejméně ovlivňovat plodnost a mít co nejméně vedlejších účinků léčby.

Dle těchto kritérií z předložených prací vyplývá, že nejvíce potlačují deviantní aktivitu antiandrogeny, nejméně ovlivňují adekvátní sexuální aktivitu lithium a depotní neuroleptika, nejméně ovlivňují plodnost lithium a depotní neuroleptika a nejméně vedlejších účinků léčby bylo zaznamenáno u lithia.

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