

Physical and sexual well-being during and after tramadol dependence

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Introduction

In Egypt the wide range of tramadol usage comes back from many myths regarding its value in improving physical and sexual function. This study aims to assess the sexual self-esteem, satisfaction about sexual relation, and quality of life during tramadol dependence and 6 months after complete absence of tramadol.

Materials and methods

A total of 112 married male patients who were dependent on tramadol were recruited, treated, and then followed up for a 6-month duration. All individuals were examined using Self-Esteem and Relationship questionnaire and Short Form-36 health survey during the dependence period and 6 months after the complete absence of tramadol use.

Results

All Self-Esteem and Relationship questionnaire subscales were better in post-treatment than in pretreatment periods. The physical functioning and role limitation because of physical health showed no significant differences before and after the treatment of tramadol dependence. Significant improvement in general health, social functioning, and emotional well-being were observed in post-treatment than in dependence period. In contrast, pain, energy, and role limitation due to emotional problems were more in dependence period than in post-treatment period.

Conclusion

Most of the myths about tramadol value in improving sexual and physical function were proved to be wrong.

Keywords:

addiction, Egypt, opiate, sex

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Introduction

Tramadol, a centrally acting analgesic, consists of two enantiomers, both of which contribute to analgesic activity by different mechanisms. (+) Tramadol and the metabolite (+) *O*-desmethyltramadol (M1) are agonists of the μ -opioid receptor. (+) Tramadol also stimulates presynaptic release of serotonin and inhibits serotonin reuptake, whereas (–) tramadol inhibits norepinephrine reuptake. Thus, tramadol enhances inhibitory effects on pain transmission both by opioid and monoaminergic mechanisms [1]. The habituating properties of tramadol are arguably mainly due to μ -opioid agonism with contributions from serotonergic and noradrenergic effects [2].

Despite the fact that drug abuse is not a newly introduced issue to Egyptian society, the wide range of usage and illegal transactions are associated with tramadol abuse, making it the most easily accessible and readily provided drug at cheap cost [3]. It also seems that it is not only an Egyptian problem, but also a problem in neighboring countries [4]. Their lower price and availability without prescription make them very popular. Thousands of young men are developing dependence to a prescription painkiller used to alleviate the stress of

living. They also use it to relieve psychosomatic symptoms such as headaches and abdominal pain, as well as depression and nervousness [4]. Students, laborers, and even professionals are buying large quantities of tramadol on the black market.

In Egypt, Soueif *et al.* [5] reported several reasons for the different user categories. For secondary school students, the main reason was for entertainment in happy social occasions and socializing with friends. Workers and university students take drugs in situations of physical exhaustion and fatigue and to cope with psychosocial problems or difficult working conditions as well as at times of studying and examinations [6]. According to Soueif *et al.* [7], there is misconception that opiates are used to increase cognitive and sexual performances and to avoid physical exhaustion. Hence, it is not surprising to find that tramadol use has become recently very popular especially among youth and the middle-aged groups as a self-medication for premature ejaculatory function and for extended orgasm and to increase sexual pleasure [8]. In contrast, there were some studies that showed negative impact of opiate use on cognitive functions [9,10]. Another study stated that opium users exhibit impaired sexual function (diminished libido and impaired sexual performance are common sequelae of chronic use) [11]. Early

clinical studies suggested that opiates may interfere with sex hormone secretion, although opiate addicts often equate the drug experience with sexual orgasm [12]. All these studies were conducted on opium, but none of these studies, to the best of our knowledge, was conducted on atypical opioids such as tramadol.

Fawzi [3] reported that an increasingly alarming phenomenon of tramadol (Tramal, Amadol, Tramax, Contramal, Trama SR, Ultradol, Tramundin) abuse has been heavily demonstrated in the recent years. Ezzat [13] reported a catastrophic incidence of tramadol abuse after the 25th January Egyptian Revaluation; the report underlined the fact that the addiction rate in Cairo has jumped to comprise 7% of the capital's population during the study period. According to the Shura Council's Health Committee report, rising addiction rates were found to be partially attributable to the spread of erroneous concepts among young people. It is said that 30.6% of addicts believe that drugs increase physical abilities, whereas 36.6% associate drugs with getting over adversities and 34.8% do drugs to overcome depression [13]. This study aims to assess the sexual self-esteem, satisfaction about sexual relationship, and the quality of life during tramadol dependence and 6 months after complete abstinence of tramadol.

Materials and methods

Study locality

This study was conducted in Addiction Unit Outpatients Clinic, Psychiatry Department, Mansoura University Hospitals, Egypt during the period from 1 May 2012 to 31 January 2013 (3 months recruiting tramadol-dependent patients and 6 months' follow-up).

The current study was approved by the Mansoura University Faculty of Medicine Ethical Committee. All patients gave informed consent in accordance with the Helsinki II Declaration after the purpose of the study and the protocol had been explained to them, and before any intervention was performed.

Study design

This study was designed as a quasi-experimental (pre-intervention/postintervention) study.

Target population

All tramadol-dependent patients attending for treatment and agreed to participate in the study and to keep on follow-up were included.

All male patients who fulfilled the inclusion criteria (191 patients) were interviewed using Arabic version of Mini International Neuropsychiatric Interview [14,15]. They were diagnosed according to the DSM-IV-TR criteria for opioids (tramadol) dependence [16]. A total of 22 patients refused to participate in this study. Patients who accepted to participate in the study (169 patients) were treated by analgesics (Brufen 600–1800 mg for 2 weeks), α 2-adrenergic receptor agonist lofexidine (Detoxydine 0.2–1.2 mg, stopped within 2 weeks from the initiation of treatment), and amitriptyline (Tryptizol

25–100 mg for treatment of withdrawal insomnia for maximum 10 days from the initiation of treatment). Hence, all patients became drug free after 2 weeks of initiation of the treatment then they were followed up every 2 weeks in the first 3 months and monthly later on until 6 months. At every follow-up session, clinical examination and urine screening for drugs (THC, opium, benzodiazepine, amphetamine, tramadol) were performed. Patients who gave history of tramadol intake or who gave positive results to tramadol or any other drugs during the follow-up period were excluded from the study (45 patients). Furthermore, 12 patients dropped out and did not regularly come in the follow-up.

Inclusion criteria

Male sex, age above 20 years, who were married and used tramadol daily during the last year, with no concomitant medications used for any reason either at least 3 months before the initiation of the study or at least 3 months before the end of the study, were included.

Exclusion criteria

Mental retardation, not in regular sexual relationship (single, divorced, widow), other substance dependence (codependence), any psychiatric, neurological, or chronic medical illness, and any concomitant drug use for any reason (body building, vitamin) were the exclusion criteria.

Study instruments

All participants were examined by Arabic version Self-Esteem and Relationship (SEAR) questionnaire for Egypt [17], and the translated Arabic form of Short Form-36 (SF-36) health survey was used [18–20] during tramadol dependence period at the initiation of the study before the treatment and 6 months after the last use of tramadol.

The SEAR questionnaire covers Sexual Relationship (items 1–8), Confidence (items 9–14), Self-Esteem (items 9–12), Overall Relationship (items 13 and 14), and total scores (items 1–14). It has five response options [almost always/always; most times (much more than half the time); sometimes (about half the time); a few times (much less than half the time); and almost never/never]. Higher score indicates more favorable response.

SF-36 health survey: This 36-item measure is made up of eight subscales, each evaluating a different domain of health-related quality of life, such as physical functioning, role limitation due to physical health, bodily pain, general health, energy and fatigue, social functioning, role limitation due to emotional problems, and emotional well-being. Subscale scores are calculated according to the standard procedures, yielding score values of 0–100; higher scores indicate better quality of life.

Data analysis

Data were analyzed using SPSS version 16 (Statistical Package for the Social Science; SPSS Inc., Chicago, Illinois, USA). Variables were presented as mean \pm SD. Variables were tested for normality distribution by the Kolmogorov–Smirnov test. The paired *t*-test was used for pre–post comparisons in normally distributed variables

and the Wilcoxon signed-rank test was used for pre–post comparison in nonparametric variables. *P* value of 0.05 or less was considered statistically significant.

Results

A total of 112 tramadol abusers were included in the study. Their age ranged from 22 to 49 years, with a mean age of 32.1 ± 6.1 years.

Table 1 shows that all SEAR questionnaire subscales mean scores showed significant increase post-treatment compared with pretreatment (80.5 vs. 56.7 for sexual relationship; 81.7 vs. 62.9 for sexual self-esteem; 61.5 vs. 43.8 for overall relationship satisfaction; and 78.1 vs. 56.6 for the total score).

The mean score of both physical functioning and role limitation due to physical health showed no significant difference before and after the treatment of tramadol dependence. Significant increases were observed in the mean score of general health (88.1 vs. 46.9), social functioning (83.3 vs. 41.8), and emotional well-being (80.3 vs. 52.7) post-treatment. In contrast, pain, energy, and role limitation due to emotional problems were more during dependence period than post-treatment period (34.6 vs. 20.9; 84.4 vs. 59.5; and 48.2 vs. 10.4, respectively; Table 2).

Discussion

In an Egyptian study by Kamel *et al.* [21], cannabis was the most widely used drug followed by opioids, and in a more recent study by El-Sawy and Abd Elhay [22] it was found that adolescents (exposed to trauma) were more likely to use tramadol, followed by cannabis and benzodiazepines.

The present study demonstrated that all SEAR questionnaire subscales were better in post-treatment patients than

in pretreatment patients, with statistically significant difference. This could be explained by the fact that patients on tramadol know that they are abnormal and dependent on substance to make efficient sex practice. This idea decreased their self-esteem, which was improved after complete abstinence from substance, and they found that they could perform their sex practices without support of drugs. This is in contrast with the result found by many studies [8,23–29], which cited that tramadol shows promise as a drug for treating rapid ejaculation. The explanation of this difference could be returned to the use of tramadol on demand to treat premature ejaculation but not tramadol dependence with regular use for more than 1 year.

In this study, there were no statistically significant differences between physical functioning and limitation due to physical health before and after the tramadol dependence. This is against the myth that tramadol use could improve physical performance. This could be explained by the fact that tramadol is not an activating drug but is an analgesic, which may help to increase physical activity by decreasing pain feeling, but once the patient stops drugs he feels very exhausted and cannot do any physical activity. Patients' day is divided into two phases, first a period under effect of tramadol with no pain feeling and false feeling of increased activity; and second phase during withdrawal of tramadol with pain and nearly no activity, and the sum is average amount of physical activity nearly equal to his average activity without drug use.

General health, social functioning, emotional well-being, and less role limitation due to emotional problems in this study were better among post-treatment patients than among pretreatment patients. Use of drugs makes patients feel that they are abnormal, and during period of drug withdrawal they appear in inappropriate way, which they know well. Of course, patients do not want that surrounding people watch them in this way; this makes patients to be withdrawn from any social relationships, and hence they are in bad mood. Moreover, in Egypt, use of drugs is stigma, and hence community refuses to interact with people who use drugs.

Table 1 Comparison of scores on Self-Esteem and Relationship questionnaire between pretreatment and post-treatment patients with tramadol abuse

	Pretreatment (<i>n</i> =112) (mean \pm SD)	Post-treatment (<i>n</i> =112) (mean \pm SD)	Significance test
Sexual relationship	56.7 \pm 15.0	80.5 \pm 9.5	<i>t</i> = 14.3, <i>P</i> \leq 0.001
Sexual self-esteem	62.9 \pm 21.7	81.7 \pm 8.4	<i>t</i> = 8.7, <i>P</i> \leq 0.001
Overall relationship satisfaction	43.8 \pm 15.8	61.5 \pm 14.0	<i>t</i> = 9.96, <i>P</i> \leq 0.001
Total score	56.6 \pm 10.9	78.1 \pm 6.7	<i>t</i> = 18.7, <i>P</i> \leq 0.001

Table 2 Comparison of scores on Short Form-36 health survey between pretreatment and post-treatment patients with tramadol abuse

	Pretreatment (<i>n</i> =112) (mean \pm SD)	Post-treatment (<i>n</i> =112) (mean \pm SD)	Significance test
Physical functioning	80.0 \pm 7.6	80.5 \pm 11.6	<i>t</i> = 0.4, <i>P</i> = 0.7
Role limitation due to physical health	19.0 \pm 7.4	17.1 \pm 10.7	<i>Z</i> = 1.5, <i>P</i> = 0.13
Role limitation due to emotional problems	48.2 \pm 14.6	10.4 \pm 5.9	<i>Z</i> = 9.2, <i>P</i> \leq 0.001
Energy/fatigue	84.4 \pm 8.7	59.5 \pm 14.7	<i>t</i> = 17.7, <i>P</i> \leq 0.001
Emotional well-being	52.7 \pm 10.7	80.3 \pm 11.9	<i>t</i> = 20.3, <i>P</i> \leq 0.001
Social functioning	41.8 \pm 12.8	83.3 \pm 7.0	<i>t</i> = 32.4, <i>P</i> \leq 0.001
Pain	34.6 \pm 9.9	20.9 \pm 7.7	<i>t</i> = 11.8, <i>P</i> \leq 0.001
General health	46.9 \pm 17.5	88.1 \pm 63.6	<i>t</i> = 8.9, <i>P</i> \leq 0.001

Z values were determined by Wilcoxon signed-rank test.

In contrast, pain and energy were more during dependence period than post-treatment period. Patients using drugs, during a day, pass in several periods of drug withdrawal with severe pain symptoms (headache, colic, bone-ache, etc.); these periods do not present after complete abstinence of drug use. This is in contrast with studies showing efficacy of tramadol in reducing organic and psychosomatic pain and in increasing health-related quality of life [30–32]. The explanation of difference in this study is the sampling design. In this study all participants had no psychosomatic or organic pain; hence, after the abstinence of drug use, no pain recurred. Moreover, Nielsen *et al.* [33] found that there is a lack of association between pain and aberrant behaviors, suggesting that it should not be assumed that those in opioid treatment misuse medications in response to pain.

In conclusion, apart from those patients with medical disorders using tramadol, the drug has the potential for abuse [34]. Most of the myths about its value in improving sexual and physical function proved to be wrong. The easy availability of tramadol, its cheap price, and myths about its value may become a bigger challenge in the future.

Strength and limitation of this study

This is one of the rare studies discussing a very important problem in Egypt. It disproves the myths that stand for widespread use of tramadol among male youth. However, it suffers some limitations including the small sample size, short duration, and being a single-center (one hospital) study. No available data about tramadol dependence from other countries are available discussing the same aims of this study to compare with the results of this study.

Acknowledgements

Conflicts of interest

There are no conflicts of interest.

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