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THE EFFECTIVENESS OF NALTREXONE IN PREVENTING RELAPSE IN OPIOID-DEPENDENT PATIENTS

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Abstract:

Aim: *To assess efficacy of Naltrexone in preventing the relapse among opioid-dependent pts.*

Place of study: *In the Psychiatry department of Sheikh Zayed Medical College & Hospital, Rahim Yar Khan for one-year duration from April 2019 to April 2020.*

Study design: *Interventional design: Prospective, open-label, clinical trial.*

Sampling technique: *no probability: deliberate sampling.*

Material and methods: *Forty-five male drug addicts; 25 from Bahawalpur and 20 from Rahim Yar Khan were included in the study. After detoxification, each patient was given 50 mg of Naltrexone daily under supervision of a care giver. Each patient was followed for one-year.*

Results: *On completion of the trial, 13 patients (28.9%) had relapsed while 71.1% were still abstinent as judged by Thin Layer Chromatography of urine. LFTs remained normal in all cases. Headache was the most frequent (29.7%) side effect followed by anxiety (27.4%) and loss of energy (25.3%). Conclusion: A high rate of abstinence (71.1%) coupled with a low incidence of side effects makes Naltrexone an acceptable mode of treatment for opioid dependence*

Keywords: *naltrexone, opiod.*

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INTRODUCTION:

Drug addiction is a complex but treatable brain disease. It is characterized by compulsive drug seeking and use that persist even in the face of severe adverse consequences. Although treatments are tailored to individual needs, drug addicts can recover and lead a productive life. Most opioid addicts seek treatment to 'control' drug use, while society calls for and defines 'control' as abstinence. This demand prompted governments to support detox programs as detoxification is the most direct and immediate way to free a person from heroin. However, the problem of relapses still exists. Another study using data from the National Institute on Drug Abuse in the US reported a relapse rate of 22.75% among opioid users. Naltrexone blocks the opioid receptors on the cell surface. As a result, opiates do not elicit euphoria and their effect on pain may be less predictable. At very low doses, naltrexone is believed to increase the body's natural endorphins, which play a role not only in regulating mood, but also in the functioning of the immune system.

METHODOLOGY:

This study was held in the Psychiatry department of Sheikh Zayed Medical College & Hospital, Rahim Yar Khan for one-year duration from April 2019 to April 2020. Forty-five male drug addicts; 25 from Bahawalpur and 20 from Rahim Yar Khan were included in the study. After detoxification, each patient was given 50 mg of Naltrexone daily under supervision of a care giver. Each patient was followed for one-year. The study enrolled patients aged 19–50 years without heroin and other opioids for 7–10 days or 10 days for methadone prior to naltrexone maintenance treatment, free from acute hepatitis and abnormal LFT. People who have obtained consent and are highly motivated to be opioid free or have the support of family and / or friends.

RESULTS:

45 patients were included in the study. Thirty-two patients completed the study. The age of the patients ranged from 19 to 50 years (Fig. 1).

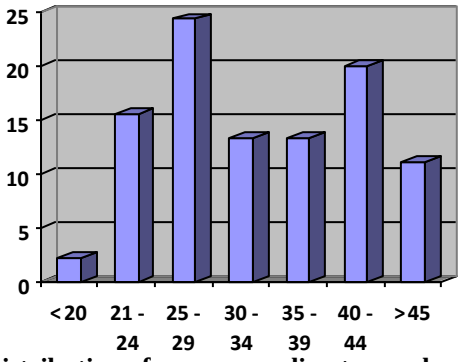

Fig 1: Distribution of cases according to age duration of drug abuse.

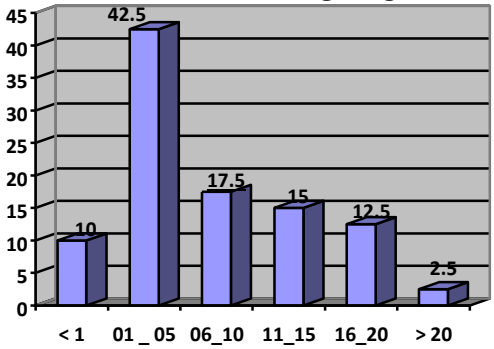

Fig 2: Duration of drug abuse.

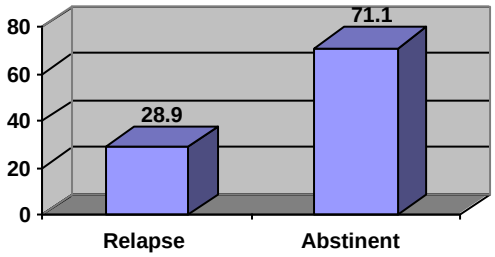

Fig. 3: Status of the patients at the end of study.

The mean age was 33.1 ± 8.4 years. The maximum number of patients ranged from 25-29 years (24.4%), followed by 40-44 years (20%). The period of abuse ranged from 6 months to 22 years. The mean duration was 7.9 ± 8.2 years. The majority of patients (42.5%) had been using the drug for one to five years. Of the 45 patients enrolled in the study, 13 patients (28.9%) had a relapse. Thirty-two patients (71.1%) remained abstinent until the end of the study. Of the 25 cases in Lahore, 10 patients had a relapse (40%), while of the 20 Peshawar patients only 3 had a relapse (15%). The relapse rate was therefore higher in Lahore compared to Peshawar, but the difference was not statistically significant (P> 0.05). Urine thin post-chromatography (TLC) was performed monthly (Table 1).

Table 1: Positive TLC test according to time of treatment

Month	=n	Positive TLC test	
		n=	%age
First	45	-	-
Second	45	-	-
Third	45	1	2.2
Fourth	44	7	15.9
Fifth	37	4	10.8
Sixth	33	1	3.1
Total	45	13	28.9

DISCUSSION:

Initial clinical studies on the efficacy of naltrexone in preventing relapse in opioid addicts were conducted in the 1980s, when the drug was introduced to the market. However, the number of patients in these studies is generally small and only a limited number of these studies are double-blinded. Consequently, in many studies the type of drug is self-selected, and when blinding is performed, the dropout in the placebo group is significantly greater than in the naltrexone group. Recently, the use of naltrexone as adjunct treatment for opioid dependence has been evaluated in numerous clinical trials in street addicts, methadone maintenance patients and reform addicts. An analytical and decision-making model using Monte Carlo simulation was developed comparing naltrexone as adjunctive therapy to a group without naltrexone. The results suggested that naltrexone maintenance therapy may be better than placebo in retention in treatment, but this was not statistically significant. A meta-analysis of the seven RCTs included gave a relative risk (RR) of loss of retention in the naltrexone group of 0.94. The total hazard ratio (HR) reported in five randomized clinical trials with treatment data retention up to 35 weeks was calculated as 0.90 in favor of naltrexone and also did not reach statistical significance. The risk of drug abuse for naltrexone versus placebo, with or without psychological support in both arms, gave a cumulative RR of 0.72, which was a statistically significant difference in favor of naltrexone. The combined HR of the three RCTs for the opioid relapse-free rates differed significantly from placebo in favor of naltrexone 0.53; however, it has disappeared over time and may be of limited clinical significance. They concluded that after successful opioid withdrawal, naltrexone may be administered chronically to block any future opioid effects. Krupitsky et al. (2006), in a randomized placebo-controlled trial, tested the efficacy of oral naltrexone with or without fluoxetine in preventing relapse of heroin dependence. All patients received medical advice from parents or other beings to encourage compliance. A total of 414 patients were reported, 343 gave informed consent, and 280 were randomized (mean age 23.6 +/- 0.4 years). After 6 months, two to three times as many naltrexone-treated patients as compared to naltrexone placebo-treated patients remained on treatment and had not relapsed. Psychiatric symptoms and general adjustment improved significantly in all patients who remained on treatment and did not relapse.

Naltrexone has been reported to be a fairly effective means of preventing relapse in opioid dependent patients. However, there are no data on the outcomes and acceptance of treatment in patients from the subcontinent. Malhotra et al. (2003) conducted an open label clinical trial in which 106 opioid-dependent patients received naltrexone 50 mg daily for 6 months. Fifty-eight patients (55%) could be followed-up and reassessed after 6 months. The observation groups and the groups who dropped out of school were comparable. Using the analysis performed on the last result; the overall abstinence rate was 52% (55 out of 106 patients). The relapse rate among Indian patients was significantly higher ($p < 0.02$) than in our study (28.9%). The relapse rate observed in our study is more closely related to the 22% reported in the NJDA data. The relapse rate reported in our study is significantly lower than the 72% reported by Mufti et al. (2004) in a 5-year follow-up of heroin addicts in Peshawar undergoing prolonged inpatient detoxification for 30 days, motivational interview, and training in coping strategies . Early relapse is common after opioid withdrawal and deprives addicts of important opportunities to develop new, opiate-free cognitive-behavioral habits. The oral opiate antagonist naltrexone significantly reduces relapses only under close supervision.

CONCLUSION:

Naltrexone appears to be an acceptable treatment for opioid dependent patients. However, there is general consensus among drug professionals that the effectiveness of naltrexone treatment depends very much on the individual's circumstances, including their degree of commitment to abstaining from heroin and the support available.

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