



Journal of Medical Sciences

ISSN 1682-4474

science
alert

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JMS (ISSN 1682-4474) is an International, peer-reviewed scientific journal that publishes original article in experimental & clinical medicine and related disciplines such as molecular biology, biochemistry, genetics, biophysics, bio-and medical technology. JMS is issued four times per year on paper and in electronic format.

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Prevalence of Opium Addiction in Iranian Drivers 2001-2003

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To evaluate the prevalence of opium addiction in drivers a cross-sectional study was designed. Three thousands drivers were evaluated randomly and checked up on routine laboratory tests and urine rapid morphine test. All drivers were interviewed by a psychiatrist. Data analysis showed that the prevalence of addiction with morphine test was 14.6% but with psychiatric interview was 26.5%. The results revealed statistical significant difference between addict and non-addict drivers in diastolic blood pressure, pulse rate, white cell count, lymphocyte rate and serum cholesterol. There was significant relation between chest X-ray changes and Electrocardiogram changes at two groups too. Opium addiction is frequent in drivers. It caused drowsiness and car accident. Thus health program designing for drivers and checking up on them periodically seems to be necessary.

Key words: Addiction, opium, prevalence, driver, Kerman

INTRODUCTION

Drug abuse and addiction in Iran are national and international problem. Although opium has always been the most widely abused substance in Iran, but the pattern has diversified with the rapid growth of cities, immigration and general social changes. The range of drugs now abused in cities has come to include Heroin, the Hallucinogens and Hypnotics^[1].

Iran is passage of drug trafficking from eastern of Asia to Europe. The long distance drivers of Lorries and buses, whose great mobility make them of considerable importance in the trafficking of drugs within country are more exposed to danger of drug abuse and addiction because of boring and hard works and they consume these drugs specially opium for refreshing, in their mind^[2].

Addiction to opium is frequent in drivers, possibly. It cause of drunken headache and drowsiness^[3] and increase risk of car accidents as the result. In the current reports of Kerman transport organization (KTO), 30% of accidental victim relate to road accident^[4], so track drivers ought to have a good health condition. As the fact all Iranian drivers should have Health Insurance Document and check up on themselves periodically.

The present study determined the prevalence of opium addiction in the road truck Lorries and buses drivers at Kerman province in one of the health check up program.

MATERIALS AND METHODS

Cases were identified from records of health drivers program (HDP) of KTO. This program covers five thousands road drivers approximately. We selected three thousands of drivers randomly during two years 2001-2003.

All cases were referring from KTO to special clinic of Kerman Medical Sciences University for evaluation and checking up. At the first all drivers were visited by physician and physical examinations were done, then routine tests as cell blood count (CBC) and differentiation, urine analysis (UA), fasting blood sugar (FBS), serum cholesterol, triglyceride (TG), urea, creatinine (Cr), chest X-ray (CXR), electrocardiography (ECG) and morphine test were performed for all drivers. Morphine test was done by one step morphine test urine strip package-ACON Laboratories Inc., California, USA, in central laboratory of KMSU. After performing of Lab tests, all drivers were referred to psychiatric clinic. Psychiatrist evaluated the cases with interview with emphasis to finding addiction. He blinded about morphine test results. After psychiatric interview, addicts were determined and

then data of clinical, para-clinical and psychiatric interview of each cases were registered to a data collection form and analyzed by computer.

Statistical analysis was performed using SPSS-10 software. Continuous variables were reported as the mean plus standard deviation. The Chi-square test and Fisher's exact test were used for univariate analysis of categorical data. Student's t test and Mann-Whitney test were used to assess the distribution of continuous variables. A P less than 0.05 were considered statistically significant.

RESULTS

Three thousands cases were evaluated. All of them were male and their mean (SD) age was 40 (10.1) with range of 19-76 years. Positive morphine test rate was 4.6% (139 cases) but psychiatric interview determined 795 addicted drivers (26.5%). From a total of 795 only 112 of them had positive morphine test report. The

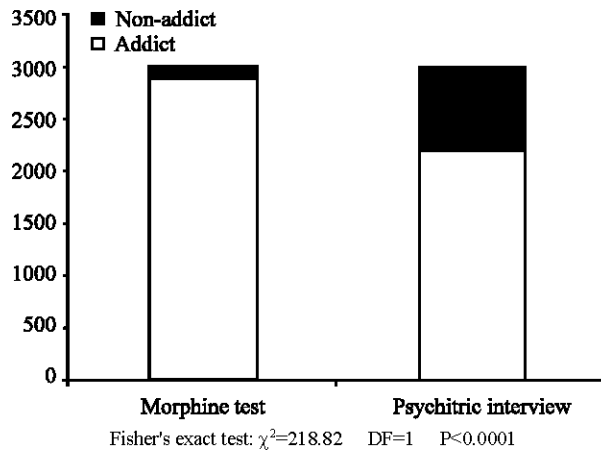


Fig. 1: Comparison between Morphine test and Psychiatric interview

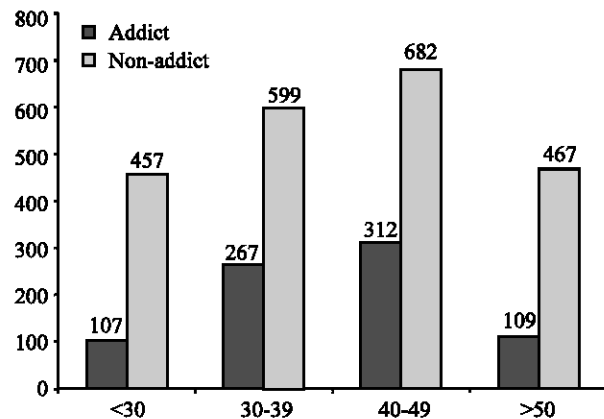


Fig. 2: Frequency of opium addiction in different age group

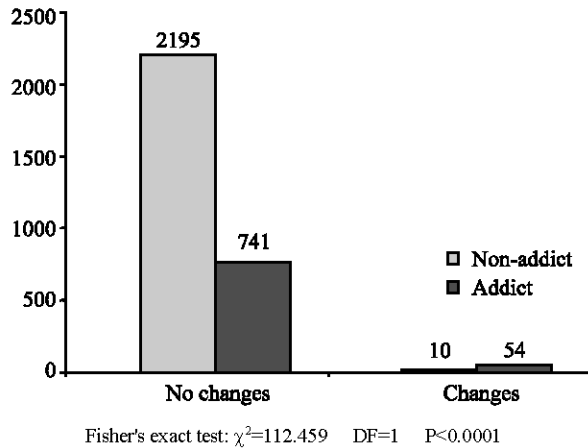


Fig. 3: Distribution of CXR/ECG changes in Drivers

Table 1: The mean of significant parameter between addict and non-addict

	Group	Mean	SD	P value
Diastolic blood pressure	Non-addict	76.3	7.3	P=0.002
	Addict	75.3	7.0	
Pulse rate	Non-addict	81.0	6.6	P=0.03
	Addict	82.0	7.2	
White blood cell	Non-addict	7423.0	4995.0	P<0.0001
	Addict	8309.0	3251.5	
Lymphocyte rate	Non-addict	39.7	13.8	P<0.0001
	Addict	37.0	12.8	
Cholesterol	Non-addict	204.0	93.6	P=0.018
	Addict	195.5	65.8	

accuracy of morphine test against psychiatric interview was 14% only and there was a statistical significant difference between Morphine test and psychiatric interview (Fig. 1). Regarding the comparison of data between two subgroup of addict and non-addict drivers, there was no significant difference in average of age between two group ($t=0.834$, $P=0.4$), the most frequent addict ages was 30-50 years old (Fig. 2).

Diastolic blood pressure, pulse rate, white cell count, lymphocyte rate and serum cholesterol revealed statistically significant difference between addict and non-addict (Table 1).

Fifty four out of sixty four cases with changes in CXR were addict. The same as CXR changes they had ECG changes (Fig. 3).

DISCUSSION

Every year thousands of people encounter difficulty because of drugs abuse. Addiction has many complications and morbidities. It seems drivers are exposed by substance abuse and high risk for addiction. It is important to diagnose and treat them for preventing of car accident dangers and co morbidities^[5,6]. Many surveys showed that frequency of drugs abuse was

increasing among recent years in drivers. Bogusz *et al.*^[5] revealed addict drivers had been increased from 900 people at 1983 to 3329 at 1995. 5.1% of drivers used Heroin. In the other study prevalence of substances abuse varied from 5.1 to 76.8%^[5,7-9], in such a manner Spain drivers were at the top of list. In this country Benzodiazepines were the frequent substance abuse 19%^[8].

Studies in Iran have reported addiction rate in opioid between 2.1 to 20 percent in different social groups. Ahmadi and Hasani^[10] studied prevalence of substance abuse in high school students. They estimated the rate of opioid abuse 2.1%. The other survey about substance abuse in sample of nursing students showed 8.5% of them used opium and 0.5% used morphine^[11]. Twenty percent of offspring of opioid addicts in Iran had addiction to opioids. Nineteen percents used opium and one percent to Heroin^[12]. The comparison between these studies and our data determined that the rate of opium addiction is much higher in drivers.

On the other hand, the data demonstrated that the risk of ischemic heart disease and pulmonary disease is sixteen time over in addicts. It is considerable, routine clinical and Para clinical evaluation of long distance drivers of lorries and buses are very necessary. The more exact Morphine test have to replace in current urine Morphine test in Iranian laboratories like immunoassay methods, Gas chromatography and mass spectrophotometer and it's better that evaluations are done on serum or blood samples^[5,13]. The present study was concluded that psychiatric evaluation of drivers is inserted in drivers health program.

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