PLASMA LEVL OF REPRODUCTIVE HORMONES IN MALE HEROIN ADDICTS AT HYDERABAD PAKISTAN

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Abstract

Serum levels of gonadal steroid (testosterone) and pituitary gonadotrophs, FSH and LH were studied in the heroin addicts at Hyderabad. The testosterone levels were decreased significantly in the heroin addicts and the FHS and LH were increased significantly.

Keywords: Plasma, Heroin, Reproductive Hormones

Introduction

Chronic heroin addiction and high dose methadone therapy had a consistent association with low serum testosterone levels (Cicero et al., 1975, Mendelson et al., 11975 a). in a controlled ward condition, addicts after active heroin adminstration and subsequent detoxification with methodone over a short term study showed a dose related suppression of testosterone which persisted throughout the methodone maintainance (Mendelson et al., 1975). During acute withdrawal in a group of heroin addicts the serum testosterone was similarly suppressed (Azizi et al. 1973). Reported a decreased secretion of LH and FSH in method one clients with increment of these during withdrawal period. Afrasiabi et al., (1979) reported an elevation in LH and FSH in heroin addicts. Rangi et al. (1988) showed an elevated gonadal function in three male heroin addicts by measuring basal plasma levels of LH, FSH, Prolactin and testosterone.

The present study aimed at the hormonal profiles and their associative symptoms in male heroin addicts.

Materal and Methods

The blood samples of 5ml each were collected from 30ml heroin addicts aged between 25-35 years belonging to different localities of Hyderabad within 24 hours of the last dose of the heroin.30 samples of non-users were used as control.

The addicts were using 1-2g\day heroin for at least 2-3years. Serum was separted, sealed in vials, analyzed in the atomic energy center, LUMH, Jamshoro.

The serum testosterone, follicle stimulating hormone (FSH)and leutinizing hormone (LH) were determined by using R.I.A. method. The results were analyzed by using students "t" test.

Testosterone (n mol /1.)	**32:78 ± 6.23**	**12.25 ± 3.21**
FSH (m U/ml.)	**5.61 ± 1.32**	**13, 26 ± 3.45***
LH (m1U/ml)	**5.80 ± 1.41**	**9.30 ± 2.61****
Student " t " Te		***P< 0.05** ****P< 0.145**

Table # 1:

Serum levels of Testosterone, FSH and LH in Heroin Addicts & Non-User Control Heroin Addict Males

Results

Personal History:

The heroin addicts generally complained of complete loss of libido and impotence.
All the hormones, the testosterone, FSH and LH analyzed in the study were affected significantly in the heroin addicts as compared to the control (Table-1).

Serum testosterone levels in the heroin addicts was 55% lower than that of the control whereas, the pituitary gonadotrophs FSH and LH were elevated markedly (FSH,130% and LH, 90%) in the heroin addicts as compared to the control. So the results of the present study reveals than the gonadal steroids with the effect of heroin are suppressed and the pituitary gonadotrophs are increased in the peripheral circulation.

Discussion

Sexual impotency libido in the heroin addicted persons occurs gradually. This condition is in agreement with many evidences reported earlier (Willis, 1969, Weiland and yunger, 1971 and Cushman, 1972).

The decreased sexual function in heroin addicts can have psycho logic bases as well, resulting from alteration in life and their social acceptability and their hostile attitude towards the world, (Mendelson et al., 1975a).

Testosterone is one of the most important endocrine determinant including the intensity of sexual desire in the human male (Money, 1961). The results presented show similarity with the finding of Azizi et al. 1973; Cicero et al. 1975; Mendelson and Mello, 1975a b; Mendelson et al. (1975).

The increased values of FSH and LH level in the heroin addicts are due to decreased levels of the testosterone (negative feed back mechanism). This is also reported by many workers Teppenerman (1973) and Parkes (1976s).

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