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Poster Presentations

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The effects of morphine abuse on sperm parameters, chromatin integrity and apoptosis in men consuming morphine

Ghasemi-Esmailabad S[1, 2], Talebi AH[3], Talebi AR[1, 4, 5], Amiri S[1], Moshrefi M[1, 6], Pourentezari M[5].

1. *Research and Clinical Center for Infertility, Yazd Reproductive Science Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*
2. *Abortion Research Center, Reproductive Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*
3. *Department of English Language and Literature, Faculty of Humanities and Social Sciences, Yazd University, Yazd, Iran.*
4. *Andrology Research Center, Reproductive Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*
5. *Department of Biology and Anatomical Scineces, Faculty of Medicine, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*
6. *Medical Nanotechnology and Tissue Engineering Research Center, Yazd Reproductive Science Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*

Email: m.pourentezari@gmail.com

Background: Morphine is one of the major psychoactive chemicals in opium that can increase the production of free radicals and thus can negatively affect spermatogenesis.

Objective: The purpose of this survey was to demonstrate the effect of morphine consumption on sperm parameters, DNA integrity and apoptosis in men taking morphine.

Materials and Methods: In this case-control study, 30 man abusing morphine (cases) and 30 healthy men (controls) were compared for sperm parameters (count, motility and morphology) and sperm chromatin quality, with aniline blue, toluidine blue and Chromomycin A3 stainings. The participants were matched for age, weight, amount and duration of cigarette smoking.

Results: In men with morphine dependency, sperm progressive and total motility ($p = 0.038$ and $p < 0.001$ respectively) showed significant decreasing compared to control group. Regard to morphine abusing, although morphine can decrease the sperm chromatin condensation and increases the rate of sperm apoptosis, but these differences were not statistically significant.

Conclusion: According to our result morphine dependence can reduce male fertility by affecting sperm parameters and also it may affect sperm chromatin/DNA integrity.

Key words: *Morphine, Sperm parameters, Chromatin, Human.*