

## عنوان مقاله:

Impacts of morphine addiction on spermatogenesis in rats

## محل انتشار:

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## خلاصه مقاله:

Background: There are numerous investigations on wide range of issues that disrupt regulatory spermatogenesis, individuals who are exposed to drug abuse faced infertility and immature spermatogenesis. Objective: The aim of this study was to evaluate the addiction effects of morphine and its derivatives on rats spermatogenesis. Materials and Methods: 40 male Wistar rats were randomly divided into 5 equal groups, which were exposed either with intravenous morphine, naloxone, naloxone and morphine, sham (with normal saline injection) and a control group without infusion. Spermatogenesis was assessed after three months via histological sections with hematoxylin and eosin staining, using a light microscope based on measurement of spermatogonia, spermatocyte, spermatid, and spermatozoa. Results: Those rats that received opioids had changes in spermatogenesis function. The population of spermatogenesis cycle cells at spermatogonia, spermatocyte, spermatid, and spermatozoa stages was significantly decreased in those rats that received opioid in comparison to the control group ( $p < 0.05$ ). Histological studies revealed that changes in different groups of opioid application might affect sperm formation. Sperm count in morphine group was  $(0 \pm 0)$  and in naloxone group, naloxone+morphine, sham and control were  $235 \pm 3.77$ ,  $220 \pm 3.81$ ,  $247.12 \pm 6.10$  and  $250 \pm 6.54$ , respectively ( $p < 0.001$ ). Conclusion: Morphine could affect all spermatogenesis stages

## کلمات کلیدی:

(Opioids, Morphine, Spermatogenesis, Sperm, Rats. This article extracted from M.D. thesis. (Ali Lashkari

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