Effect of oral morphine administration on fertility of Balb/c mice

Sahraei H. (Ph.D.)¹, Kaka G.R. (M.S.)², Ghoshooni H. (M.S.)³, Shams Lahijani M. (Ph.D.)⁴, Ramazani M. (M.S.)⁵.

¹-Assistant Professor, Department of Physiology and Biophysics, Faculty of Medicine, Baghyatallah (a.s.) Medical Sciences University, Tehran, Iran.
²-Instructor, Anatomy Department, Faculty of Medicine, Baghyatallah (a.s.) Medical Sciences University, Tehran, Iran.
³-Instructor, Department of Physiology and Biophysics, Faculty of Medicine, Baghyatallah (a.s.) Medical Sciences University, Tehran, Iran.
⁴-Professor, Biology Department, Faculty of Sciences, Beheshti University, Tehran, Iran.
⁵-Ph.D. Student, Biology Department, Faculty of Sciences, Azad University, Tehran, Iran.

Abstract

In addition to have side effects on adults and embryos, abused drugs by affective sex and hypophysial hormones can reduce germ cells and sexual drive resulting infertility in human. Aim of this study is to evaluate the effects of addiction to morphine-induced infertility in Balb/c mice.

For these purpose, a control (n=6) and 21 experimental (n=363) groups were used. Then oral morphine with initial doses (0.01, 0.05 and 0.1 mg/ml of water) in a 3 weeks period was administered to the animals and then the animals were crossed to each other. On 17th day of pregnancy, female rats were anesthetized by ether and the embryos were taken out surgically. Results showed that in all groups the birth chance were reduced according to the control group. The reduction was observed in group, which was treated with 0.01 morphine. Therefore it is concluded that morphine extremely reduced the birth chance in mice and may reduce fertility in animals and this may be reliable for human.

Keywords: Morphine, Mice, Infertility, Addiction and Abused drugs.

Corresponding address: Dr. Sahraei H., Departement of Physiology and Biophysics, Faculty of Medicine, Baghyatallah (a.s.) Medical Sciences University, P.O. Box: 19396-6558, Tehran, Iran.

Email: h.sahraei@bmsu.ac.ir