Some anatomic alterations in the rat's newborns induced by zolpidem treatment during pregnancy

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Introduction. Zolpidem is new sedative drugs that bind in benzodiazepine binding site of GABA A receptor in the brain. It is widely used by pregnant women. In a number of reported cases, some teratogenic effects of this drug have been noticed on the human newborn babies. A research on teratogenic effects of this drug on rat newborn is aim here.

Materials and Methods. First the male and female rats are left in one place to mate. The day on wich the vaginal plaque is formed is considered as zero day of gestation. The pregnant females are randomly classified into four groups:

I.Control with saline injection intraperitoneal (i,p), II.Treated with zolpidem (5mg/kg,i.p), III.Treated with zolpidem (10 mg/kg,i.p), IV.Treated with zolpidem (20 mg/kg,i.p).

Salin and zolpidem are injected intraperitonealy from zero day for constitutive 10 days. After all the injections are finished then the rats are allowed to give birth to their babies and as soon as the babies are born, all the anatomic characteristics such as body weight and size and the size of the head are measured and thenanalized, using Grafpad software.

Results. Our results show a significant decrease in the body weight and size and size of the head of newborn with adoze dependent maner of zolpidem injection.

Conclution. Since zolpidem has agonistic effect on GABA A receptor and considering the fact that GABA A receptor exists in mammal's nervous system and has important role in developing it, so probably the use of zolpidam causes some disorder in the the developing of different parts of nervous system. propbably this malformation can interfere in the correct development of different parts of brain and as aresult of this, there will be some malformation in the newborn babies.

Keywords: Zolpidem; GABA A receptors; Teratogenic; Newborn

Microglia-mediated neurotoxicity and AIDS

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Introduction. Microglia, the resident innate immune cells in the brain, have been implicated as active contributors to neuron damage in neurodegenerative diseases, in which the overactivation and dysregulation of microglia might result in disastrous and progressive neurotoxic consequences. Approximately 60% of individuals infected with the human immunodeficiency virus (HIV) have neurological impairment, and post-mortem analysis reveals neuropathology in 90% of autopsied cases.