

the mediolateral and transverse plans in the both groups of subjects. In contrast the flexion/extension range of motion of the hip joint decreased in the CP patients ( $p$ -value $<0.05$ ). There was a rotational pattern in the hip joint of CP patients in contrast to that in the normal participants. The knee joint of the CP patients moved differently in contrast to that in normal subjects.

**Conclusion.** There was a significant difference between the gait performance of the normal and CP patients. As the range of motion of ankle joint increased in the CP patients, it can be recommended that some specific types of low profile orthoses, which also influences the knee and the hip joints, be used to improve the gait performance of the CP patients.

**Keywords:** Cerebral palsy; Gait; Hip; Knee joints

## Teratogenic effects of maternal zolpidem administration on rat embryo based on histological study

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**Introduction.** Teratology is the study of abnormalities of physiological development. A wide range of different chemicals and environmental factors are suspected or are known to be teratogenic in humans and in animals. A selected few include: Drugs and medications; Environmental chemicals and Ionizing radiation. Exposure to teratogens can result in a wide range of structural abnormalities. Exposure to a single agent can produce various abnormalities depending on the stage of development it occurs. Zolpidem can affect the developing brain embryo via the activating of the GABA A receptors. However it is used now as a sedative even by the pregnant women. So its effect on embryo is questioned here.

**Materials and Methods.** Female pregnant rats were randomly divided into 4 groups. Control with saline injection intra peritoneal (i.p); Treated with 5, 10, 20 mg/kg, i.p. injection of zolpidem. Zolpidem was injected at 1<sup>st</sup> post mating day. On 18<sup>th</sup> day of pregnancy, fetuses were excluded and processed for histological characters and the end data was analyzed.

**Results.** There were differences between control and test group qualitatively but quantitative analysis should be done.

**Conclusion.** *Neurotoxicology and Teratology* provides a forum for publishing new information regarding the effects of chemical and physical agents on the developing, adult or aging nervous system. GABA A receptors are expressed during development of rat brain nervous system. zolpidem has agonistic effect on this receptors. Based on this fact, zolpidem causes disorder function of this receptor and then in some disorders in the developing fetal brain. As a result of this, there will be some malformation in the rat embryo.

**Keywords:** Zolpidem; GABA A receptors; Fetal brain; Developing embryo; Histological characters