

عنوان مقاله:

Effect of orally-administrated thymoquinone during pregnancy on litter size, pentylenetetrazol-induced seizure, and body weight in rat offspring

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خلاصه مقاله:

Objective(s): This study aimed to assess the impact of orally-administrated thymoquinone (TQ) during pregnancy on litter size, pentylenetetrazol-induced seizure, and body weight in rat offspring. **Materials and Methods:** In this experimental study, 64 pregnant rats were divided into groups according to the doses of TQ (0, 10, 40, and 80 mg/kg) and gestational week (GW2 and GW3) of TQ administration. After parturition, the pups were counted, weighed, and assessed for pentylenetetrazol (PTZ)-induced seizure on postnatal days 14 (P14) and 21 (P21). **Results:** In GW2 treated rats, TQ 40 mg/kg decreased seizure stages compared with control only on P14 while seizure duration significantly decreased on P14 and P21. On P14, 40 mg/kg TQ increased latency to the first seizure but decreased it on P21. In addition, 40 mg/kg dose decreased body weight (BW) on P1, P14, and P21 compared with 10 mg/kg dose and control groups. The dose of 80 mg/kg led to a complete pregnancy loss. In GW3 treated rats, only 10 mg/kg TQ decreased the seizure stages on P14 and P21. None of the doses had a significant effect on seizure duration and latency. TQ 40 and 80 mg/kg led to a low birth weight while increased BW on P14 and P21. A 50% decrease in litter size was observed in 80 mg/kg treated rats. **Conclusion:** Prenatal TQ may have anticonvulsant effects. The effects of TQ on BW of offspring depend on its dose and administration time. Also, a high dose of TQ at GW2 can be severely toxic for pregnancy.

کلمات کلیدی:

Nigella Sativa, Pentylenetetrazol, Pregnancy outcomes, Seizure, Thymoquinone

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