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Embryo-Fetal Development Study of Artesunate in Rats

Moon Koo Chung, Cheng-Zhe Jiang, Jong Choon Kim[1], and Sang Seop Han,
Korea Institute of Toxicology, P.O. Box 123, Yuseong, Daejeon, Korea; [1]College of Veterinary Medicine, Chonnam National University, Gwangju, Korea

The present study was conducted to investigate the potential embryo-fetal toxicity of Artesunate, an antimalarial drug, in Sprague-Dawley rats. The test item was orally administered by gavage to pregnant rats (22 females per group) from days 6 through 15 of gestation at dose levels of 0, 2, 4 and 8 mg/kg/day. All dams were subjected to caesarean section on day 20 of gestation and their fetuses were examined for external, visceral, and skeletal abnormalities. There were no treatment-related clinical signs, body weights, food consumption, and gross findings in any of the treatment groups. At necropsy of the dams on day 20 of gestation, an increase in the relative weight of left kidney was observed in the 4 mg/kg group. An increase in the relative weights of kidneys and an increase in the absolute and relative weights of heart were found in the 8 mg/kg group. At caesarean section on day 20 of gestation, decreases in the gravid uterine weight and the weight of female fetuses and increases in the fetal deaths and the post-implantation loss were observed in the 8 mg/kg group. In fetal morphological examinations, an increase in the incidence of visceral and skeletal variations was observed in the 4 and 8 mg/kg groups. There were no signs of maternal toxicity or embryotoxicity at 2 mg/kg.

Based on these results, it is considered that no-observed-adverse-effect levels (NOAELs) of Artesunate are 2 mg/kg both for dams and embryo-fetal development, respectively.