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Title: Toxic effects of the antifungal drug “diniconazole” on pregnant albino mice

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ABSTRACT

The purpose of this study was to assess the maternal, reproductive and hepatotoxic effects of diniconazole on pregnant female mice. The pregnant females were orally administered with 15.625mg/kg that equivalent to 1/8 LD₀ (low dose) or 31.25mg/kg that equivalent to 1/4 LD₀ (mid-dose) or 62.5 mg/kg that equivalent to 1/2 LD₀ (high dose) diniconazole in the treated groups or with corn oil in the control group, at day 8 till day 17 of gestation and sacrificed on 18th day of pregnancy. Diniconazole treatment was found to induce maternal toxicity as indicated by a significant reduction in the maternal body weight, increased maternal organs weight. Also, diniconazole increases the percent of dams with complete late resorption, abortion of all implants, reduced number of live fetuses and fetal growth retardation as manifested by reduced fetal weight and length. The hepatic tissues of dams showed marked histopathological alternations in dose dependent manner, including; a loss of hepatic architecture, reduction in the cytoplasmic material and nuclei were hypertrophic, irregular or pyknotic. Also, inflammatory leucocytic infiltrations were observed around necrotic hepatocytes area with dilated and/or congested blood vessels and sinusoids. Concerning the histochemical demonstration of general carbohydrate and total proteins in the liver tissue of pregnant mice treated with diniconazole revealed marked depletion in the content of both carbohydrates and total proteins specially in the high and mid doses.

Key words: maternal, hepatic, toxicity, histopathology, diniconazole and mice

