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Maternal–fetal repercussions of *Phyllanthus niruri* L. treatment during rat pregnancy

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Abstract

Ethnopharmacological relevance: *Phyllanthus niruri* is a well-known plant for its therapeutic purposes to treat various diseases, being widely used by the population, mainly by women. However, there is no scientific confirmation of the effects of use during pregnancy.

Aim of the study: Evaluating the effect of *Phyllanthus niruri* aqueous extract on the maternal toxicity, reproductive outcomes and fetal anomaly incidence in rats.

Materials and methods: Pregnant rats were distributed into four experimental groups: Control = treated with water (vehicle); Treated 150 = treated with *P. niruri* at dose 150 mg/kg and; Treated 300 = treated with *P. niruri* at dose 300 mg/kg; and Treated 600 = treated with *P. niruri* at dose 600 mg/kg. The rats were treated by intragastric route (gavage) with *P. niruri* or vehicle (water) from gestational day 0 to 21. At day 21 of pregnancy, maternal reproductive outcomes, biochemical profile and maternal renal tissue were evaluated. The fetuses and placentas were collected and analyzed.

Results: Treatment with *P. niruri* did not alter the reproductive performance outcomes of rats. However, treated 600 group presented with changes in maternal kidney weight and morphology. The plant did not present teratogenic effect, but caused fetal macrosomia and increased ossification sites.

Conclusion: Treatment with aqueous extract of *P. niruri* administered during gestation did not cause reproductive toxicity, but led to changes in maternal kidneys and in offspring weight, showing that the leaf extract of this plant can produce detrimental effects during pregnancy.

Keywords: Gestation; Kidney; Malformations; Medicinal plants; *Phyllanthus niruri*; Rats.

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