

Anti implantation effects of *Jatropha curcas* crude oil when fed to pregnant Sprague dawley rats during the early gestation period

ABSTRACT

Jatropha curcas is a species of flowering plants in the spurge family, Euphorbiaceae. The seeds contain 27-40% oil consisting of curcin and tetramethylpyrazine which are toxic and cause abortion, fetotoxicity and teratogenic effects if consume during pregnancy. Twenty four Sprague dawley rats at early gestation weighing about 200- 300g were randomized into four groups: Positive control group was orally administered with retinyl palmitate, negative control group with corn oil (vehicle), treatment group with 0.7 ml/kg body weight of the oil and the normal group was given distilled water. Females were paired overnight with male rats and presence of sperm in the vaginal smears indicated positive mating and considered pregnant day 1. Rats were dosed orally once daily from day 1 till day 7 of gestation. Maternal body weights were also recorded daily. Rats were euthanized by diethyl ether inhalation on day 8 and the uteri removed and stained with 1% ammonium sulphide. The number of implantation sites was counted and data obtained were analysed using SPSS. There is a significant reduction in number of implantation sites i.e., treatment groups, positive and negative control and normal group are 0.83 ± 0.401 , 4.5 ± 0.428 , 8.67 ± 0.333 , 9.17 ± 0.307 respectively. There is also a significant difference between treatment and control group in maternal body weights. In addition, a high percentage (90%) of anti-implantation activity was recorded in treatment groups. The small number of implantation sites and high percentage of anti-implantation activity suggests that *Jatropha curcas* crude oil have anti-fertility effects when fed to pregnant rats during early gestation.

Keyword: *Jatropha curcas*; Anti implantation; Early pregnancy