Physiological and histological study on the effects of Ricinus communis seed extract and oral contraceptive pills on female albino mice Mus musculus

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The present study involve preparation of aqueous extract of Ricinus communis seeds. Many chemical tests were done to find out the chemical contents of this extract. The test of acute toxicity for the extract had been done, it was found that the LD_{50} for extract was 8.6 mg/gm.

Comparative physiological and histological study have been done to show the effect of the extract and oral contraceptive pills (type of Nordette) for female mice, the physiological study using blood parameter which including (Red blood cells count, white blood cells count, hemoglobin concentration and packed cell volume) and some of biochemical parameters such as (some enzyme activity GPT, GOT and total protein, cholesterol), it was found there are no significant differences among them, when one of them were treated with extract and the other that treated with OCPs in comparison to the control group, but the PCV, GOT, GPT show significant differences.

The histological study have been done to explain the efficiency of each of extract and OCPs on Liver, Kidney, Ovary and Uterus in female mice. The effect was similar in Ovary and Uterus in both treated groups, but there were significant differences in Kidney and Liver which show more effectiveness by OCPs than the group treated with extract. Effect of extract on body weight have been done, it was found that the extract causes decrease in body weight.

In addition that, the study investigates the effect of each extract and OCPs on female mice fertility which show no differences and probability of fertility was zero. Moreover the ability of animal to pregnancy after interruption of oral dose of extract or OCPs was studied, the animal treated with OCPs resume the ability to pregnancy faster than that treated with extract. The effect of extract on oestrus cycle of female mice was studied, show large effectiveness on prolonged of oestrus cycle and its phases especially Dioestrus phase.