

Effects of Mangiferin Drug on Level of Reproductive Hormones, Sexual Activity, Number and Weight of Offspring in Female Albino Rats

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SUMMARY. This study was aimed to investigate the effect of two doses of Mangiferin (MGF) on hormonal level and sexual activity in female albino rats. Ninety female rats with age (9-10 weeks) and weight (200 ± 20 g) were divided into three major groups of thirty rats. First group was considered as control G1, the second G2 and third G3 groups were exposed to MGF in two doses 150, and 300 mg/kg body weight per day respectively. Each major group was divided into three subgroups (subgroup A, B, and C of each has ten rats), the treatments last for one month for subgroup A, two months for subgroup B, and three months for subgroup C. Five rats from each subgroup were placed separately into two breeding cages with two isolated males and waiting the pregnancy and then delivery. Blood samples were collected from other five rats in each subgroup by heart puncture technique for hormonal assessment, The results showed a significant ($p \leq 0.05$) decrease in the levels of luteinizing hormone (LH), follicular stimulating hormone (FSH), and prolactin hormone (PRL) in treated groups (G2 and G3), when compared to the control group. A significant ($p \leq 0.05$) increase in the levels of testosterone, estradiol, and progesterone was observed in the serum of treated groups (G2 and G3), when compared to control rats (G1). The results showed a significant ($p \leq 0.05$) delay in the delivery of the offspring in (G2 and G3) groups as compared with control (G1). There was a significant ($p \leq 0.05$) decrease in the number and weights of offspring in the treated rats (G2 and G3), as compared to the number and weights of offspring of the control groups (G1).

RESUMEN. Este estudio tuvo como objetivo investigar el efecto de dos dosis de mangiferina (MGF) sobre el nivel hormonal y la actividad sexual en ratas albinas hembra. Noventa ratas hembra con edad (9-10 semanas) y peso (200 ± 20 g) se dividieron en tres grupos principales de treinta ratas. El primer grupo se consideró como control G1, el segundo grupo G2 y el tercero G3 se expusieron a MGF en dos dosis de 150 y 300 mg/kg de peso corporal por día, respectivamente. Cada grupo principal se dividió en tres subgrupos (el subgrupo A, B y C de cada uno tiene diez ratas), los tratamientos duran un mes para el subgrupo A, dos meses para el subgrupo B y tres meses para el subgrupo C. Cinco ratas de cada El subgrupo se colocó por separado en dos jaulas de reproducción con dos machos aislados y esperando el embarazo y luego el parto. Se recolectaron muestras de sangre de otras cinco ratas en cada subgrupo mediante la técnica de punción cardíaca para la evaluación hormonal. Los resultados mostraron una disminución significativa ($p \leq 0.05$) en los niveles de hormona luteinizante (LH), hormona estimulante del folículo (FSH) y hormona prolactina. (PRL) en los grupos tratados (G2 y G3), en comparación con el grupo control. Se observó un aumento significativo ($p \leq 0.05$) en los niveles de testosterona, estradiol y progesterona en el suero de los grupos tratados (G2 y G3), en comparación con las ratas control (G1). Los resultados mostraron un aumento significativo ($p \leq 0.05$) retraso en el parto de la descendencia en los grupos (G2 y G3) en comparación con el control (G1). Hubo una disminución significativa ($p \leq 0.05$) en el número y peso de las crías en las ratas tratadas (G2 y G3), en comparación con el número y peso de las crías de los grupos de control (G1).

KEY WORDS: female rat, mangiferin, offspring sex hormones, weight and number.

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