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## Research Details :

Research Title : *The Histological and Ultrastructural Changes in Male Reproductive System of Swiss Albino Mice after treatment with Lithium Carbonate ( Li2Co3).*

التغيرات النسيجية و التركيبية الدقيقة في الجهاز التناسلي الذكري للفئران السويسرية البيضاء بعد معالجتها بكاربونات الليثيوم (Li2Co3) .

Descriptipn : This study investigated with the effect of Camcolit (Lithium Carbonate) "used in the treatment of depression" on the histological structure of the male reproductive system. In addition the ultrasrtucture examination of the testes and the testosterone level in the plasma of the male albino mice was investigated . In this study we used 40 pregnant mice (10th day of pregnancy) and 40 mature male mice . All mice were injected intraperitoneally and were divided equally in to two groups , 1st group was the control group injected with saline (0.9%) and the 2nd group was the experimental group injected daily with Camcolit (0.75 mg/mouse) for 35 days .Twenty male weanling mice were taken from each controlled and experimental female groups . Testicular tissue , epididymis and vas deferens were taken from both immature and mature groups .All selected specimens were processed by histological method and 5  $\mu$  section were obtained , stained by (Haematoxylin & Eosin) and Toluidine blue for histological studies examination . Also the testes were taken after intracardiac perfusion by gluteraldehyde to insure the success of fixation for the electron microscopic study. Blood samples were collected from the eye by using capillaries tube and by using the centrifuge male plasma is separated by centrifuging blood samples and used for testosterone determination. Results showed the following : Significant increase in weight of immature animals and significant decrease in weight of mature animals .Decrease in testes weight of mature animals due to the adverse effect of lithium on the gonadotropin releasing hormone (FSH & LH) Our histological results supported the changes which were observed in the testes weight due to the hypospermatogenesis also the effect of Camcolit extended to cause change in the epididymis and vas deferens tissues .The radioimmunoassay explained the relation between the disturbion of Leydig cells and the low level of the testosterone . Mitochondria and smooth endoplasmic reticulum were sensitive indicators to the slightest pathological changes induced by drug administration which lead to dysfunction

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