Testicular Toxicity of Lead in Male ICR Mice

*Li-Chung TSENG, Jim-Shoung LAI, Jiunn-Wang LIAO, and Shun-Cheng WANG

1Department of Technology, China Medical college, Taichung, Taiwan 400, ROC
2Department of Public health and Institution of Environmental Health, China Medical college, Taichung, Taiwan 400, ROC
3Department of Applied Toxicology, Taiwan Agriculture Chemicals and Toxic Substances Research Institute, Taichung, Taiwan 413, ROC

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ABSTRACT Male ICR mice were treated intraperitoneally (i.p) with 0 and 100 mg/kg body weight (bw) of lead acetate for 5 day-repeated dosages and sacrificed on day 35 or 0, 2.5, 5, 25, and 50 mg/kg bw 5 days a week and sacrificed on days 21 and 35, to evaluate the sperm concentration, abnormality, motility, testis and epididymis toxicity in different doses and periods. Experimental results indicated that reduced sperm concentration and motility, and increased the sperm abnormality in the cauda epididymis after 100 mg/kg bw of lead for 5-day repeated dosage treatments. The histopathological effects were extensive spermatocytes and spermatids as well as seminiferous tubular atrophy in the testis. Furthermore, much necrotic cell debris was found in the cauda epididymis lumen with only a few sperms left. A dose-dependent decrease occurred in the sperm concentration, and the sperm abnormality increased as well. The histological scores of the testis and cauda epididymis increased when the dose was gradually increased in the 21 day-repeated dose groups. The testicular toxicity in 35 day-repeated group was more severe than that of 21 day-repeated groups, indicating that lead could cause testicular toxicity in male ICR mice. [Tseng LC, Lai JS, Liao JW, and Wang SC. Testicular toxicity of lead in male ICR mice. J Chin Soc Vet Sci 27 (2): 113-121, 2001. *Corresponding author TEL: 05-379 2951, FAX: 05-370 3510, E-mail: condict@ms43.hinet.net]

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