
Impact of lead on hearing

Usama Abd El-Baset Hadhoud

Inorganic lead toxicity is a well-known entity. This metallic element has many applications and is commonly found in home and industrial surroundings. This study was carried out to evaluate the toxic effect of lead on the inner ear structure and hearing threshold level. Our epidemiological study was conducted on 1000 Egyptian subjects from the suburban of Kalyoubia Governorate that were divided into 2 groups, 500 lead - exposed subjects in their daily job and 500 controls (sex and age matched). For all the studied groups, B-pb level, EPP and HTL were estimated. BAEP was done on 50 exposed subjects only. There was a statistically significant difference between both groups in B-pb level, EPP level in blood and in HTL. Regarding lead exposed subjects, there was a +ve significant relation between B-pb level and HTL and there was a +ve relation between B-pb level, age and duration of exposure to lead. The subgroup (randomly taken from the exposed subjects) that was studied by (BAEP) 4 subjects only from 50 lead - exposed subjects showed prolongation in IPLP (I-V). In the experimental study that was conducted on 30 guinea pigs, 10 guinea pigs were poisoned by I.P injection of 1% lead acetate solution.