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Genotoxic effects of hexavalent chromium on *Labeo dussumieri*, a food fish in Sri Lanka

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This study was carried out in order to evaluate the genotoxicity caused by hexavalent chromium (Cr) in the freshwater fish Malabar *Labeo* (*Labeo dussumieri*). The comet assay was performed *in vitro*, exposing fish erythrocytes overnight to different concentrations of chromium (0.0015 – 0.15 mg/L) based on previously recorded levels in fish blood. The micronucleus test was performed after exposing adult fish *in vivo* to concentrations based on environmental levels (0.002 – 2.0 mg/L) to evaluate long term exposure. The comet assay demonstrated that DNA damage in terms of tail DNA percentage and Olive moment was significantly higher ($p < 0.05$) in cells exposed to 0.015 mg/L Cr and above, in comparison to the controls. Both parameters showed strong positive dose dependent trends ($r_2 = 0.973$, $r_2 = 0.966$; $p < 0.05$). The number of micronuclei in erythrocytes of fish exposed to 0.02 mg/L concentrations and higher was increased significantly ($p < 0.05$) compared to that of control fish. There was a marginally significant positive correlation between exposure concentration and the number of micronuclei. These results indicate the potential genotoxicity of hexavalent Cr in *L. dussumieri*, at environmentally relevant levels. The dose-dependent nature of the damage allows these parameters to be used as biomarkers for monitoring aquatic pollution.

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Nurses' knowledge and practices regarding detection and management of acute drug poisoning at Cairo University hospitals

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Detection and management of poisoning represents a basic emergency nursing competency. Nurse's knowledge and practice play important roles in providing supportive care to decrease morbidity and mortality caused by poisonings. The study aimed to assess nurses' knowledge and practice regarding detection and management of acute drug poisoning. A descriptive exploratory design was utilized. Two research questions were formulated: What is the nurses' level of knowledge regarding detection and management of acute drug poisoning? and What is the nurses' level of practice regarding detection and management of acute drug poisoning? The study is carried out at The National Center for Clinical and Environmental Toxicology affiliated to Cairo University Hospitals. A convenience sample of 30 nurses with a minimum one year of experience was utilized. Three tools were developed and utilized to collect data: Tool-1. Nurses' sociodemographic data sheet, tool-2; acute drug poisoning nurses' interview questionnaire and tool-3; acute drug poisoning nurses' practice observational checklist. All the studied sample (100%) had unsatisfactory knowledge and practice level (<75%) regarding detection and management of acute drug poisoning with a total mean knowledge and practice scores of $(36.86 \pm 2.046$ & $28.20 \pm 2.51)$ respectively. No significant correlations were found between age, years of experience, total knowledge scores and total practice scores. No significant statistical difference was found in the total mean practice scores in relation to socio-demographic characteristics. A high significant statistical difference was found in the mean practice scores in relation to qualifications.

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