

Assesment of Chemical Risk Factors among Artisanal Tannery Workers in Morocco

Arhoune. I^{1,2*}, Hoummami. H¹, Khattabi. A³, Faqir. S⁴ and Achour. S^{1,2}

¹Pharmaco-Toxicology service of CHU Hassan II Fez, Morocco

²Laboratory of Biomedical and Translational Research, Faculty of Medicine, Morocco

³National school of public health, Morocco

⁴Laboratoy of Epidemiology Clinical Research and community health, Morocco

Epidemiological studies among tannery workers have shown different risks and toxic effects on the health of tanners (1),(2). However, health problems of traditional tannery workers has never been studies in Morocco with medical monitoring.

Aim: To assess the health hazards faced by the workers in traditional tanneries in Morocco.

Materials and Methods: In this cross-sectional study, a total of 440 study population that 220 are the workers from three artisanal tanneries located in the old medina of Fez city, besides 220 subjects served as a control. The study was approved by the University Hospital committee of Ethics at fez. The questionnaire included socio-demographic, clinic-pathological, biological and toxicological informations. The results were analyzed by statistical tests included Chi Square and student's t-test. Total blood chromium was estimated by ICP-MS.

Results: All the research population was men. The most recruited age section was between 40 and 60 years. The clinical manifestation was significantly higher (86%) in comparison to the control group (32%). Musculoskeletal diseases (77.5%), Dermatological (19%) genito-urinary disorders (36%) were found more frequently for tanners in comparison to the controls (9%), (4.5%) and (1.8%) concurrently. The frequency of anemia (3%) and urinary infections (34%) was higher for the tannery workers in comparison to the control (0%). Also, there is no statistical difference in liver enzyme activities and renal functions between the two studies groups. Blood chromium level showed no significant difference in workers as compared with control.

Conclusion: Health risks among artisanal tannery workers are very high and they are extremely associated with some chemicals and insupportable working conditions.

Bibliography:

1. Özdiilli K, İşsever H, Özyildirim BA, Hapçıoglu B, Ince N, Ince H, et al. Biological hazards in tannery workers. Indoor Built Environ. 2007;16(4):349–57.
2. Ahsan MM. Biochemical and Haematological Abnormalities in Human Population Exposed To Hexavalent Chromium in Effluents of Tanneries Industrial Area of District Kasur. 2003;38(3):239–53.