

The Changes of Erythrocyte Indices in Pesticide Factory Workers

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Abstract

Background and Objectives: Erythrocyte indices are helpful for monitoring the erythrocyte synthesis and liver condition. The pesticide factories' staff are being exposed to poisoning. This article aims to evaluate the effect of pesticides on blood indices of subjects which are exposed to organophosphate toxins.

Material and Methods: This cohort study was conducted on the 63 employees of a pesticide factory In Gorgan.Iran (2005). We performed a two-step Sampling, The beginning of working season and three months later. Then, data analysis was carried out ($p < 0.05$).

Results: The difference between the mean of MCV in phase one (82.8 ± 7.1 fl) and phase two (80.3 ± 6.7) is Significant ($p < 0.001$). The increase of Erythrocyte, hemoglobin, HCT, and MCHC in the second phase was statistically meaningful. There is not any significant relation between the work place, Record of Services and red blood cell indices.

Conclusion: In regard to the changes in hematologic indices in a three-month period, it seems logical to set up a program to have a routine check on the hematologic indices in people engaging in such occupations

Key words: Pesticide, organophosphate toxins, hematologic indices, MCV, hemoglobin, hematocrit.