

عنوان مقاله:

Evaluation of Blood Parameters of the Medical Radiation Workers

محل انتشار:

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خلاصه مقاله:

Introduction: Medical workers in the departments of radiology, computed tomography, nuclear medicine, and radiotherapy are always exposed to ionizing radiations. Complete blood count (CBC) test is commonly used to monitor the health of radiation workers. The aim of this study was to evaluate the hematological parameters of radiation workers of Isfahan, Iran, and reveal the effectiveness of the CBC tests in the prediction of the radiation effects on the health of such workers. Material and Methods: The current study was conducted on 160 radiation workers and 103 healthy people using CBC tests. To obtain the main aim of the study the obtained results of the two groups were compared in terms of blood parameters. Results: The hematocrit in the male radiation workers was estimated at 45.98 ± 3.00 , which was significantly higher than that of the control group ($44.33 \pm 2.41\%$, $P < 0.05$). However, mean corpuscular hemoglobin concentration and platelets counts were of lower levels in radiation workers, compared to the control group ($P < 0.05$). The lymphocyte percentage of female radiation workers was $33.78 \pm 7.47\%$, which was significantly lower than that of the controls ($37.84 \pm 8.97\%$, $P < 0.05$). Conclusion: The CBC test can be used to follow up on the overall health status of radiation workers. However, it is essential to perform complementary methods, such as chromosomal changes, cytokines, and interleukins evaluation, for the early detection of radiation effects.

کلمات کلیدی:

Complete blood count, Radiation Effects, workers

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