

عنوان مقاله:

Evaluation of some blood parameters alteration following low-dose radiation induced by Myocardial Perfusion Imaging

محل انتشار:

مجله فیزیک و مهندسی پزشکی، دوره 8، شماره 2 (سال: 1397)

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خلاصه مقاله:

Introduction: With increasing the usage of myocardial perfusion imaging (MPI) for the diagnosis of ischemic heart disease, we aimed to evaluate the side effects of low-dose radiation induced by this technique on blood elements, especially proteins and liver function factors. **Material and Methods:** 40 eligible patients (Mean age: 54.62 ± 10.35 , 22 female and 18 male), who had referred to the nuclear medicine department for MPI from May till August 2014, were enrolled in the study. A blood sample was taken from each patient just before and 24 hours after the injection of 740Mbq of Technetium- 99m Methoxy isobutyl isonitrile (99mTc-MIBI) in the rest phase of the MPI in a reference medical laboratory; blood tests included total protein (TP), albumin (Alb), globulin (Glo), aspartate aminotransferase (AST), alanine transaminase (ALT), alkaline phosphatase (ALP), direct bilirubin (D.Bili), total bilirubin (T.Bili), serum iron (SI), total iron bounding capacity (TIBC), Albumin globulin ratio (A/G ratio), and complete blood count (CBC). **Results:** Injection of 740Mbq 99mTc-MIBI caused a significant increase in serum levels of AST ($p=0.001$), ALT ($p=0.001$), SI ($p=0.030$), TIBC ($p=0.003$) and A/G Ratio ($p=0.020$). However, following radiotracer injection, a significant decrease was noted in the serum levels of TP ($p=0.002$), Alb ($p=0.014$), Glo ($p=0.002$), ALP ($p=0.001$), D.Bili ($p=0.003$) and T.Bili ($p=0.000$). **Conclusion:** Due to increased usage of MPI, our data highlights the importance of monitoring the clinical and paraclinical effects of the procedure on vital organs and physiological pathways to reduce their adverse effects.

کلمات کلیدی:

Low-dose Radiation, Blood Biomarkers, Myocardial Perfusion Imaging

