

عنوان مقاله:

Effect of Ramadan Fasting on the Blood Coagulation System in a Session Soccer Match

محل انتشار:

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خلاصه مقاله:

Introduction: Ramadan fasting is associated with modifications in athletes' metabolic, physiological, and psychological responses, which may affect their physical performance. The present study aimed to assess the changes in some of the risk factors for thrombosis in trained men after one soccer session in fasting and non-fasting states. **Methods:** This study was conducted on 11 amateur soccer players with the mean age of 22 ± 16 years and mean body mass index of 26.49 ± 2.86 kg/m². The subjects played in a soccer match with the duration of ~100 minutes, including 10 minutes of warm-up and 90 minutes of a soccer match, in two sessions (one week before and on day four of Ramadan). Blood samples were collected before and after the soccer game. Fibrinogen and D-dimer were analyzed using the Clauss clotting method and the turbid metric assay, respectively. In addition, plasminogen and alpha 2-antiplasmin were analyzed via spectrophotometry, and homocysteine was examined using the ELISA assay. Data analysis was performed using the Shapiro-Wilk test and independent and dependent t-test at the significance level of $P \leq 0.05$. **Result:** One session of soccer match increased homocysteine in the fasting ($P = 0.006$) and non-fasting subjects ($P = 0.042$). Alpha 2-antiplasmin decreased in the fasting ($P = 0.031$) and non-fasting subjects ($P = 0.001$), while plasminogen decreased only in the non-fasting subjects ($P = 0.012$). One session of soccer match had no significant impact on fibrinogen and D-dimer in both states, as well as plasminogen in the fasting state ($P \geq 0.05$). Furthermore, no significant differences were observed between the fasting and non-fasting subjects in terms of homocysteine, alpha 2-antiplasmin, fibrinogen, plasminogen, and D-dimer in response to one session of soccer match ($P \geq 0.05$). **Conclusion:** According to the results, one session of soccer match in the fasting state was parallel to the non-fasting state, and fasting led to no adverse consequences in the coagulation system of the subjects.

کلمات کلیدی:

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