March hemoglobinuria and hematological changes in severe physical activity

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Background: Severe physical activity can changes metabolic rate and function of several body organs. Long term physical activity can cause hematological changes and complication of kidney and muscles. Thus we decided to assess hematological changes in athletes with severe physical activity in order to determine weather regular cheked up can alarm any hematologica changes and prevent dengerous complications in these persons.

Material and method: This case-control study conducted on ۴۶ athletes with severe physical activity for one month and ۵۰ non athlete healthy individuals. Initially two groups evaluated for Hb and HCT level and also present of hemoglobinuria in four times at before beginning of practice, one day, one week and also one month after start of practice. Finally obtained data were analyzed by SPSS software. We used t-test for comparision between two groups of case and control.

Results: Comparison between ۴۶ athletes with severe physical activity and ۵۰ people as control group revealed that Hb and HCT at the first day of practice did not have statistically significant different ($P>۰.۰۵$) but after first week and last month of practice was seen statistically significant different. Hemoglobinuria after beginning and the last month of practice had statistically significant different in comparison with control group.

Conclusion: Regularly check up for Hb, HCT and hemoglobinuria was recommended in athletes with severe physical activity.

Keyword: Severe physical activity, hemoglobinuria, Hb, HCT