

Comparison of acid lactic and fatigue levels following by specific test with a simulated tournament in professional table tennis athletes' girls of Guilan province

Ensieh Mazlomi*,

Abstract Introduction: The aim of this study was to comparison acid lactic and fatigue levels following by specific test with a simulated tournaments in professional table tennis athletes' girls of Guilan province. **Method:** Among 20 provincial table tennis athletes, sixteen athletes with age ranges rages 20-30 years old were ed as the study population. Athletes conducted a specific table tennis test (until exhaustion) and a simulated table tennis match (two continuous days and seven game in each day) with a minimum of 24 hours rest between tests. Blood lactate concentration was measurement before the first game and after the third and seventh games of simulated table tennis match, and before and 20 and 60 seconds after finishing of the specific table tennis test. In addition, fatigue level was measurement and compared after both simulated table tennis match and specific table tennis test using Borg scale. Statistical analyses were performed using SPSS software, version 23 at the significance level of $p < 0.05$). In addition, between tests fatigue index assessing, indicated that fatigue index changes after simulated table tennis match was significantly higher than specific table tennis test ($p = 0.0001$). In addition, there were a significant positive correlation following specific test with a simulated tournaments for blood lactate ($r = 0.05$ and $p = 0.04$), heart rate activity ($r = 0.90$ and $p = 0.00$) and heart rate activity to target Heart Rate ratio ($r = 0.93$ and $p = 0.00$). **Conclusion:** Altogether, it can be conclude that specific table tennis test is a valid test for assessing anaerobic test in table tennis athletes and it has appropriate validity for predicting player's fatigue level during the tournament.

Keywords : Key words: table tennis, acid lactic, fatigue, professional table tennis

athletes' girls

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