A Study of Speed, Power & Fatigue Index of Cricket Players

Kumar[1], Ashok and Kathayat[2], Lokendra Bahadur
[1] Assistant Professor, Department of Sports Science, Punjabi University Patiala (Punjab) India Email: akashokin@gmail.com
[2] Research Students, Department of Sports Science, Punjabi University Patiala (Punjab) India

Abstract

The purpose of this investigation was to study speed, power and fatigue index of under 19 year cricket players. The design of this study required participants to perform six sprints each of 35 meter. Thirty one (N=31) trained male cricketers between the ages of 15 and 19 years volunteered for this study. The mean age, height and weight of cricketer were 16.81±1.13year, 172.23±6.85cm and 61.33±8.93Kg respectively. The mean sprint time of each 35m sprints-of cricketers was 5.39±0.34 seconds, 5.53±0.31 seconds, 5.61±0.36 seconds, 5.85±0.26 seconds, 5.94±0.25seconds and 6.07±0.17 seconds. The mean power-1, 2,3,4,5 and 6 of cricketer was 491.00±105.90 watts, 454.90±94.81watts, 435.23±90.49 watts, 382.84±78.54watts, 364.68±78.62watts and 339.94±58.96watts.The maximum power, minimum power and average power of cricketer was 511.55±94.97watts, 333.71±65.83watts, and 411.42±73.59 watts. It was concluded from the results of this study that sprint time and power decline in cricketer may be due to reduced energy production via anaerobic glycolysis and muscle acidosis.

Key words: Speed, Power, Anaerobic glycolysis, Fatigue

Introduction

Although cricket is one of the oldest organized sports, there is a relative lack of scientific research of this sport or its players. Very few studies of the physical and physiological demands of cricket playing are available in the literature *(Woolmer & Noakes, 2008; Christie & King, 2008).* International cricket is undergoing a phase of rapid change as it competes to attract a more global audience. International cricketers are now exposed to greater demands reflected by more five-and one day matches per season, longer seasons and more frequent touring *(Noakes & Durandt, 2000).* Thus, there is a real need to understand critically the physiological demands of modern cricket, initially for the benefit of individual players and teams, but eventually for the survival and growth of the game itself. Due to the nature of cricket that demands varying degress of intermittent activities such as batting, bowling, fielding, anaerobic power and capacity is of great interest to those involved in the sport, as most rely heavily on players' ability to move quickly and powerfully. Sprint running times have been shown to be well correlated to peak and mean power output *(Patton & Duggan, 1987).* The purpose of this investigate was to evaluate the speed, power and fatigue index (i.e. anaerobic power and capacity) of under 19 year cricket players.

Materials & Methods

The design of this study required participants to perform six sprints each of 35 meter. A rest of 10 second was given to the participants between each sprint. Thirty one (N=31) trained male cricketers between the ages of 15 and 19 years of Punjab Cricket Academy volunteered for

Date of Communication: Dec. 10, 2013
Date of Acceptance: Feb. 10, 2014
SJIF IMPACT FACTOR 2013=4.65