Abstract:

The purpose of this study was to compare classic Wingate anaerobic test with on-ice specific field test MM636 and also evaluate reliability and validity of MM636. The MM636 uses an on-ice continuous skating protocol to induce a physical stress on a participant`s anaerobic energy system. Subject is instructed to skate at maximal speed back and forth 6 times 36m distance (blue base lines) with full equipment and stick. 22 elite junior ice hockey player age between 16-20 years perform both tests with one week rest pause between them. The maximal anaerobic power (Pmax) significantly ($p<0,025$) correlated ($r = -0,45$), while for anaerobic capacity (AnC) we found only non- significantly ($p>0,1$) correlation ($r = 0,28$) with Wingate anaerobic test. The blood lactate levels were very similar after MM636 and WAT30. The measured difference was only 0,5 mmol/l. The Reliability of MM636 during a retest were significant ($p<0,001$) for both AnC ($r = 0,97$) and Pmax ($r = 0,73$). The MM636 appeared to be valid and reliable test, but only a poor correlation was observed between WAT30 and MM636 in this group of hockey players.

Title:

Correlation between Wingate anaerobic test (WAT30) and on-ice field MM636 test.

Objective:

Estimating validity and reliability of MM636 and measuring correlation between WAT30 and MM636.

Methods:

Correlative – predictive study

Results:

Demonstrate reliability, validity of MM636 test and correlation with WAT30.

Key words:

Wingate test, maximal anaerobic power, anaerobic capacity, ice hockey, field test.