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EVALUATION OF INCIDENCE OF BALL HANDLING ON SWIMMING INTENSITY IN FEMALE WATER POLO

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Abstract

The purpose of the present study is to verify the incidence of ball handling in swimming intensity in water polo, in order to obtain useful indication in coaching. The research method is integrated and consists of action research for coach contribution by training and evaluation, and theoretical-argumentative to deduce a framework in which define the data processing. Eleven well-trained competitive athletes were recruited and asked to swim 5 x 20-m, one time with ball, and one time without ball. This test was repeated three times.

For each swimmer was calculated the mean and standard error of times per test, both with and without the ball. Analysis was conducted individually for each athlete, and in total for each test. The results, trough confrontation of means of times, reveals a high variability, and indicate a non mechanical incidence of ball handling on swimming intensity. Reading this results in correlation to athletes anamnesis reveals that incidence of ball-handling is significant only in athletes who have a swimming-oriented athletic history, but there are not significant differences in times for athletes who have a water polo oriented athletic history.

The results show as this study can help the coach to train the team for improving the analyzed skills in different mode, creating a methodological system training to enhance the performance.

Coaches are suggested to carefully monitor swimming rhythm during trials, and to increment ball-handling in every training condition.

Keywords: action research, theoretical-argumentative, performance analysis.

Introduction

Water polo is a collective sport and efforts of high intensity are made in less duration, where the players must swim, jump, and send the ball with moments of rest or low intensity; it is also a contact sport where the players conduct battles against their adversaries like blockades, beatings, contacts, and pushes (H.K. Smith, 1998; K. Van der Wende, 2005).

In water polo, the skill that is used for the majority of the game is swimming.

"Water polo consists of high intensity bursts of sprinting, interspersed with short periods of low to moderate intensity swimming." (A. Hohmann, R. Frase, 1992).

In this perspective, swim conditioning is obviously an important aspect of training for Water Polo.

In swimming, conditioning training assumes a consistent role to achieve the better goals (G. Raiola et al, 2011).

Aim of this pilot study was to establish the influence of ball handling in swimming intensity in water polo, in order to obtain useful indication in coaching.

Methods

The research method is integrated and consists of action research for coach contribution by training and evaluation and theoretical-argumentative to deduce a framework in which define the data processing.

Eleven well-trained competitive athletes were recruited and asked to swim 5 x 20-m, one time with ball, and one time without ball. This test was repeated three times.

For each swimmer was calculated the mean and standard error of times per test, both with and without the ball. Analysis was conducted individually for each athlete, and in total for each test.

Results. The following histograms show the mean of times for athlete for the three test.

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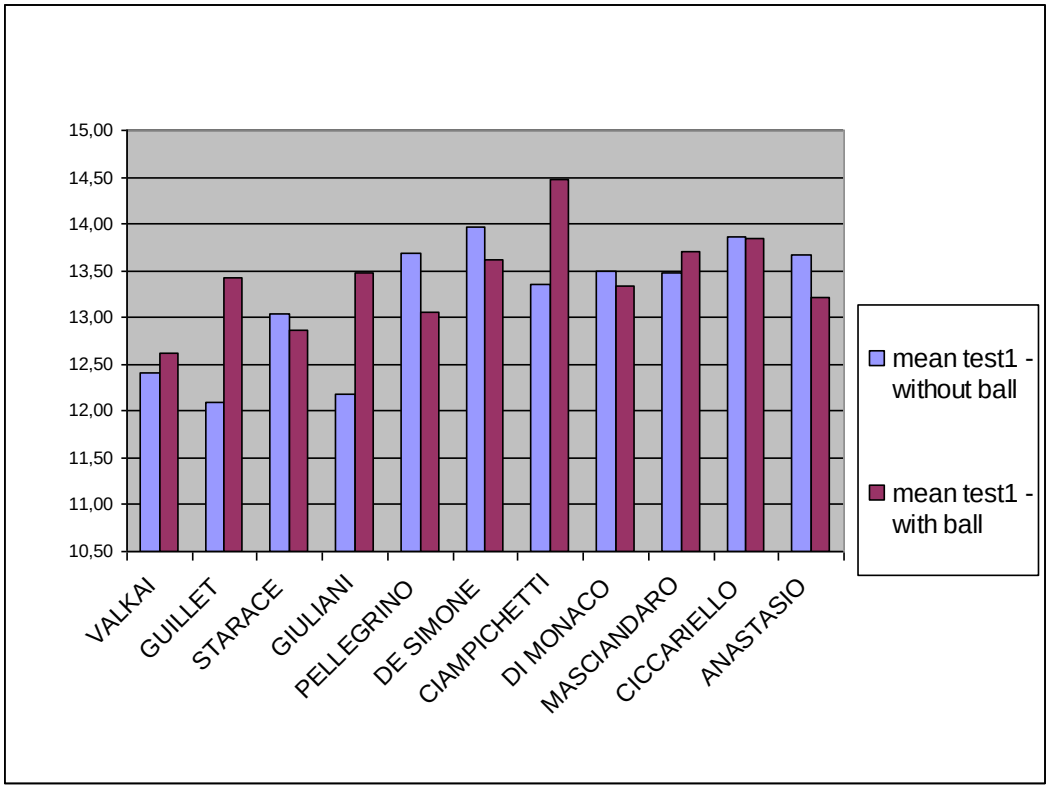

Figura 1 - first test, means with and without ball

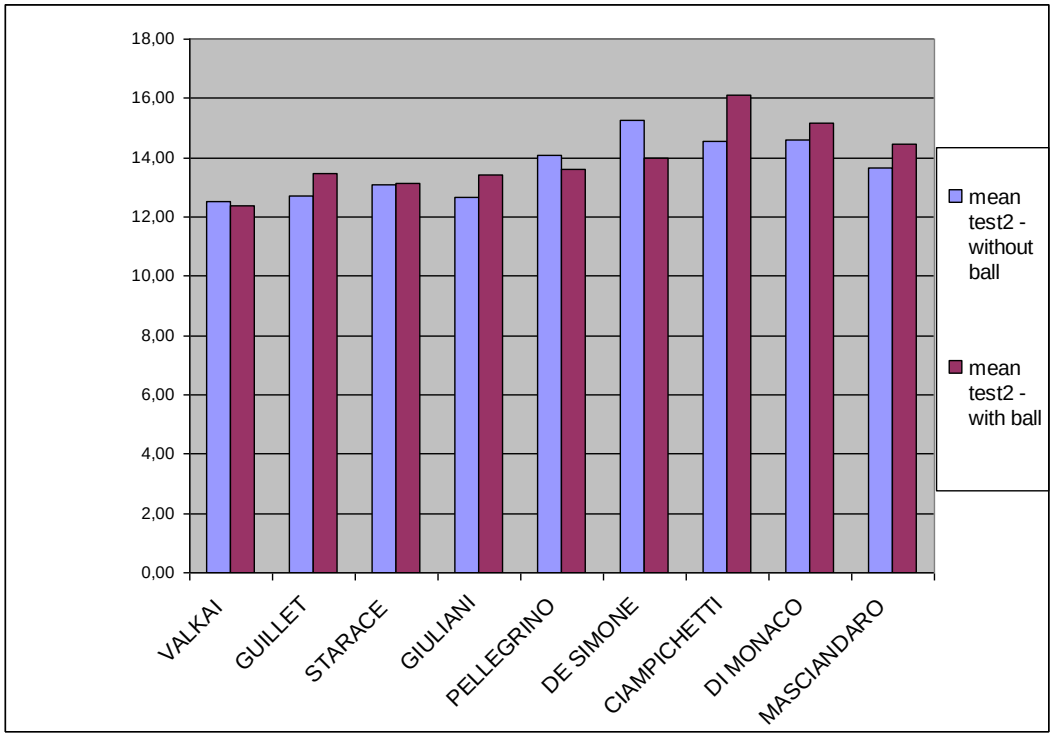

Figura 2 - Second test, means with and without ball

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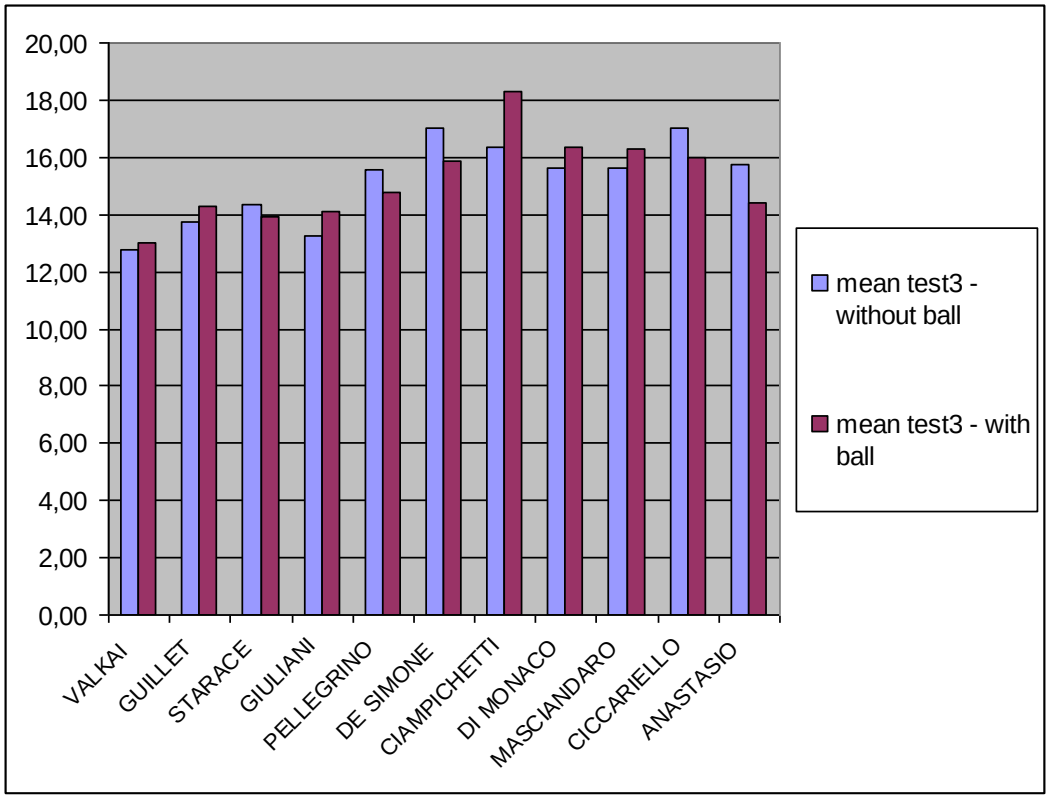

Figura 3 - 3rd test, means with and without ball

Discussion

In table 1 is visible as mean of times without ball is not always smaller than mean of times with ball, which indicates a non mechanical incidence of ball handling on swimming intensity.

This results can be read in correlation to athletes anamnesis, revealing that incidence of ball-handling is significant only in athletes who have a swimming-oriented athletic history, but there are not significant differences in times for athletes who have a waterpolo-oriented athletic history.

Some athletes (indicated with a "<<" in table 1) realized systematically smaller times when they swam with ball.

	1st test without ball	1st test with ball		2nd test without ball	2nd test with ball		3rd test without ball	3rd test with ball	
VALKAI	12,41	12,61	>>	12,54	12,37	<<	12,75	13,03	>>
GUILLET	12,10	13,42	>>	12,72	13,46	>>	13,74	14,28	>>
STARACE	13,04	12,87	<<	13,09	13,15	>>	14,37	13,89	<<
GIULIANI	12,19	13,48	>>	12,64	13,44	>>	13,24	14,11	>>
PELLEGRINO	13,69	13,05	<<	14,07	13,60	<<	15,56	14,78	<<
DE SIMONE	13,96	13,61	<<	15,26	13,97	<<	17,03	15,87	<<
CIAMPICHETTI	13,36	14,47	>>	14,56	16,10	>>	16,37	18,32	>>
DI MONACO	13,49	13,34	<<	14,60	15,15	>>	15,59	16,34	>>
MASCIANDARO	13,48	13,71	>>	13,64	14,44	>>	15,62	16,26	>>
CICCARIELLO	13,86	13,84	<<	14,52	14,43	<<	17,03	15,96	<<
ANASTASIO	13,68	13,22	<<	14,69	13,21	<<	15,73	14,39	<<

Tabella 1 - Means for each test

The results show as this study can help the coach to train the team for improving the analyzed skills in different mode, creating a methodological system training to enhance the performance.

Coaches are suggested to carefully monitor swimming rhythm during trials, and to increment ball-handling in every training condition.

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