This questionnaire was divided into transfers, activities of daily living (ADLs) and sport skills (SS). After descriptive analysis, we applied U de Mann-Whitney (wheelchair use) and Kruskal-Wallis (age, wheelchair use, years since injury, years of wheelchair use, years of federated sport and years of recreative sport) for determine the statistical difference, after check the normality of the data, indicating the value of effect size. The level of significance was set at $p \leq 0.05$.

RESULTS

Twenty seven point five percent of the players reported SP, while 13.7% of those had pain in their right shoulder. Subjects had more SP between 10 and 20 years of using wheelchair. There was no statistical difference for SP related to specific SS according to age, years since injury, years of wheelchair use and years of federated/recreative sport. However, SP had statistical difference when do rebounding/one-handed long passes according to wheelchair use. The practical significance was from small to large.

CONCLUSIONS

SP has been reported to increase with advancing age and years of wheelchair use (Curtis et al, 1995). However, in this study subjects with less than 20 years showed increasing index score. In participants that use wheelchair for daily activities, SP is more prevalent in SS such as rebounding/one-handed long passes. Subjects between 10 and 20 years since injury had higher SP in ADLs. Players that had less time doing sport are more predisposed to have SP. It is necessary to promote shoulder health in WB players. In conclusion, SP affect more ADLs than SS in WB players specially related to age, years since injury, years of wheelchair use and years of federated/recreative sport; however SP related to SS had more SP do rebounding/one-handed long passes according to wheelchair use.

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The distance-time relationship with aerobic parameters determined in tethered swimming

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INTRODUCTION

Critical velocity (CV) as calculated by the slope of the d-t_{Lim} relation, has been suggested as a useful tool in the prescription and training load control (Costa et al., 2015). Tethered swimming has been pointed as one of the most specific swimming ergometer, simulating the environment characteristics, stroke mechanics and physiological aspects of swimming (Morouço, 2011). The aim of this study was to analyze the relationship between distance-time indicators and aerobic

parameters determined in tethered swimming.

METHODS

Eleven male (18.0±4.0 years of age, 180.2±6.8 cm in height and 71.8±9.5 kg in body weight) and five female swimmers (16.8±3.6 years of age, 166.2±5.5 cm in height and 61.1±9.8 kg in body weight), volunteered for this study. CV was determined from the modeling of the d–t_{Lim} relationship from maximal performance in 200, 400, 800 and 1500 m freestyle swimming. An incremental tethered swimming test with a conventional load system tied to the swimmer with in increments of 5% per minute (range 30-100% of Fmean) was performed. Oxygen uptake was assessed by an automatic and portable system (K4b^2 Cosmed, Italy) for direct breath-by-breath analysis of pulmonary gas exchange, which was attached to the swimmer by a snorkel with a tri-dimensional valve (Aquatrainer®). Critical force (F_{CRIT}), Maximum oxygen uptake (VO_{2max}), respiratory compensation point (RCP) and gas exchange threshold (GET) were determined, as well as the respective impulses of force (kg). Correlations were analyzed using Pearson's coefficient. In all cases $\rho \leq 0.05$ was adopted.

RESULTS

$CV_{200\text{-}400\text{-}800}$ (1.19±0.13 m.s^{-1}) was significantly correlated to iGET (5.5±1.3 kg; r=0.51, p<0.05), RCP (2214.8±455.0 ml.min^{-1}; r=0.50, p<0.05), VO_{2max} (3423.0±601.8 ml.min^{-1}; r=0.52, p<0.05) and F_{CRIT} (6.91±0.94 kg; r=0.52, p<0.05). $CV_{400\text{-}800}$ (1.18±0.16 m.s^{-1}) was also correlated to iGET (r=0.55, p<0.05), RCP (r=0.53, p<0.05), VO_{2max} (r=0.54, p<0.05) and F_{CRIT} (r=0.52, p<0.05). The last, was also correlated to $CV_{200\text{-}400\text{-}800\text{-}1500}$ (1.22±0.10 m.s^{-1}; r=0.61, p<0.05) and $CV_{400\text{-}800\text{-}1500}$ (1.22±0.10 m.s^{-1}; r=0.66, p<0.01). Conclusions: Tethered swimming is a useful method for training evaluation in swimming. Critical force seems to be related to CV determined from long distances in swimming, namely, 1.500 m.

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Characteristics and incidence of injuries in young football players

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INTRODUCTIONS

In reviewing the literature on sports injuries, quickly realizes the lack of studies on the characteristics and the incidence of injuries in young football players, and these are mainly for the elite of professional football (Hägglund et al., 2005). This study aims to understand the characteristics and incidences of injuries in young footballers over a season.

METHODS

On hundred and fifty-four football players aged between 12 and 17 years old participated in this retrospective study.