태권도 경기간 회복 방법이 남자 대학 태권도 선수의 피로관련 혈액변인 및 체력에 미치는 영향

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Abstract

You, D. S., Park, H. Y., Lee, M. G. Effects of type of recovery treatment on fatigue-related blood variables and physical fitness in male collegiate taekwondo players. *Exercise Science*, 20(3): 261-272. 2011. The purpose of this study was to examine the effects of type of recovery treatment (massage, cryotherapy, and no treatment) performed between games on fatigue-related blood variables (lactate, CPK, LDH, ammonia) and physical fitness (anaerobic power, muscular power, agility) before the 1st game (PRE), after 3rd game (MID), and after 6th game (POST), while six games were performed in one day. Eight male collegiate taekwondo players participated in massage trial, cryotherapy trial, and control trial repeatedly. Six games of three 2-min round were performed in a day of trial, and appropriate treatment was applied for 20 minutes between games in each trial. Resting HR in massage and cryotherapy trial was significantly lower than control trial from 2nd game to 6th game. Blood lactate at POST in massage trial was significantly lower than control trial. LDH at MID in massage trial was significantly lower than cryotherapy and control trial, and LDH at POST in massage and cryotherapy trial was significantly lower than control trial. Concentrations of ammonia at MID and POST in massage and cryotherapy trial were significantly lower than control trial. Anaerobic power at MID in cryotherapy trial was significantly higher than other trials and anaerobic power at POST in massage and cryotherapy trial was significantly higher than control trial. Agility at POST was the highest in cryotherapy trial, whereas the lowest in control trial. It was concluded that massage was beneficial for recovery from fatigue between games and that cryotherapy was effective to maintain physical fitness level, while six games were performed in a day.

Key words : Taekwondo, Massage, Cryotherapy, Fatigue, Physical fitness

초 록

유덕수, 박훈영, 이만균. 태권도 경기간 회복 방법이 남자 대학 태권도 선수의 피로관련 혈액변인 및 체력에 미치는 영향. *운동과학* 제 20권 제3호, 261-272, 2011. 본 연구의 목적은 태권도 경기 간에 실시한 마사지처치, 냉처치, 그리고 비처치가 1경기 시작 전, 3경기 후, 그리고 6경기 후의 피로관련 혈액성분(젖산, CPK, LDH, 암모니아)과 체력(무산소성 파워, 순발력, 민첩성)에 미치는 영향을 규명하는 것이었다. 남자 대학교 태권도 선수 8명이 마사지처치 실험, 냉처치 실험, 그리고 비처치 실험에 반복적으로 참가하였다. 하루의 처치 실험에서 2분 3회전 경기를 여섯 경기 실시하였고, 경기 간에 20분씩 마사지처치, 냉처치 또는 비처치를 실시하였다. 마사지처치와 냉처치의 안정 시 심박수가 2-6경기에 걸쳐 비처치에 비하여 유의하게 낮은 것으로 나타났다. 혈중 젖산농도는 6경기 후에는 마사지처치가 비처치에 비하여 유의하게 낮은 것으로 나타났다. LDH는 3경기 후 마사지처치가 냉처치와 비처치에 유의하게 낮았고, 6경기 후에는 마사지처치와 냉처치가 비처치에 비하여 유의하게 낮은 것으로 나타났다. 암모니아는 3경기와 6경기 후 마사지처치와 냉처치가 비처치에 비하여 유의하게 낮은 것으로 나타났다. 무산소성 파워는 3경기 후 냉처치가 유의하게 높았고, 6경기 후 마사지처치와 냉처치 모두에서 비처치에 비하여 유의하게 높은 것으로 나타났다. 민첩성은 6경기 후 세 처치 간에 유의한 차이가 나타났으며, 냉처치, 마사지처치, 그리고 비처치 순으로 나타났다. 이상의 결과를 토대로, 하루에 많은 경기를 치르는 태권도 선수의 경우 경기 간에 실시하는 마사지 처치가 피로 회복에 도움이 되고, 냉처치가 체력의 저하를 예방하는데 효과적이라고 결론지을 수 있다.

주요어 : 태권도, 마사지, 냉치료, 피로, 체력

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