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Navigating Rapids And Collecting Medical Insights: A Data Collection Of Athletes Presenting To The Medical Team At The International Canoe Federation Canoe Slalom World Championships 2023

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Abstract: Background: Canoe Slalom entails the skilful navigation of a carbon composite canoe or kayak through a series of 18-25 hanging gates, strategically positioned along the course, either upstream or downstream, amidst currents of whitewater rapids in natural and man-made river settings. Athletes compete individually in timed trials, competing for the fastest course time, typically around 80 to 120 seconds. In the new discipline of Kayak Cross, descents of the course are initiated by groups of four athletes freefalling simultaneously from a starting platform situated 3m above the river. Kayak Cross athletes, in contrast to Canoe Slalom, can make physical contact with suspended gates without incurring time penalties and are required to perform a kayak roll half way down the course. The Canoe Slalom World Championships were held at Lee Valley Whitewater Centre, London, from 19th to 24th September 2023. The event comprised 299 international athletes competing for 10 World Championship titles in Canoe/Kayak Slalom events (Olympic Debut Munich 1972), and the new Kayak Cross discipline (Olympic Debut Paris 2024). The inaugural appearance of Kayak Cross at the World Championships occurred in 2017, in Pau, France. There is limited literature surrounding Kayak Cross and the incidence of athlete injuries compared to traditional Canoe Slalom, hence it was felt important to undertake this review to address the perception that the event is dangerous. Aim: The study aimed to quantify and collate data collected from athletes presenting to the event medical centre. Methods: Athletes' details were collected at initial assessments from the start of the practice period (16th-18th September) and throughout the event. Demographics such as age, sex and nationality were recorded along with presenting complaints, treatment, medication administered and outcome. Specifically, injuries were then sub-classified into body regions. The data does not include athletes who sought medical attention from their own governing body's medical team. Results: During the 8-day period, there were 11 individual presentations to the medical centre, 3.7% of the athlete population (n=299). The mean age was 23.9 years (n=7), 6 were male (n=10). The most common presentation was minor injury (n=9), with 6 being musculoskeletal and 3 comprising skin damage, followed by insect sting/allergy (n=1) and pain relief requests (n=1). Five presentations were event-related, all being musculoskeletal injuries; 2 shoulder/arm, 1 head/neck, 1 hand/wrist and 1 other (data was not recorded). Of these injuries, the only intervention was 2 cases of 400mg Ibuprofen, which was given to both shoulder/arm injuries. Four of the 11 presentations were pre-existing injuries, which had been exacerbated due to increased intensity of practice. Two patients were advised to return for review, with 100% compliance. There were no unplanned re-presentations, and no emergency transfers to secondary care. Both the Kayak Cross and Canoe Slalom competitions resulted in 1 new event-related athlete presentation each. Conclusion: The event resulted in a negligible incidence of presentations at the medical centre, for both Kayak Cross and Canoe Slalom. This data holds significance in informing risk assessments and medical protocols necessary for the organisation of canoe slalom events.

Keywords: canoe slalom, kayak cross, athlete injuries, event injuries

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