

complaints should be based on regular PPE focussing on the musculoskeletal system as well as internal medical and cardiovascular screening.

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STRESS FRACTURES DURING TOP-LEVEL INTERNATIONAL ATHLETICS CHAMPIONSHIPS

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Background Stress fracture is a frequent injury among athletics athletes. During international Athletics championships, although stress fractures represented a small percentage of all injuries (2.9% of all injuries and 4.9% of in-competition time-loss injuries for female athletes), it exists and should not be neglected, because it could be one symptom of Relative Energy Deficiency in Sport.

Objective To specifically analyse stress fractures during top-level international Athletics championships from 2007 to 2019.

Design Prospective study.

Setting 21 international championships from 2007 to 2019.

Participants 26281 (14130 male and 12151 female) international-level registered athletes.

Main Outcome Measurements The national medical team and the local organizing committee physicians reported all injuries daily on a standardised injury report form during 21 international championships. Only stress fractures were included in the descriptive analysis.

Results During the 21 international athletics championships, a total of 36 stress fractures were reported, representing 1.6% of all reported injuries. 14 were in male and 22 in female athletes, and 54% in endurance and 46% in explosive disciplines. The overall stress fracture incidence was 1.4 per 1000 registered athletes (95%CI=1.0–1.8). The relative risk was almost doubled in female compared to male athletes although this was not statistically significant (relative risk (RR)=1.83, 95%CI=0.94–3.57). Most of stress fractures involved the lower extremity (92%). In female athletes, 46% were located at the lower leg and 41% at the foot, compared to 14% and 64%, respectively for male athletes. More than half of the stress fractures were classified as severe injuries (i.e. estimated number of days of absence >28 days).

Conclusions Stress fractures also occurred during major international athletics championships, representing a severe injury, with sex differences in location and most likely also in overall risk.

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EXPERT OPINION ON THE ASSESSMENT AND MANAGEMENT OF CALF MUSCLE STRAIN INJURIES IN SPORT

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Background Despite being a common cause of time loss, information regarding best practice for calf muscle strain injuries (CMSI) in sport is scarce.

Objective To establish best practice for the assessment and management of CMSI.

Design Qualitative.

Setting In-depth interviews.

Patients (or Participants) 20 expert medical professionals working in elite sport and/or researchers specialising in the field; representing seven countries and seven sports.

Interventions (or Assessment of Risk Factors) Semi-structured interviews using a schedule of questions canvassing pre-identified topics. Thematic coding to analyse findings.

Main Outcome Measurements Data were evaluated in three key areas: (i) injury characteristics, (ii) injury management, and (iii) injury prevention.

Results CMSI have unique injury characteristics compared to other common muscle strain injuries (e.g. hamstring), but a criteria-based approach can assist forming the most accurate impression of prognosis. Similarly, a structured approach should be followed to ensure the athlete returns to a high level of performance and the risk of re-injury is minimized, focusing on: re-strengthening, plyometric and ballistic exercises, as well as running-based reconditioning specific to the sport. For the best chance to prevent index CMSI, strategies should span multiple domains of athlete management: screening and monitoring, field-based exposure (e.g. workload data), and off-field interventions (e.g. strengthening). Injury prevention strategies should be tailored to the individual, considering extrinsic (the sport, position played, club culture/coach expectations) and intrinsic (previous injury history, age, training history) factors that may increase susceptibility to CMSI.

Conclusions Knowledge about the unique injury characteristics of CMSI can clarify the likely prognosis and best approach to rehabilitation. Practitioners attempting to prevent CMSI should use a multi-faceted approach given that the aetiology of CMSI is complex and often unique to the individual.

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RETURN TO PLAY FROM PREVIOUS INJURY WITHIN 1 YEARS MAY BE AN IMPORTANT RISK FACTORS TO BE CONSIDERED IN ORDER TO PREVENT RECURRENT INJURY DURING MAJOR EVENTS FOR YOUNG ATHLETES

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Background Investigating the relationship between time from return to play (RTP) and injury characteristics may provide an important information to preventing a recurrent injury in mass sports event.

Objective To investigate rate of recurrent injuries, and injury types and parts of recurrent injuries during 2017 Summer and Winter Universiade Games.

Design Prospective epidemiological study.

Setting Injuries were reported during 2017 Summer (2017S) and Winter Universiade (2017W) Games by medical staffs.