

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

262

STRESS FRACTURES DURING TOP-LEVEL INTERNATIONAL ATHLETICS CHAMPIONSHIPS

^{1,2,3}Pascal Edouard, ^{4,5}Anders Vinther. ¹Inter-university Laboratory of Human Movement Science (LIBM EA 7424), University of Lyon, University Jean Monnet, Saint-Etienne, France; ²Department of Clinical and Exercise Physiology, Sports Medicine Unit, University Hospital of Saint-Etienne, Faculty of Medicine, Saint-Etienne, France; ³European Athletics Medical and Anti Doping Commission, European Athletics Association (EAA), Lausanne, Switzerland; ⁴Department of Physiotherapy and Occupational Therapy, Copenhagen University Hospital, Herlev and Gentofte, Copenhagen, Denmark; ⁵QD-Research unit, Copenhagen University Hospital, Herlev and Gentofte, Copenhagen, Denmark

10.1136/bjsports-2021-IOC.242

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.

263

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

Brady Green, Anthony Schache, Jodie McClelland, Adam Semciw, Tania Pizzari. *La Trobe Sport and Exercise Medicine Research Centre, Melbourne, Australia*

10.1136/bjsports-2021-IOC.242

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.

264

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

^{4,5}Youngjun Kim, ^{4,5}Sejun Kim, ^{1,2}Hee Seong Jeong, ^{1,2,3}Sae Yong Lee. ¹Yonsei Institute of Sports Science and Exercise Medicine, Yonsei University, Seoul, South Korea (Republic of); ²Department of Physical Education, Yonsei University, Seoul, South Korea (Republic of); ³Institute of Convergence Science, Yonsei University, Seoul, South Korea (Republic of); ⁴Medical and Science department, Korean Sports and Olympic Committee, Jincheon, South Korea (Republic of); ⁵Medical center, Jincheon National Training Center, Jincheon, South Korea (Republic of)

10.1136/bjsports-2021-IOC.243

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.