



Traumatic and overuse injuries in female Artistic and Rhythmic Nationals

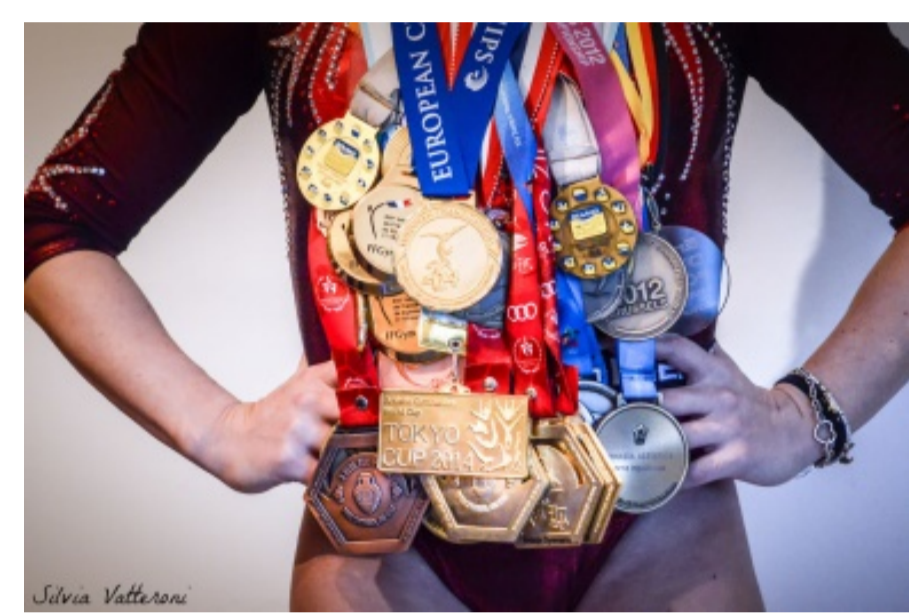


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keywords

female gymnastics, injury epidemiology, injury prevention



Introduction

the female rhythmic and artistic gymnastics is practiced at very young age with high overload and traumatic risk of musculoskeletal injury



Results

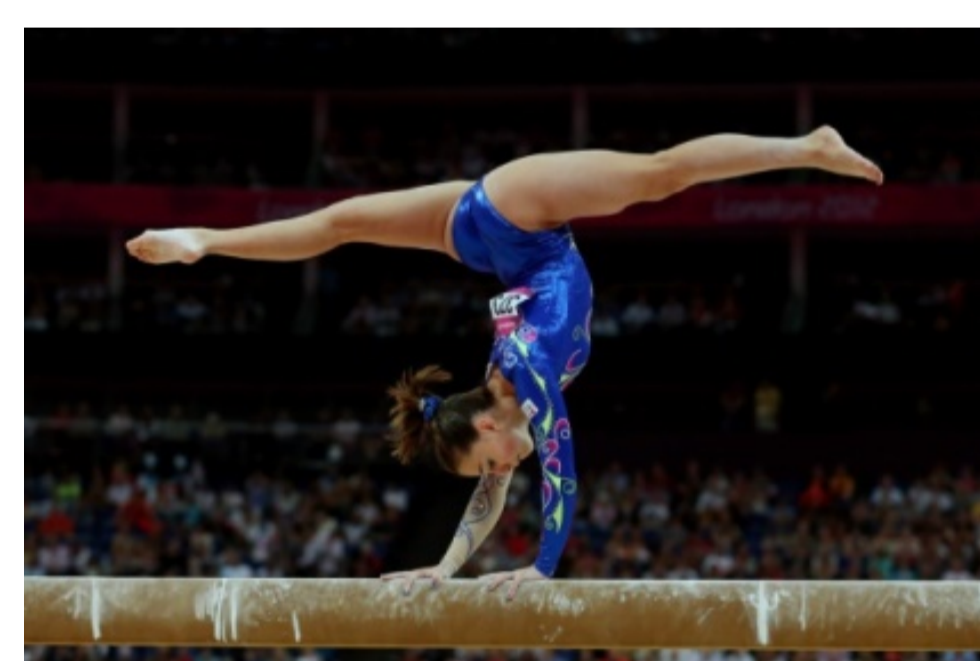
The 26 registered gymnasts top level of Italian Nationals, 10 in Rhythmic and 16 in Artistic reported 204 injuries in three years, corresponding to an incidence of 6 injuries in a month, 101 was traumatic injuries (79 TA in Artistic and 22 TR in Rhythmic) and 103 overuse injuries (42 OA in Artistic and 61 OR in Rhythmic). with highest incidence in trauma injuries in Artistic, especially in the specialties of free body followed by balance beam. 26% of injuries led to time-loss from sport practice for many months and this means for the rhythmic team to continue races without a holder, possibly overcoming the difficulty level, while for the artistic individualists means the complete stop. Surgery was necessary in 10 cases of artistic trauma followed by long rehabilitation period. Most frequent anatomical district injured were the ankle-foot. The most common diagnosis in Rhythmic was Achilles tendonitis and in Artistic forefoot and rearfoot trauma with 2 cases of complete rupture of the Achilles tendon and 6 cases of fracture of one or more metatarsal bones.

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Purpose

the aim of this longitudinal study is to determine the incidence and localization of injuries in Artistic and Rhythmic female National gymnasts, in the last three years of medical assistance at Rhythmic Academic School of Desio and at Artistic Academy of Brescia with a view to ultimately improving the injury prevention.

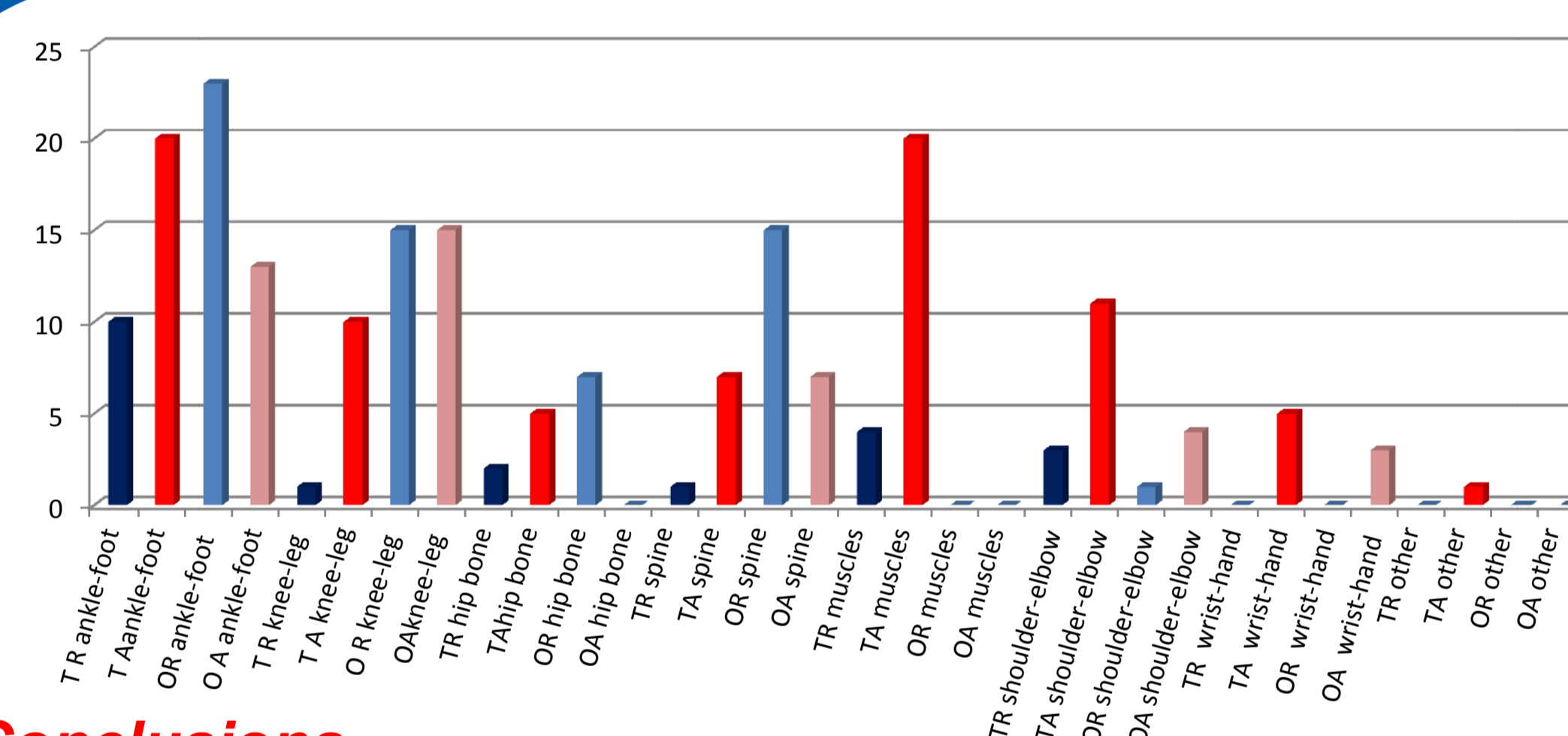


Materials

Record Survey Monkey © software T = Traumatic O = Overuse R Rhythmic A = Artistic

Methods

The medical teams of the Local Organisation reported daily, for 11 months in a year, the occurrence of newly sustained injuries which required rehabilitative or surgical medical intervention in young gymnasts divided in anatomical districts (ankle-foot, knee-leg, hip bone, spine, muscles, shoulder-elbow, wrist-hand, other).



Conclusions

Research should focus on preventing forefoot and rearfoot injuries in artistic and rhythmic gymnastics. The main causes of trauma injuries occurrence in Artistic reported a poor technique, inadequate warm-up, excessive load or speed in specific figures. In Rhythmic, the continuous activity of gastrocnemius-soleus group causes hypoperfusion of the tendon in the loading phase inducing Achilles tendinopathy onset. The most crucial points for reducing the incidence of injuries improving the communication between athletes and coaches involving athletes in preparation and to customize the programs, increasing athletic and proprioceptivity training. Recurrences often are due to misunderstood healing of previous trauma.

References

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