

Pain syndromes in competitive elite level female artistic gymnasts. Role of specific preventive-compensative activity

Marini Mirca, Sgambati Eleonora, Barni Edy, Piazza Marina and Monaci Marco

Department of Anatomy Histology and Forensic Medicine, University of Florence

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SUMMARY

The pain is a serious problem in advanced level female artistic gymnasts because it decreases the performance. The pain is due to the high numbers of hours spent in training sessions and may be associated to injuries that have relatively high incidence and severity in these athletes.

We investigated the role of a preventive-compensative physical activity program, implemented in the warm-up and the cool-down session of standard training, in the prevention and reduction of the pain syndromes, evaluated in elite level young female artistic gymnasts. Thirty elite level female athletes, 10-14 years old, participated in this study and were followed for 12 weeks during the competition preparation period. Fifteen athletes were trained with preventive-compensative motor program implemented in the ordinary training (intervention group) and fifteen (control group) followed the standard training. All athletes completed a self-administered questionnaire regarding the pain intensity on the basis of a Visual Analogue Scale pre- and post- intervention. The experimental protocol consisted of three steps: the treatment of the shortened muscle chains according to Active Posture Reeducation method, the proprioceptive-coordinative training with wobble board and the mobilization and stretching of back using fitball. Before intervention, the pain in practicing this sport was reported by 83% of all the athletes. The most common primary pain sites were the ankle and low back; the pain anatomical location was correlated to the training. After intervention, low back pain assessment showed a decrease of pain identified as mild (from 56% to 44%) or moderate (from 33% to 22%) and a disappearance of severe pain (from 11% to 0%). Ankle pain decreased and/or disappeared: the mild pain from 33% to 27%, moderate from 27% to 13% and severe from 13% to 0%. The pain analysis did not show different results in the control group. Our results indicated that the performed preventive-compensative training is of value, in a short time perspective, in preventing and reducing the pain syndromes in these athletes.

INTRODUCTION

Artistic Gymnastics is a competitive and popular sport that is approached since the early age and elite female gymnasts reach their prime in mid-teenage years.