

Oral presentation

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Exercise is not an independent risk factor for the development of adolescent idiopathic scoliosis

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Aim

The goal of this observational study is to assess the incidence of AIS among athletes and non-athletes. This will help determine whether athletic activities play a potential role in the development of AIS.

Methods

This study evaluated 2387 adolescents with a mean age of 13.4 years. All patients completed a detailed questionnaire focusing on the following: personal, somatometric and secondary sex characteristics, type, duration and character of daily performed physical activities, and history of existing cases of AIS among their relatives. The patients were classified into 2 groups according to their answers: "athletes" and "non-athletes". The 2 groups were statistically comparable as far as age, height, weight, onset of menstruation and prevalent extremity were concerned. All children underwent physical examination ("forward bending test", observation in the standing erect position for asymmetries of the lateral contours of the trunk, shoulders and scapulae and measurement of their limb's length) by 3 orthopedic surgeons during a school-screening program. Children considered, by all examiners, to be suspicious for suffering from scoliosis underwent further radiographic evaluation.

Results

One hundred and seventy seven children (66 boys and 111 girls) who were classified as suspicious. Subsequently, 99 (athletes: 48, non-athletes: 51) cases AIS were radiographically confirmed. No statistically significant difference was found between athletes and non-athletes

adolescents ($p = 0.927$), athletes and non-athletes boys ($p = 0.888$) and athletes and non-athletes girls ($p = 0.804$), as far as the prevalence of AIS was concerned.

Conclusion

Systematic exercising seems not to be positively or negatively associated with a higher or lower incidence of AIS.

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