

Adolescent soccer players have less low back pain than controls: a cross-sectional survey

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1 Introduction

Low back pain (LBP) during growth is recognised today as a possible problem, but risk factors are not yet well known. Both in adults and children a U correlation has been proven between sport activities and LBP. Soccer is widely practiced by pupils in many different countries around the world, but we don't know if there is any correlation of this specific sport with LBP.

2 Aim of the study

Verify if boys playing agonistic soccer experience more or less LBP than controls.

3 Methods

We evaluated 102 males practicing agonistic soccer two to three times per week in the age range 11-16, and compared them to a normal sample of 668 schoolboys of the same age range. We proposed a validated questionnaire to collect data on LBP prevalence and clinical characteristics. Statistical analysis required the use of the χ^2 test, with Yates' correction for 2-by-2 table when necessary. The Kruskal Wallis test for non parametric data was also applied.

4 Results

When compared to normals, soccer players had a statistically significant reduction of most of the parameters:

- lifetime prevalence (30% vs 64%),
- point prevalence (3% vs 12%),
- chronic pain prevalence (1% vs 8%),
- limitation in activities of daily life (10% vs 55%),
- need of staying home for LBP (9% vs 24%),
- medical evaluations (4% vs 23%)
- radiographic evaluations (3% vs 10%).

Among LBP sufferers, intensity of pain was similar in the two populations.

Question	SOCCER		SCHOOL		P
	Yes	No	Yes	No	
Life prevalence (sometimes, frequent, always)	29.6%	70.3%	64.2%	35.8%	<0,0001
Point prevalence	3.2%	96.8%	12.1%	87.9%	<0,0001
Prevalence in the last 15 days	11.1%	88.9%	38.8%	61.2%	<0,0001
In-patient treatment	1.1%	98.9%	1.7%	98.3%	NS
Stay at home	9,0%	91,0%	23,9%	76,1%	<0,0001
Limitation in daily activities	9,5%	90,5%	54,9%	45,1%	<0,0001
Medical evaluation	4,2%	95,8%	22,7%	77,3%	<0,0001
Radiographic evaluation	2,6%	97,3%	10,0%	90,0%	<0,0005



5 Discussion

A questionnaire evaluation of the prevalence of LBP many times suffer of an overestimation of the problem, dependent on how the question has been proposed. Nevertheless, if the questionnaire is the same applied in two populations, it's possible to suppose that a real difference exist.

According to our results, it appears that agonistic soccer players have less LBP than controls. This is coherent with previous results in the literature, due to the fact that these adolescents were not sedentary nor practicing strenuous sport activities.

The differences found were high and these results should be compared with other sport activities in adolescents in the future.

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