

STRESS URINARY INCONTINENCE AND OTHER LOWER URINARY TRACT SYMPTOMS (LUTS) IN ELITE VOLLEYBALL FEMALE ATHLETES

Hypothesis / aims of study

High-level competition sports can have a variety of negative effects on the female urogenital apparatus. Stress urinary incontinence (SUI) occurs in all sports involving abrupt repeated increases in intra-abdominal pressure that may exceed perineal floor resistance. The highest prevalence is found in sports involving high impact activities such as gymnastics, and some ball games. The prevalence during sports among young, nulliparous elite athletes varies between 0% (golf) and 80% (trampolinists) (1). The aim of this study was to determine the frequency of SUI and other lower urinary tract symptoms (LUTS) in elite volleyball women.

Study design, materials and methods

Elite volleyball female athletes were asked to fill out an anonymous self-questionnaire about their micturition habits and the occurrence of urinary complaints, during sports and everyday activities.

A total of 217 athletes of a mean age of 21.4 years completed the questionnaire, providing a response rate of 100%. Of these, 4 were pluriparous, the others nulliparous. All the subjects practised sport for 2 hours three times a week.

Results

Overall SUI was observed in 29.50% of the athletes: among these, 62.50% reported loss of urine giggling, 28.20% sneezing, 21.90% during sport, 17.20% coughing. No correlation were found between SUI and duration of athletic activity, body mass index (BMI), and parity (Pearson product moment). Urgency was present in 45.16% of women but only 17.05% reported urge urinary incontinence. 46.54% of subjects revealed feeling of incomplete emptying, 30.90% bladder pain, 12.44% perineal pain. 15.63% of the 160 sexual active athletes reported pain during sexual intercourse.

13 women (6.45%) used small pads for urine loss: 9 one-three times a week, 3 four-six times a week and 1 one-two times a day. Only 7.87% athletes have contacted a physician for urinary complaints and 2.36% have sought medical treatment for these problems.

11% of women suffer or have suffered from amenorrhea and 18.43% reported lower urinary tract infections: among these, 62.50% once a year, 20% two-three times a year, 7.50% more of three times a year.

The impact of these symptoms on the quality of life (QoL) is not considered as a problem for 51.18% of the subjects, a little problem for 41.73%, a middle problem for 5.51% and an important problem for 1.58%.

Interpretation of results

The results of this study suggest that LUTS are commonly observed in elite volleyball women: prevalence of SUI and urge incontinence in our study was 29.50% and 17.05% respectively. Similar results were found also in other studies of female elite athletes (2,3). Our data reported also a high prevalence of symptoms as urgency (45.16%) and feeling of incomplete emptying (46.54%).

Even if urinary incontinence has been shown to affect QoL, only a small group of women in this study reported the urinary complaints as a bothersome problem.

Concluding message

Factors contributing to urinary incontinence in young nulliparous women are not fully understood: it is possible that high-impact activity can cause connective tissue or pelvic floor muscles damage. So far the pelvic floor muscles need to be much stronger in elite athletes than in other women; therefore is important to give useful information about pelvic floor and promote preventive recommendations to young female athletes.

References

1. Sports Med (2004) 34(7);451-64
2. Int Urogynecol J Pelvic Floor Dysfunct (2002) 13(1);15-7
3. Med Sci Sports Exerc (2001) 33(11);1797-802

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<i>Was the Declaration of Helsinki followed?</i>	Yes
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