

DYSFUNCTION OF LOWER URINARY TRACT IN BETWEEN ACTIVE AND LOW ACTIVE IN SPORT WOMEN HIGH STUDENTS

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Abstract: *No interrelation between dysfunction of lower urinary tract and sport is discovered in world literature. It is necessary as a beginning to study the quantity of distribution of the various kinds of dysfunctions in between women athletes in order to clarify these interrelations. The contingent of our study covers 65 women high students from “V. Levski” National Academy of Sport, out of which 33 are active and 32 are low active in sport. Standardized questionnaire, structured according to the various dysfunctions of the lower urinary tract, is made use of as an evaluation method of the lower urinary tract function. Analysis of the prevalence of the symptoms of dysfunction of the lower urinary tract is made in between active and low active in sport women high students; the distribution of the various kinds of symptoms; their reflection on the quality of life, etc. The following more important conclusions are made: the symptoms of dysfunction of lower urinary tract are often met in between the women athletes under study; deficit symptoms upon emptying the bladder are of the greatest share of distribution; urinary incontinence is rarely met in between the contingent we have studied; dysfunction symptoms available in between the women under study do not have important negative effect on quality of life. The study we have made provokes the questions why namely the deficit symptoms upon emptying the bladder are most often met in between the women athletes under study; whether they are more often met in comparison with young women not active in sport and what is the reflection of these symptoms on the sport-competitive activity.*

Keywords: *dysfunction of low urinary tract, athletes*

1. Introduction

Urinary incontinence in between women is a problem discussed in details in world

literature. Considerably fewer are the available publications related to the other dysfunctions of the lower urinary tract.

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The literature review we have made has established that the distribution of the dysfunction of the lower urinary tract in between women athletes and its effect is a problem which is particularly not studied. There exist separate studies most of which refer to women long distance runners and they are for urinary incontinence only. We have not found studies related to the other kinds of dysfunctions.

It is necessary as a beginning to study the quantity of distribution of the various kinds of dysfunctions in between women athletes in order to establish the interrelation between sport and the lower urinary tract dysfunction.

The present paper is a continuation of a previous study of ours, its object being women low active in sport.

2. Purpose

The purpose of the study is to establish the prevalence of symptoms of dysfunction of the lower urinary tract in women high students active and low active in sport.

3. Research Methods

The contingent of the study covers 65 women high students from "V.Levski" National Academy of Sport, out of which 33 are active and 32 are low active in sport. There are representatives of various kinds of sport in between those questioned – track and field, gymnastics, sports games, swimming, rowing, martial arts, shooting, tennis, etc. All participants have given their consent to be listed for the study.

We have made use of a standardized questionnaire (Skilling PM, Petros P, 2003) as an evaluating method for the lower urinary tract function. The questionnaire is

structured according to the various kinds of dysfunctions of the lower urinary tract as follows:

The stress urinary symptoms are expressed in loss of urine during sneezing; coughing; exercise; walking; stooping, squatting or getting up off a chair.

Deficit symptoms upon emptying the bladder are expressed by feeling that bladder isn't emptying; difficulty starting off urinary stream; slow stream; intermittent stream.

Urge symptoms are feeling of uncontrollable desire to pass urine; involuntary loss of urine before arriving at toilet.

4. Results

The average age of the contingent under study is 21,38 years while the average age of those active in sport is 20,36 years and of those low active in sport is 22,4 years. None of the women athletes under study has given birth neither has undergone gynecological operation.

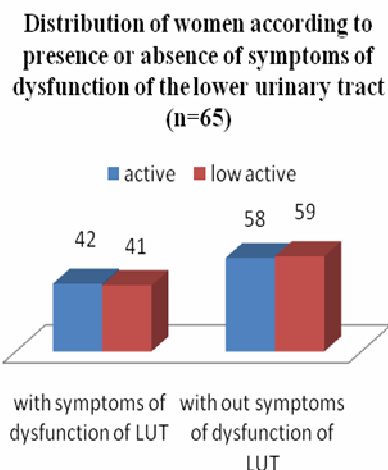


Fig.1. *Distribution of the women competitors according presence or absence of dysfunction symptoms of the lower urinary tract*
LUT – Lower Urinary Tract

Figure 1 presents the percentage distribution of the women competitors according presence or absence of dysfunction symptoms of the lower urinary tract (n=65).

No essential differences are found between the results of the women active and low active in sport. From those women high student active in sport (n=33) 42% have got dysfunction symptoms of the lower urinary tract; 41% of the women high students low active in sport have got dysfunction symptoms. Greater part of the women have no dysfunction symptoms, respectively 58% from the active in sport and 59% from the inactive in sport. While recording these percentages, neither the kind of the disfunction nor its degree have been taken in mind. The considerable distribution of the dysfunction of the lower urinary tract impresses both in between the active and inactive in sport women high students. It is necessary to take in view the nature and the degree of the symptom manifestation in order to correctly interpret these results.

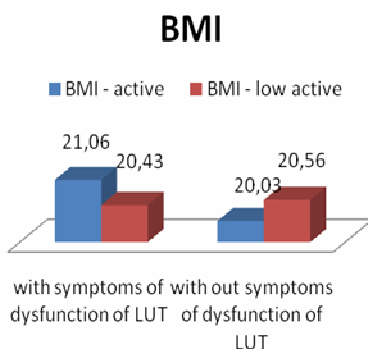


Fig. 2. BMI

Figure 2 presents the BMI average results of the women under study.

The BMI average values in between those active in sport is 20,54 (respectively 21,06 for the women having symptoms

and 20,30 in between the women without symptoms). The BMI value for those low active in sport is 20,49 (respectively 20,43 for those having dysfunction symptoms of the lower urinary tract and 20,56 in between those without symptoms). The results received do not show great differences both in between those active and low active in sport and those with and without symptoms. The BMI average values of all women under study are within the physiological norms.

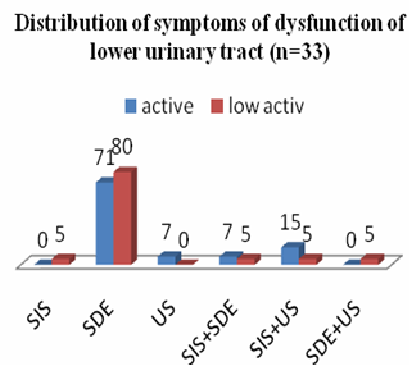


Fig.3. Percentage distribution of the symptoms of the lower urinary tract

SIS – Stress Incontinence Symptoms;
 SDS – Symptoms of Deficient Emptying;
 US – Urge Symptoms

Figure 3 presents the percentage distribution of the symptoms of the lower urinary tract for those women only who have got such symptoms (n=33, respectively in between 14 active in sport and 19 low active in sport). The greatest percentage of the women had got deficit upon emptying the bladder. These are the symptoms: feeling that bladder isn't emptying; difficulty starting off urinary stream; slow stream; intermittent stream. Essentially fewer are the women having the rest kinds of dysfunction symptoms

(Stress Incontinence Symptoms or Urge Symptoms) or some kind of combination of these.

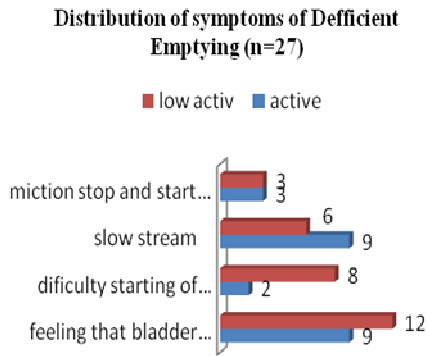


Fig.4. *Distribution of symptoms Deficient emptying*

Figure 4 presents the distribution of the separate Symptoms of Deficient Emptying. We are accenting our attention namely to that group of symptoms because they are most often distributed. Total 27 women (42%) (respectively 10 active and 17 low active in sport) have got deficit symptoms upon emptying the bladder independently or in combination with other symptoms. It is a tendency that the symptoms most often met are the feeling that bladder is not emptying; slow stream; difficulty starting of urinary stream.

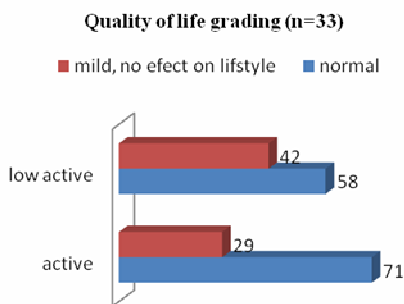


Fig.5. *Quality of life grading*

Figure 5 presents the relationship between the availability of dysfunction

symptoms of the lower urinary tract and the quality of life in percentage (n=33, respectively 14 active and 19 low active in sport). Quality of life is graded by a mark from 1 to 5. Mark 1 notes the lack of effect on the quality of life and each coming mark increases the negative impact of the dysfunction symptoms of the lower urinary tract on the quality of life. In between 71% and the active and 58% of the inactive in sport women with dysfunction symptoms of the lower urinary tract, there is no impact on the quality of life while in between the rest, respectively 29% and 42%, the impact is mild and with no effect on lifestyle. There are no women competitors to have pointed out higher mark for a negative effect of their urinary problem. The results are indicative for the fact that the available symptoms do not impact negative effect on the lifestyle of the women athletes.

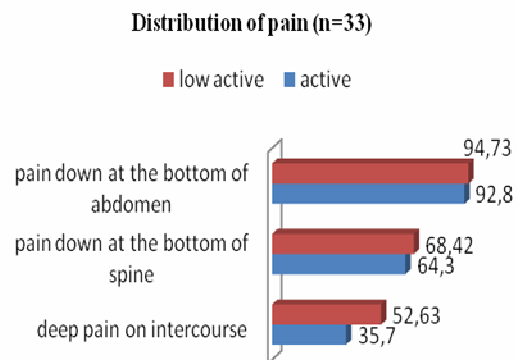


Fig 6. *Distribution of pain*

Figure 6 presents the distribution in percentages of the availability of deep pain on intercourse; pain down at the bottom of spine and pain down at the bottom of abdomen inbetween women having dysfunction symptoms (n=33, respectively 14 active and 19 low active in sport women). Both active and low active

in sport women most often notify about availability “sometimes” of a pain in the lower part of the abdomen. It is recommendable to specify the origin of the pain.

5. Discussion

Poświata A. et al., 2014 research the prevalence of stress urinary incontinence in a group of elite female endurance athletes, as professional sport is one of the risk factors for stress urinary incontinence. SUI rates in the groups of female cross-country skiers and runners were compared to determine whether the training weather conditions like temperature and humidity influenced the prevalence of urinary incontinence. An anonymous questionnaire was distributed among 112 elite female athletes i.e. They found that 50.00% of all study subjects were losing small amounts of urine. In 27.68% of the respondents, incontinence was associated with a sense of urgency. 45.54% of the participants reported leakage of urine associated with sneezing or coughing, which indicated stress urinary incontinence symptoms. All together in the group reporting SUI symptoms and in that one which reported urge urinary incontinence, there were 18.75% female athletes, who reported mixed incontinence. Other problems associated with the urinary tract, which were pointed out in the questionnaire, were frequent urination (58.04%), pain or discomfort in lower abdominal or genital area (36.61%) and problems with bladder emptying (33.04%) [12].

Agarwal A et al., 2014 investigate “What is the most bothersome lower urinary tract symptom?”

Urgency was identified as the symptom with the highest prevalence of at least moderate bother at the population level. Among those who experienced a particular symptom, however, UUI was the symptom most likely to be reported as bothersome. Because of its low prevalence, UUI was only the fourth most bothersome LUTS considering the population as a whole.

Authors made conclusion that urinary urgency is the most prevalent bothersome LUTS at a population level, but of individuals with symptoms, UUI is most likely to be rated as bothersome. We observed substantial differences in the frequency of symptoms in men and women, but for symptomatic subjects, the frequency of at least moderate bother was similar [1].

6. Conclusions

Dysfunction symptoms of the lower urinary tract are often met in between the women athletes under study.

Essential differences in the percentage distribution of the symptoms of the lower urinary tract in between active and low active in sport women high students are lacking.

The deficit symptoms upon emptying the bladder have got the greatest share of the distribution both in between active and inactive in sport women.

Urinary incontinence is rare in between the contingent under our study. The average values of the Body Mass Index in between the contingent under our study are found to be within the physiological norms.

Dysfunction symptoms in between the women higher students under our study do not negatively impact their lifestyle.

The study we have made provokes a range of issues. We are accentuating our attention on some of them, namely: why deficit symptoms upon emptying the bladder are most often met in between the women athletes under study; whether these symptoms are more often met in between the latter in comparison with the young women population who are not active in sport and what is the reflection of these symptoms on the sports and competitive activity.

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