158 - PROFILE ATHLETES IN HIGH IMPACT URINARY INCONTINENCE IN FEMALES

ANGIE FREITAS WEBA GUIMARÃES
Ms. JACQUELINE MARIA MARANHÃO PINTO LIMA
CENTRO UNIVERSITÁRIO DO MARANHÃO
SÃO LUÍS, MARANHÃO, BRASIL
angie.freitas@gmail.com

INTRODUCTION

According to the International Continence Society (ICS), urinary incontinence (UI) is defined as any involuntary loss of urine, and can bring many negative consequences for quality of life of women. The most common type of UI, is the effort, being present in approximately 50% of all incontinent women, followed by mixed UI (30-40%) and urgency urinary incontinence (10-20%) (BROWN et al. 2003).

Hay-Smith et al. (2001) observed that the impact force on the pelvic floor during activities like running, is 3-4 times the body weight, 5 to 12 times to jump, nine times the body weight in the fall after a high jump, 16 times after a higher jump.

The pure stress urinary incontinence is the most common. It is defined as involuntary urine loss in the absence of detrusor contraction occurring in the effort, when the pressure inside the bladder exceeds the pressure within the urethra. It is caused by anatomical defect, congenital or acquired. Young nulliparous women may present (SOUZA et al., 2002).

It is known that in the absence of a specific work for the pelvic floor muscles, repeated the charge on the perineal muscles frequently associated with increased intra-abdominal pressure tends to reduce the effectiveness of the mechanics of the pelvic floor and / or produce changes in the composition some muscles, such as reducing the number of type I fibers observed in the riser of anus muscle. According to these evidences intense exercises can be considered for some women precipitating factor in SUI (ZUCCHI et al., 2003).

In women, urinary incontinence is a common condition, with its prevalence varying between 10 and 40%. Its prevalence increases with age, and despite not being a disease that causes death, can many times conduct her to shame, depression and isolation (DINIZ et al., 2007).

The treatment consists of reduction of aggravating factors of incontinence, like as obesity, smoking, excessive drinking and clinical management of diseases that affect the urinary tract. The pelvic floor muscle is achieved through specific exercises that should be supervised, performed on a regular basis and supported by some form of feedback so that the patient can evaluate its case (BARACHO, 2007).

The overall goal of this research is to evaluate the profile of athletes with high impact urinary incontinence in females.

METHODOLOGY

This study was a prospective, descriptive and quantitative approach through field research. The development period of the study occurred from February to June 2010 and the data were collected in April and May 2010. The research site was in a private school in São Luís - MA. The study population consisted of all three modality of sports athletes , 11 athletes from volleyball, basketball and handball with 13 athletes to 12 athletes, whose sample consisted of all athletes (N = 36) who were willing to participate in the research taking as a criterion for inclusion in the range of 15 to 17 years. The instrument for data collection was a questionnaire with closed and open questions which have been included with information that fit the research objectives. She was sent to the school selected for convenience, an Official request to perform the study and after consent has been started to collect data, by the researcher to ensure its accuracy. The results were stored in a database program and Excel 2000 with construction of statistical tables and determination of dependency relationship in significance equal to 0.05 in the program biostatisticians 10.0 UFPA.

RESULTS AND DISCUSSION

Table 1: Frequency distribution of female athletes, aged 15 to 17 years in high-impact sports, the relationship between situational variables and determiners of urinary incontinence when related to sport. São Luis, Maranhão, 2010.

Situational Variables/ Sports Practice	Determiners of Urinary Incontinence									
	S 1		C/S		R/S		S2		CP	
	F	%	F	%	F	%	F	%	F	%
With Urinary Loss										
-Basketball–										
- WPA	02	5,55			01	2,78				
- OPA	03	8,33	02	5,55	01	2,78				
- IOPA					02	5,55				
- Handball –										
- WPA	03	8,33			03	8,33				
- OPA	01	2,78			01	2,78				
- IOPA	02	5,55	02	5,55	01	2,78			01	2,78
- Volleyball –										
- WPA	02	5,55	02	5,55	04	11,11				
- OPA	03	8,33	02	5,55			01	2,78		
- IOPA										
Total general			36			100				

Legend: S1 = Smile, C/S = Cough and Sneeze, R/S = Run and Skip, S2 = Stress, CP = Change Position; WPA = Withing the Physical Activity, OPA = Out of Physical Activity, IOPA = Inside and Outside the Physical Activity.

The results in Table 1 showed significantly higher percentage of athletes from basketball, with urinary loss in OPA, WPA and IOPA respectively in situations of smiling, coughing / sneezing and running / jumping with (n = 03, 8.33%) and (n = 02; 5.55%). In handball sport in WPA, respectively in situations smile and run / jump with (n = 03, 8.33%). In volleyball, in WPA and OPA,

respectively in situations run / jump and laugh with (n = 04; 11.11%) and (n = 03, 8.33%). Also, we observed that situations change and exhale position, had no representative cases in the sport and basketball, only 2.78% of the population investigated in terms handball and volleyball, respectively IOPA and OPA. Statistically, it was determined in contingency analysis, considering the situations run / jump, the three methods investigated in WPA, and OPA IOPA, a (p) <0, 0001, so we can say that there is an interdependence between the situation determinant of urinary incontinence and the different moments of physical activity in all three modalities investigated.

Urinary incontinence is a common effort (SUI), characterized by loss of urine when coughing, sneezing or perform physical labor, data consistent with the findings of the research in question (FELDNER, 2006).

It was also noted by Polden and Mantle (2002), that girls in particular go through a phase cheerful around puberty, if not before. Some think that this results in embarrassing loss of urine. When the leak is significant, one should suspect an unstable detrusor, more may be that the urethral closure pressure is below normal.

Depending on the results, the data are observed by Caetano (2007) in a survey about urinary incontinence and physical activity in the city of Campinas-SP, about 27% of athletes reported losing urine during coughing, sneezing, laughing, 29% during physical activity and 15% during sudden movement or rising.

In this sense, a study by Thyssen et al (2002) among 291 women athletes with a mean age of 22.8 years studied, it was found that 51.9% had experienced urine loss during their respective sports and everyday life situations. One hundred and twenty five women (43%) reported that they lost urine only during sports activities. Of those 125 athletes, 95.2% had urine lost during training, while 64 (51.2%) during the competition. The authors explain that difference may be related to a "ritual" of athletes in emptying the bladder before competitions and with the decrease in fluid intake, data similar to the findings.

Table 2: Distribution of frequencies of female athletes, aged 15 to 17 years in terms of high impact on the relationship between the time of sports practice for urinary incontinence and exercise time per game. São Luis, Maranhão, 2010.

Moment of Sports Practice/ Exercise Time	Moment of Sports Practice/ Urinary Loss							
	WPA		OPA		IOPA		WUL	
	F	%	F	%	F	%	F	%
Time/Mode								
- Basketball –								
< 2 years								
3 a 5 years			01	2,78			01	
> 5 anos	2,78							
- Handball –	01	2,78	01	2,78	01	2,78	**04**	
< 2 years	**11,11**							
3 a 5 years	**02**	**5,55**	**02**	**5,55**				
> 5 years								
- Volleyball –	01	2,78					**02**	
< 2 years	**5,55**							
3 a 5 years	**03**	**8,33**			01	2,78	**02**	
> 5 years	**5,55**							
	01	2,78	01	2,78				
			01	2,78	01	2,78	**03**	
	8,33							
	02	**5,55**					01	
	2,78							
			02	**5,55**			01	
	2,78							
Total general			36			100		

Legend: WPA = Within the Physical Activity, OPA = Out of Physical Activity, IOPA = Inside and Outside the Physical Activity, WUL = Without Urinary Loss.

The results in Table 2 showed higher percentages among the athletes in basketball with urinary loss, and more than 5 years of sports practice, WPA and OPA in with (n = 02; 5.55%). In sport and handball, 3 to 5 years of activity in WPA with (n = 03, 8.33%). In volleyball, and 3 to 5 years of activity in WPA, with more than 5 years of practice, OPA, with (n = 02; 5.55%). Moreover, we observed that the highest frequency was the sport basketball without urinary incontinence in athletes from 3 to 5 years service, with (n = 04; 11.11%). Statistically, it was determined in contingency analysis, considering the variables sport and the timing of urine loss, (p) t = 0, 5804, greater than 0, 05, so we can say that urine leakage is independent of time and practice High-impact sports, in the three modalities investigated.

According to Eliasson (2002), the athletes who complained of urine loss reported that incontinence began after two and half years of training. The urinary loss was associated with the training time, age, duration and frequency of training, which reinforces the scores of this research.

According to Silva (2005), in a survey that relates stress urinary incontinence with physical activity in nulliparous women say that within the sport of volleyball, the athletes are in training for 7.55 years (+ or - 4 , 78). In the analysis of urinary continence, all women reported continence maintenance in their daily activities, including for efforts that increase intra-abdominal pressure, however, only one athlete reported episodes of urinary urgency, divergent data to this research.

The results confirm the quote by Caetano (2007), that says athletes who complained of urine loss reported that incontinence began after two and half years of training. The athletes incontinence were older and had been training longer and more frequently for those without symptoms. The physical activity found that 40% of athletes reported to have lost urine during sports in High School that correspond to the degree of school (15 to 17 years usually) and 17% in school or Elementary School (seven to 14 years) .

CONCLUSION

Is very common among women who perform physical activities, especially high-impact show loss of urine, this particular group has subtle clinical conditions that often go unnoticed, the athletes should be directed to an interdisciplinary team including physical therapists with effective methods and noninvasive being the best for young nulliparous athletes.

The results showed that there is an interdependence between the situation of urinary incontinence and determining the different moments of physical activity in the three modalities investigated. In relation to the exercise time by mode, the higher percentage of athletes from basketball, with more than five years of playing sports.

Therefore, the importance of evaluating the profile of urinary leakage in high impact athletes in females, making room

for new studies and show that urinary incontinence should be treated with more attention by authorities and health professionals. We need more comparative studies with objective values and the presence of normal parameters.

REFERENCES

BARACHO, E. **Fisioterapia aplicada á obstetrícia:** Uroginecologia e aspectos de mastologia. Rio de Janeiro: Guanabara Koogan, 2007.

BROWN, JS; et al. Prece dings of the national institute of diabetes and Kidney discases international symposium on epidemiologic issues in urinary incontinence in women.am **J Obstet Gynecol (suplement)** 2003; 188 : 77-88.

CAETANO, Aletha Silva et al. **Incontinência urinária e prática de atividades**, Campinas-SP, 2007.

DINIZ, Múcio Barata et al. In: BARACHO, E. **Fisioterapia aplicada á obstetrícia: uroginecologia e aspectos de mastologia**. Estudo Urodinâmico. Rio de Janeiro: Guanabara Koogan, 2007; 27:291.

ELIASSON K; LARSSON, T; MATTSON E. Prevalence of stress incontinence in elite trampolinists.Scand **J Med Sci Sports**. 2002, 12:106-10.

FELDNER P.C. et al. Diagnóstico Clínico e Subsidiário da Incontinência Urinária. **Revista Brasileira de Ginecologia e Obstetrícia** 2006; 28 (1): 54-6.

HAY-SMITH E, et al. **Pelvic floor muscle training for urinary incontinence in women.** The Colaborations Oxford: Update Software 2001;3.

POLDEN, Margaret; MANTLE, Jill. **Fisioterapia em ginecologia e obstetrícia**. São Paulo: Santos, 2002. 442p.

SILVA,Lissandra Henrique et al. Relação da incontinência urinária de esforço com prática de atividade física em mulheres nulíparas. **Salusvita,** Bauru, v.24, n. 2, p.195-206,2005.

SOUZA, Elza Lúcio Baracho Lotti de et al. **Fisioterapia em obstetrícia & aspectos de mastologia :** 2. Ed. Rio de Janeiro: Guanabara Koogan, 2002.

THYSSEN. H.H., CLEVIN. L., OLOSEN, S. Urinary incontinence in elite nuliparous athletes and dancers. **Int Uroginecol,** 2002;13:15-7.

ZUCCHI, E.V.M, et al. Impacto da atividade esportiva no assoalho pélvico. **Feminina,** 2003; 31 (4): 333-335.

Rua 6; Quadra 24; Casa 12; conjunto Ilha Bella;
Jardim São Cristovão; São Luís, Maranhão, Brasil.
(98) 32251169/ 96131055/ 81173561.

PROFILE ATHLETES IN HIGH IMPACT URINARY INCONTINENCE IN FEMALES

ABSTRACT

Urinary incontinence is defined as any involuntary loss of urine, and can bring many negative consequences for quality of life of women. The high impact sports or abrupt movements can trigger urinary incontinence in athletes, the impact force to the pelvic floor and increased into-abdomen pressure. In this context, therefore this study aims to evaluate the profile of athletes with high-impact urinary incontinence in women. This is a study of a prospective, descriptive and quantitative approach, through field research, conducted in April and May 2010, taking place as a private school in São Luís – MA, were interviewed 11 volleyball players, 13 basketball and 12 handball players. The results showed that there is a relationship of dependency between the situation determinant of urinary incontinence and the different moments of physical activities in three modalities investigated. Regarding the time of exercise modality, the highest percentage of athletes in basketball, with more than five years of playing sports. Identifying the profile of athletes provides physical therapy specializing in women's health and reduce risks from the intense efforts of high-impact activities.

KEYWORDS: Urinary incontinence; Pelvic floor; High-impact athletes.

PROFIL DES ATHLÈTES DE PERTE D'IMPACT URINAIRE ÉLEVÉE CHEZ LA FEMME

RÉSUMÉ

L'incontinence urinaire est définie comme une perte involontaire d'urine, et peut apporter de nombreuses conséquences négatives pour la qualité de vie des femmes. Les sports à fort impact ou des mouvements brusques peuvent provoquer l'incontinence urinaire chez les athlètes, la force d'impact sur le plancher pelvien et l'augmentation de la pression intra-abdominale. Dans ce contexte, donc, cette étude vise à évaluer le profil des athlètes de haut impact avec l'incontinence urinaire d'effort chez les femmes. Il s'agit d'une étude d'une approche prospective, descriptive et quantitative, par la recherche de terrain, menée en avril et mai 2010, qui aura lieu comme une école privée à São Luís, Maranhão, ont été interrogés 11 joueurs de volley-ball, basket-ball 13 et 12 joueurs de handball. Les résultats ont montré qu'il existe une interdépendance entre la situation de l'incontinence urinaire et de déterminer les différents moments de l'activité physique dans les trois modalités de l'enquête. En ce qui concerne la durée de l'exercice selon le mode, le pourcentage plus élevé d'athlètes de basket-ball, avec plus de cinq années de pratique d'un sport. Identifier le profil de l'intervention en physiothérapie permet aux athlètes spécialisés dans la santé des femmes et réduire les risques des efforts intenses d'activités à fort impact.

MOTS-CLÉS: Incontinence urinaire; Du plancher pelvien; Athlète de haut impact.

PERFIL DE LOS ATLETAS CON PÉRDIDA DE ALTO IMPACTO EN URINARIO FEMENINO

RESUMEN

La incontinencia urinaria se define como cualquier pérdida involuntaria da involuntaria de orina, y puede traer muchas consecuencias negativas para la calidad de vida de las mujeres.

Los deportes de alto impacto o movimientos bruscos pueden provocar la incontinencia urinaria en los atletas, la fuerza del impacto sobre el suelo pélvico y el aumento de la presión intra-abdominal. En este contexto, por lo tanto, este estudio tiene como objetivo evaluar el perfil de los atletas de alto impacto con incontinencia urinaria de esfuerzo en mujeres. Se trata de un estudio de un enfoque prospectivo, descriptivo y cuantitativo, a través de la investigación de campo, realizado en abril y mayo de 2010, que tendrá lugar en una escuela privada en São Luís, Maranhão, fueron entrevistados 11 jugadores de voleibol, baloncesto 13 y 12 jugadores de balonmano. Los resultados mostraron que existe una interdependencia entre la situación de la incontinencia urinaria y la determinación de los distintos momentos de la actividad física en las tres modalidades de investigación. En relación con el tiempo de ejercicio por el modo, el mayor porcentaje de atletas de baloncesto, con más de cinco años de practicar deportes. Identificar el perfil de la fisioterapia permite a los atletas que se especializa en salud de la mujer y reducir los riesgos de los intensos esfuerzos de las actividades de alto impacto.

PALABRAS CLAVE: Incontinencia urinaria; Del piso pélvico; Deportista de alto impacto.

PERFIL DE ATLETAS DE ALTO IMPACTO COM PERDA URINÁRIA, NO SEXO FEMININO

RESUMO

A incontinência urinária é definida como qualquer perda involuntária de urina, e pode trazer várias conseqüências negativas à qualidade de vida das mulheres. Os esportes de alto impacto ou de mudanças abruptas de movimentos podem desencadear a incontinência urinária em atletas, pela força de impacto no assoalho pélvico e aumento da pressão intra-abdominal. Neste contexto, portanto, este trabalho tem como objetivo avaliar o perfil de atletas de alto impacto com perda urinária no sexo feminino. Trata-se de um estudo de caráter prospectivo, descritivo com abordagem quantitativa, através da pesquisa de campo, realizada no mês de abril a maio de 2010, tendo como local uma escola da rede privada do município de São Luís-Maranhão, onde foram entrevistadas 11 atletas de voleibol, 13 de basquetebol e 12 atletas de handebol. Os resultados demonstraram que existe uma relação de dependência entre a situação determinante de incontinência urinária e os momentos diferenciados de atividade física nas três modalidades investigadas. Em relação ao tempo de exercício por modalidade, os maiores percentuais de atletas do basquetebol, com mais de cinco anos de prática esportiva. A identificação do perfil de atletas possibilita a intervenção fisioterapêutica especializada em saúde da mulher e reduzir os riscos provenientes dos esforços intensos das atividades de alto impacto.

PALAVRAS-CHAVE: Incontinência urinária; Assoalho pélvico; Atleta de alto impacto.