

ORIGINAL ARTICLE

Prevalence of urinary complaints and their impact on the quality of life of women that participate in physical activity groups

Prevalência de queixas urinárias e o impacto destas na qualidade de vida de mulheres integrantes de grupos de atividade física

Flávio Afonso Gonçalves Mourão¹, Luciana Napoleão Lopes², Natália de Paula Carneiro Vasconcellos³, Maria Beatriz Alvarenga de Almeida⁴

ABSTRACT

Introduction: The International Continence Society defines urinary incontinence as any loss of urine reported by the patient. This is a condition that affects the world's population, mainly the female sex, leading to several implications. The purpose of this study was to assess the prevalence of urinary complaints and their impact on the quality of life of women that participate in physical activity groups. **Methods:** A total of 50 women, aged 40 years and older that participated in physical activity groups, participated in the study carried out by Physical Therapy Department of a Basic Health Unit in Belo Horizonte, Minas Gerais, Brazil. The volunteers were submitted to urogynecological anamnesis and the ones that had presented urinary complaints in the recent months answered the "King's Health Questionnaire" to have quality of life evaluated. **Results:** The prevalence of women with urinary complaints was 42%. The most predominant symptoms were: urgency (95.24%), frequency (90.48%), stress incontinence (85.71%) and nocturia (80.95%). Regarding the intensity, the urge-incontinence (49) and urgency (46) symptoms had the highest rates. According to the analysis of the domains, the impact of incontinence (53.96 ± 26.83) is striking when compared with the other results, followed by the measure of severity domain (43.78 ± 23.01). **Conclusion:** The studied population had a high prevalence of urinary complaints and their impact on the quality of life does not rule out the negative influence of the pathological picture.

KEYWORDS

urinary incontinence, women, quality of life

RESUMO

Introdução: A Sociedade Internacional de Continência define incontinência urinária como qualquer perda de urina relatada pelo paciente. É uma condição que afeta a população mundial, principalmente feminina, levando a diversas implicações. O objetivo deste estudo foi verificar a prevalência de queixas urinárias e o impacto destas na qualidade de vida das mulheres, integrantes de grupos de atividade física. **Métodos:** Participaram do estudo 50 mulheres, com idade a partir de 40 anos, participantes de grupos de atividade física conduzidos pela Fisioterapia em um Centro de Saúde de Belo Horizonte, Minas Gerais. As voluntárias foram submetidas a uma anamnese uroginecológica, e aquelas que apresentaram queixas urinárias nos últimos meses responderam o questionário "King's Health Questionnaire" para avaliação da qualidade de vida. **Resultados:** A prevalência de mulheres com queixas urinárias foi de 42%. Os sintomas mais predominantes foram: urgência (95,24%), frequência (90,48%), incontinência de esforço (85,71%) e noctúria (80,95%). Quanto à intensidade, os sintomas de urge-incontinência (49%) e urgência (46%) apresentaram os maiores índices. De acordo com a análise dos domínios, o impacto da incontinência ($53,96 \pm 26,83$) sobressalta-se quando comparado a outros resultados, seguido pelo domínio medidas de gravidade ($43,78 \pm 23,01$). **Conclusão:** A população estudada apresentou elevada prevalência de queixas urinárias e o impacto da qualidade de vida encontrado não descarta a influência negativa do quadro patológico.

PALAVRAS-CHAVE

incontinência urinária, mulheres, qualidade de vida

1 Physical therapist

2 Master in Physical Education, Professor of Centro Universitário de Belo Horizonte – UNI-BH

3 Master in Health Sciences, Professor of Centro Universitário de Belo Horizonte – UNI-BH

4 Specialist in Public Health, Professor of Centro Universitário de Belo Horizonte – UNI-BH

CORRESPONDING AUTHOR:

Centro Universitário de Belo Horizonte - UNI BH - Departamento de Ciências Biológicas, Ambientais e da Saúde

A/C Flávio Afonso Gonçalves Mourão

Av. Prof. Mário Werneck, 1685- Belo Horizonte / MG

Cep 30455-610

E-mail: f_agm@yahoo.com.br

INTRODUCTION

The International Continence Society defines urinary incontinence as “the complaint of any involuntary leakage of urine” reported by the patient.¹

The three most common types of urinary incontinence are: stress incontinence, considered as the “complaint of involuntary urine loss due to exertion or coughing or sneezing”; urge incontinence, considered as “the complaint of involuntary urine loss preceded by urinary urgency” and mixed urinary incontinence, which is “the complaint of involuntary urine loss associated with urgency and also with the stress incontinence, during exertion, coughing or sneezing”.¹

The urinary incontinence (UI) is a multifactorial symptom and several pathologies can cause it.² The risk factors for its development include: advanced age, Caucasian ethnicity, obesity, vaginal delivery, estrogen deficiency, conditions associated to increased abdominal pressure, smoking, collagen diseases, neuropathies and previous hysterectomy.^{3,4} It is a condition that affects the world’s population, but mainly the female population.⁵

According to Fonseca et al⁶ the loss of urinary continence can affect up to 50% of the women at some phase of their lives, with severe implications for their quality of life.

The literature indicates that the evolution of UI symptoms can result in social isolation, loss of sexual function and other psychosocial problems, causing patients to have a negative perception of their general state of health.^{6,7,8}

Quality of life is a multidimensional concept that incorporates social, physical and mental aspects of individuals, being related to the perception of their health status in large domains or dimensions of their lives.² According to the World Health Organization, quality of life is defined as “the perception of an individual of his/her position in life in the context of culture and system of values in which he or she lives and with regard to his/her objectives, expectations, patterns and concerns”.^{2,9}

Although there is no consensus regarding the concept of quality of life (QoL), there are three essential aspects concerning the construct: subjectivity, multidimensionality (physical, psychological, level of independence, social relations, spirituality, religion and personal beliefs) and the presence of positive and negative dimensions.^{2,9}

The use of questionnaires, either generic or specific ones, as QoL assessment tools, has been intensified in scientific research in the last years, due to the crescent interest by health researchers in subjective methods of clinical assessment, valuing the patient’s opinion on his/her condition.^{10,11}

One of the specific, valid and reliable tools for the QoL assessment of women with UI is called the “King’s Health Questionnaire”, which is characterized by using, as assessment methods, not only the presence of urinary incontinence symptoms, but also its relative impact, which leads to more consistent results, allowing a global measurement, as well as the assessment of the impact of symptoms on the several aspects of individuality.^{6,7}

Thus, taking into consideration the relevance of the subject and

the scarcity of programs and/or specific projects within the context of the Women’s Healthcare Assistance Policy^{2,12-15} totally directed at the requirements generated by UI, we aimed at carrying out a study that would explore questions related to QoL

OBJECTIVE

The present study aimed at analyzing the prevalence of urinary complaints and the impact of these complaints on the QoL of the women participating in physical activity groups.

METHODS

The present is a cross-sectional study, carried out in physical activity groups supervised by the Physical Therapy team of UNIBH, at Centro de Saude Sao Francisco, located in the district of Pampulha, in the city of Belo Horizonte, state of Minas Gerais, Brazil, between February and April, 2007.

Procedures

All the women participating in the physical activity groups were invited to attend a 50-minute lecture on urinary incontinence, with the objective of learning about UI and all its physiopathological, curative and preventive aspects. This activity consisted of an illustrative-theoretical content, with posters and folders, using a clear, lay format that was understandable for the population.

All women that participated in physical activity groups and met the inclusion criteria: female individuals, 40 years of age or older, who had attended the lecture given by the physical therapy team on UI. All of them were informed of the purposes of the study and signed the free and informed consent form and were submitted to a urogynecological anamnesis,¹⁶ which consisted of an interview carried out by the examiner, with the objective of identifying and characterizing the profile of the population with urinary complaints. After the anamnesis, all women that present urinary loss complaint in the last months caused by exertion, urinary urgency or mixed loss, were selected and submitted to the King’s Health Questionnaire,⁶ a validated tool,^{6,7} to evaluate quality of life of the women with UI.

The King’s Health Questionnaire consists of 21 questions, divided in 8 domains: General Health Perception, Impact of Incontinence, ADL limitations, Physical Limitations, Social Limitations, Interpersonal Relations, Emotions, Sleep and Motivation. The tool is scored for each of the domains, and thus, there is no general score. Scores vary from 0 to 100 and the higher the score, worse is the QoL related to that domain.^{6,7} In addition to these domains, there are two other independent scales: one to assess the severity of the urinary incontinence and another to assess the presence and intensity of the symptoms. The item that assesses the UI severity can also be considered a specific domain. Therefore, the questionnaire consists of 30 questions, divided in 9 domains.⁶ In this study, we calculated the values related to all QoL domains. All the data assessments and collection were carried out individually

by four independent examiners, in a tranquil and quiet environment inside the health care unit facility.

Data Analysis

The results obtained with this study were submitted to a descriptive analysis and these were presented as means and SD regarding age, time of complaint and values related to the QoL domains; medians, maximum and minimum values, regarding age and values related to QoL domains; percentages regarding the sociodemographic characteristics, urogynecological anamnesis and prevalence of symptoms described in the QoL questionnaire.

The data concerning the symptom intensity item were displayed according to the total sum of the related values, proposed by the QoL questionnaire, and thus, the higher the value, the higher the intensity.

RESULTS

Population Profile

The study presented a total of 50 assessed individuals and 42% of these presented urinary complaints; 58% did not have any complaint. The sociodemographic characteristics of the population

Table 1
Overall sociodemographic characteristics of the population.

Characteristics	N
Age (yrs)	
Mean (SD)	59.74 (± 9.70)
Median (Min – Max)	59.50 (40 – 81)
Married or living with partner (%)	
Yes	42
No (Never married - Divorced – Widowed)	58 (13.79 – 13.79 – 72.41)
Work outside home (%)	
Yes	14
No	86
Degree of schooling (%)	
Illiterate	4
Complete or Incomplete Elementary School	72
Complete or Incomplete High School	14
College or University	10

are shown in Table 1.

Table 2 shows the profile of the population with urinary complaints, according to the initially applied urogynecological¹⁶ anamnesis.

Quality of Life in the Population with urinary Complaints | Symptom Presence and Intensity Scale (King’s Health Questionnaire)

Table 3 illustrates the prevalence and intensity of the symptom

Table 2
Profile of the population with urinary complaints

Characteristics	N
Age (yrs)	
Mean (SD)	59.14 (± 10.36)
Median (Min – Max)	57 (40 – 81)
Hormonal Replacement Therapy(%)	
Yes	28.9
No	71.4
Births (%)	
Yes	90.47
Vaginal (mean births per individual /Birth SD)	78.94 (4.87± 3.14)
Cesarean section (mean births per individual /Birth SD)	21.05 (2.00± 0.89)
Surgical Antecedents (%)	
Yes	61.9
No	38.1
Use of sanitary pads (%)	
Yes	28.9
No	71.4
Time of complaint (yrs)	
Mean (SD)	7.75 (± 8.21)
Median (Min – Max)	3 (1 – 25)
Type of urinary Loss (%)	
A few drops	66.66
Complete	9.52
Flow	23.8
Sought medical attention (%)	
Yes	42.85
No	57.14
Comorbidities (%)	
Arterial Hypertension (Medications/Diuretics)	33.33 (38.1)
Diabetes Mellitus	4.46
Obesity (BMI ≥ 30)	23.08
Digestive System	
Intestinal Constipation	69.9
Difficult evacuation	47.61
Hemorrhoids	38.09
Fecal Incontinence	19.04

complaints, according to the symptom presence and intensity scale, in the population with urinary complaints. According to the results, there was a higher prevalence of symptoms of urgency, frequency, stress incontinence and nocturia. The other symptoms represented by the scale presented decreasing values according to the following order: urge-incontinence and frequent urinary tract infection pictures; pictures of nocturnal enuresis, incontinence during sexual intercourse; bladder pain and difficulty to urinate. As for the intensity of the reported symptoms, the sums of the observed values demonstrate that urge-incontinence and urgency

represent the highest rates. The frequency and stress incontinence symptoms presented similar rates, followed by bladder pain, nocturnal enuresis, incontinence during sexual intercourse and frequent urinary tract infections, difficulty to urinate symptoms.

Table 3

Values according to the Scale of Presence and Intensity of Symptoms, in the population of individuals with urinary complaints (King's Health Questionnaire).

	Prevalence of complained symptoms (%)	Intensity of reported symptoms
Frequency	90.47	34
Nocturia	80.95	30
Urgency	95.23	46
Urge-Incontinence	61.90	49
Stress Incontinence	85.71	34
Nocturnal Enuresis	52.38	24
During sexual intercourse	52.38	24
Frequent Urinary Infections	61.90	24
Bladder pain	52.38	26
Difficulty to urinate	42.86	18

According to the analysis of the domains presented in Table 4 and illustrated by Figure 1, it was observed that the Impact of Incontinence domain presented a higher mean value when compared to the other results, followed by the severity measurements. The other domains represented by the scale presented a decreasing prevalence, according to the following order: General Health Perception; Emotions; ADL Limitations; Sleep and Motivation; Physical Limitations; Interpersonal Relations; Social Limitations.

Table 4

Descriptive Analysis of the Quality of life domains of the King's Health Questionnaire.

	Mean	S.D.	Median	Maximum	Minimum
General Health Perception	38.10	16.99	50.00	75	0
Impact of Incontinence	53.96	26.83	33.33	100	33.33
ADL Limitations	33.33	34.16	33.33	100	0
Physical Limitations	26.98	32.26	16.66	100	0
Social Limitations	17.99	23.95	0.00	66.66	0
Personal Relations	20.83	33.43	0.00	83.33	0
Emotions	34.92	29.45	33.33	88.88	0
Sleep and Motivation	28.57	24.23	33.33	100	0
Severity assessment	43.78	23.01	40.00	86.66	0

DISCUSSION

The results of the present study showed a population with a mean age older than 50 years, which consisted of individuals whose majority did not work outside home, widows and a level of schooling in which the complete/incomplete grade school predominated.

The age factor, mainly in female individuals, tends to be critical as the cause of urinary disorders. The lower urinary tract presents alterations related to aging that occur even in the absence of diseases. The contraction capacity of the detrusor muscle, the vesical capacity and the capacity to delay urination apparently

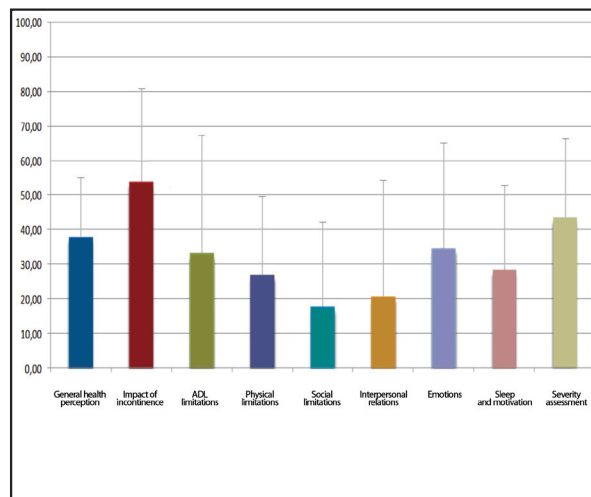


Figure 1 - Values found according to the analysis of the Quality of Life domains, in a population of individuals with urinary complaints (King's Health Questionnaire).

decrease. Involuntary contractions of the vesical musculature and the post-urination residual volume increase with aging in both sexes. However, the maximum urethral closing pressure and the cells of the striated musculature are predominantly altered in women.¹⁷ The aging process causes the decrease in collagen fibers, a substitution of muscular tissue by adipose tissue and a decrease in the levels of estrogen, responsible for the urethral coaptation.¹⁸

There was a predominance of urinary complaints in 42% of the assessed individuals, with a mean age of 59.14 ± 10.36 years, presenting urinary complaints. The only Brazilian epidemiological study, found in the literature review, carried out with women in this age range, showed a prevalence rate of 35%.^{4,15}

Many of the studies show a higher prevalence of urinary complaints in women older than 40 years. Authors such as Mendonça et al,¹⁹ who interviewed 410 Brazilian women treated at a specialized service, found a higher prevalence (48%) in the age range of 45 to 60 years⁴. Other studies, such as the one by Chiarelli et al,²⁰ demonstrated a prevalence of urinary loss between 36% and 35%, respectively, in women in the age range of 45 to 50 years and 70 to 75 years. These values were higher than those found among younger women, aged 18 to 23 years, presenting a prevalence of 12.18%.⁴

Studies such as the one by Tamanini et al¹⁵ on UI, prevalence and risk factors in women treated at the gynecological cancer prevention program, showed a prevalence of 34.8% of women with the symptoms, with half of the women being 40 years or younger.

As for therapy replacement therapy, only 28.9% of the individuals reported receiving it during the research. It is known that hypoestrogenism contributes, together with the effects of aging, to the onset of urinary dysfunctions, as it evidently affects the urinary tract, resulting in trophic alterations that aggravate or trigger the incontinence.

The decrease in the vesical capacity causes clinical symptoms, such as urinary urgency, polyuria, and even nocturia, as will be discussed subsequently together with the symptoms detected by the symptom and QoL scale of the King's Health Questionnaire. It is likely that the estrogen deprivation would have an effect on the bladder proprioception, which would be unable to adequately accommodate larger volumes of urine.²¹

The association between age and menopause is a relevant risk factor, during which there is a decrease in estrogen levels responsible for the urethral coaptation, which creates the condition for the continence.¹⁸

It is noteworthy the number of vaginal deliveries among the women who presented urinary complaints (78.94%), in addition to the mean number of deliveries per individual, a value close to 5, a finding that corroborates the data found by Moreno²² and Rubinstein,²³ who state that among all the etiologies, the most common source of pelvic floor dysfunction, possibly related to the delivery trauma, is the genital prolapse, which is the dislocation of the pelvic viscera in the caudal direction, towards the genital hiatus.² Regarding the type and the duration of the delivery, studies have demonstrated that the pressure and the stretching of the delicate pelvic structures caused by labor and the passage of the fetus through the vaginal canal are considered the main causes of damage to the continence mechanism.¹⁸

The number of pregnancies and the pregnancy itself promote an increase in the mechanical pressure of the pelvic floor, in addition to the stretching, also occurring due to the change of uterine position associated to hormonal alterations.¹⁸

Of the individuals with urinary complaints, 61.9% presented urogynecological surgical antecedents, such as vaginal sling and hysterectomy. It has been postulated that hysterectomy can be related to the development of urinary incontinence, due to the damage to the pelvic innervation and the pelvic support structures that the surgery can cause.⁴

Of the individuals with urinary complaints, only 28.9% used sanitary pads and/or panty liners in parallel to the percentage of 66.66% of women that reported that the loss occurred only in the form of a few drops. Two possible factors can be related: either the population considers the symptoms, which will be discussed later, irrelevant, having little effect on the QoL, as they consider the use of pads unnecessary,² or hygiene care is not taken into account.

The mean time of symptom onset was 7.75 ± 8.21 years and the predominance of the types of urinary loss reported was 66.66% as "a few drops", 9.52% as "complete" and 23.8% as "flow". A mean of 42.85% of the patients sought medical assistance to report the problem or receive medical help, which is in accordance to the literature, which shows that 30 to 50% of the people who present UI do not spontaneously report this fact to health professionals and only seek medical help after the first year of symptom onset, considering the urinary loss as something to be expected with aging.⁶ Women, for instance, report a variety of reasons that make them not seek medical help, such as symptom disregard and lack of time to make a doctor's appointment, as if urinary loss was a natural consequence of aging and was part of the problems that women have to endure as they get older.²⁴ The condition is normally known by the family when the patient is an elderly woman, who depends on caregivers.²

Thus, silently, the self-esteem decreases and depression, anxiety and irritation appear.⁶ The social embarrassment, an important factor, is related to the social difficulties faced by women with incontinence, concerning the domestic, professional, social, sexual and personal activities. The reports of self-reclusion are frequent, which describe how the women spontaneously leave the social scenario in an attempt to avoid the perception of urinary loss by people they know or by strangers.²

The incontinent women rarely speaks about her problem, and, as she does not believe the condition can be cured or treated, many of

them suffer in silence. When asked about the subject, they seek to omit it, a fact that was observed during some of the interviews of the present study, which leads us to suspect that there is a larger number of individuals with urinary complaints in the population. This is indicative of the need to change the attitude of some professionals that prevent their patients from expressing their complaints.²⁴

As for the associated comorbidities, such as systemic arterial hypertension (SAH), diabetes mellitus (DM), obesity and those related to the digestive system, 33.33% of the individuals with urinary complaints presented arterial hypertension, with 38.1% of them using diuretics. SAH is often associated to urinary incontinence, as demonstrated by the study of Tamanini et al,¹⁵ where patients with arterial hypertension presented a two-fold increased chance of developing the incontinence condition, compared to the group without incontinence.¹⁵ Additionally, the use of diuretics in the control of hypertension can cause adverse effects such as polyuria, urinary frequency and urgency, and, consequently result in the onset or worsening of the incontinence. Regarding DM, 4.46% of the patients presented UI. The disease causes a peripheral neuropathy as well as a peripheral vasculopathy, which will contribute to the onset of urinary symptoms, with the main ones being polyuria, urinary urgency, nocturnal enuresis and irritation symptoms.¹⁸ The individuals considered as obese, with body mass index (BMI) $\geq 30,25$ were 23.08% of those with urinary complaints. According to Ortiz,²⁶ obese women are 4.2-fold more affected by UI than women with normal BMI. Obesity is a condition that is also associated to diabetes and can lead to UI. Finally, regarding the presence of comorbidities related to the digestive system, more than 50% of the individuals with urinary complaints also complained of intestinal constipation. The presence of impacted feces in the rectal ampoule, in individuals with constipation complaints, can be responsible for up to 10% of the UI pictures treated at geriatric clinics.¹⁷ The repetitive effort to evacuate can impair the integrity of the muscles of the pelvic floor and it is another risk factor for UI.¹⁸

Originally, the King's Health Questionnaire was created to be filled out by the individual being assessed without help from an examiner. Due to the low level of schooling and cultural level of the Brazilian population and particularly of the population sample of the present study, in which most individuals, although literate, had not finished Elementary School, we chose to apply the tool by reading it to all individuals during an interview, thus preventing any methodological bias.

The tool presents a positive correlation among its items and it certainly measures the impact of UI on the QoL of the studied individuals.⁷

The QoL results assessed by the King's Health Questionnaire showed to be heterogeneous. Among the most often reported symptoms, the urinary urgency, frequency and stress incontinence presented high levels of impact. Although the urge-incontinence complaint is not the most predominant one, it seems to be the symptom that mostly affects the population, with a high degree of intensity, when compared to the other symptoms. According to Tamanini et al,⁸ women that present urge-incontinence symptoms are unable to have control of the urinary function, and are subject to sudden involuntary urinary loss.

On the contrary, symptoms such as nocturia and urinary infections, although present, did not affect the studied population so severely, when compared to the other assessed symptoms.

The analysis of the specific QoL domains proposed by the

questionnaire also showed a large variability of results, mean values with a relatively high standard deviation. The impact of incontinence predominated on the population, although the levels of the domains responsible for the assessment of the limitations, interpersonal relations, emotions, sleep and motivation did not present similar values. The general health perception and the severity assessment did not present such high values on average, either, when compared to the impact caused by the incontinence, but they were higher than the other domains. All the paradoxical data observed, according to the QoL assessment proposed by the questionnaire, can be justified, as previously described, by the disregard of symptoms by the patients, in addition to the embarrassment presented by them when they have to talk about the subject.^{5,24}

Therefore, in spite of the many repercussions on the life style of women with UI, involving physical, economical and psychosocial problems, and that interfere with the social, professional, sexual and family relations⁵, such statements are somewhat compromised and restricted, together with a definite conclusion on the QoL of this population, as this study presented a cross-sectional and descriptive character and a very heterogeneous population regarding the complaints and the final outcomes of the QoL domains.

Among the limitations, we did not perform a comparative study with a possible control group and only the main complaint was analyzed regarding the urinary disorders, without a more comprehensive assessment, such as a physical examination or urodynamic study.

However, taking into account the prevalence of urinary incontinence observed, its chronic, "silent" nature and its physical and psychosocial impact, wherein many patients remain underdiagnosed and untreated because they do not complain about the urinary loss that they are experiencing,^{15,24,28,29} it becomes imperative that professionals and prevention programs adequately prepare healthcare professionals to carry out an effective management approach of this condition in the population.^{15,24,27}

CONCLUSION

The studied population presented a high incidence of urinary complaints and the impact on the quality of life observed among these individuals does not rule out the negative influence of the pathological picture. The results confirm that one cannot study quality of life using a fragmented design and that the objective and subjective aspects that comprise it must be evaluated. Thus, to see the individual under a holistic perspective is more than adding parts, is to perceive the integration and interaction of all dimensions of life.

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