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Assessing dehydration in the elderly in a family health strategy

Evaluación de la deshidratación en ancianos en una estrategia de salud de la familia

Avaliando a desidratação em idosos de uma estratégia de saúde da família

ABSTRACT

Objective: To check for possible signs of dehydration and to evaluate water intake habits among elderly people who attend a Family Health Strategy (FHS) in the municipality of Tucuruí, Pará. **Method:** This is a descriptive field research with a quantitative approach based on the analysis of questionnaires answered by the research participants. **Results:** The sample consisted of 40 elderly people, mostly women. It was identified that 85% have a good feeling of thirst, 47.5% admit to feeling dry mouth, 7.5% feel dry armpits and 47.5% feel dry skin. Regarding the frequency of defecation, 97.5% defecate daily. Regarding the consumption of drinks and food, it was found that water is the most consumed, where 75% admit drinking from 1 to 2 liters per day, 12.5% drink from 2 to 3 liters and the other 12.5% ingest less than 1 liter. **Conclusion:** Fortunately, it was possible to verify that the individuals surveyed have good habits, such as healthy eating and good water intake, which contributes to not showing signs of dehydration.

DESCRIPTORS: Elderly health; Family Health Strategy; Dehydration.

RESUMEN

Objetivo: Verificar posibles signos de deshidratación y evaluar hábitos de consumo de agua en personas mayores que asisten a una Estrategia de Salud de la Familia (ESF) en el municipio de Tucuruí, Pará. **Método:** Se trata de una investigación de campo descriptiva con enfoque cuantitativo basado en el análisis de cuestionarios respondidos por los participantes de la investigación. **Resultados:** La muestra estuvo conformada por 40 ancianos, en su mayoría mujeres. Se identificó que el 85% tiene una buena sensación de sed, el 47,5% reconoce sentir sequedad en la boca, el 7,5% siente resequedad en las axilas y el 47,5% siente resequedad en la piel. En cuanto a la frecuencia de defecación, el 97,5% defeca diariamente. En cuanto al consumo de bebidas y alimentos, se encontró que el agua es el más consumido, donde el 75% admite beber de 1 a 2 litros por día, el 12,5% bebe de 2 a 3 litros y el otro 12,5% ingiere menos de 1 litro. **Conclusión:** Afortunadamente, se pudo comprobar que los encuestados tienen buenos hábitos, como una alimentación saludable y una buena ingesta de agua, lo que contribuye a no mostrar signos de deshidratación.

DESCRIPTORES: Salud de los ancianos; Estrategia de salud familiar; Deshidratación.

RESUMO

Objetivo: Verificar possíveis sinais de desidratação e avaliar hábitos de ingestão hídrica de idosos frequentadores de uma Estratégia Saúde da Família (ESF) do município de Tucuruí, Pará. **Método:** Trata-se de uma pesquisa de campo, de caráter descritivo, com abordagem quantitativa baseada na análise de questionários respondidos pelos participantes da pesquisa. **Resultados:** A amostra foi composta por 40 idosos, sendo em sua maioria mulheres. Identificou-se que 85% possuem boa sensação de sede, 47,5% admitem sentir a boca seca, 7,5% sentem as axilas secas e 47,5% sentem a pele seca. Sobre a frequência de defecação, 97,5% defecam diariamente. Sobre o consumo de bebidas e alimentos, verificou-se que a água é a mais consumida, onde 75% admitem beber de 1 a 2 litros por dia, 12,5% bebem de 2 a 3 litros e os outros 12,5% ingerem menos de 1 litro. **Conclusão:** Felizmente, foi possível verificar que os indivíduos pesquisados possuem bons hábitos, tais como alimentação saudável e uma boa ingesta hídrica, o que contribui para que não apresentem sinais de desidratação.

DESCRIPTORES: Saúde do idoso; Estratégia Saúde da Família; Desidratação.

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INTRODUCTION

According to the Brazilian Institute of Geography and Statistics (IBGE), there are currently approximately 28 million people in Brazil aged 60 years and over, representing at least 13% of the Brazilian population. ⁽¹⁾ According to statistical projections of the World Health Organization - WHO, in the period from 1950 to 2025, the group of elderly people in the country must have increased fifteen times, while the total population in five. Thus, Brazil will occupy the sixth place in terms of the contingent of elderly people, reaching, in 2025, about 32 million people aged 60 or over. ⁽²⁾

In parallel with the changes observed in the population pyramid, there is a growing demand for health services ⁽³⁾, given that the aging process causes biological, psychological and social changes in the body. ⁽⁴⁾ Among the main changes resulting from aging, there is a decrease of 10 to 16% in lean muscle mass (fat free mass), this decre-

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ase is due to the reduction caused by the aging of bone mass, in skeletal muscle, and also because of the decline in amount of body water. ⁽⁵⁾

Dehydration results from deficiency of inputs and / or excess water loss and can be classified according to the tonicity of the extracellular space, in isotonic, hypotonic and hypertonic. ⁽⁶⁾ When mild to moderate, it is manifested with fatigue, loss of appetite and thirst, red skin, heat intolerance, dizziness, oliguria and increased urinary concentration. When severe, it is difficult to swallow, loss of balance, the skin is dry and withered, sunken eyes and blurred vision, dysuria, numb skin, delirium and muscle spasms. ⁽⁷⁾

Dehydration covers a significant part of this population, where according to Collins et al. ⁽⁸⁾ and Vivanti et al. ⁽⁹⁾ is one of the most frequent causes of hospitalization among individuals aged 65 to 75 years. Rosler et al. ⁽¹⁰⁾ identified dehydration as one of the main causes of entry to the emergency room in this age group. Even more, according to Lo-

pes⁽¹¹⁾ it was shown through a study that around 27% of patients living in nursing homes who are admitted to the hospital are dehydrated.

Based on this, the present study aims to verify possible signs of dehydration and evaluate water intake habits among elderly people who attend a Family Health Strategy (FHS) in the city of Tucuruí, Pará.

METHODS

It is a descriptive field research, with a quantitative approach based on the analysis of questionnaires answered by the research participants. The study was carried out during the months of June to August 2017 at the FHS located in the Santa Monica neighborhood of the municipality of Tucuruí, in the interior of the state of Pará.

The research population was the elderly who attended the FHS that fit the inclusion criteria of the research, which were: to be elderly and to be in the age group of 60 to 80 years old, to be a resident of the municipality of Tucuruí and

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to be registered in the health program of the FHS elderly.

Regarding data collection, this happened, in person and individually, with each elderly person surveyed, after they established the best place, day and time. At the time of collection, individuals who agreed to participate in the research were presented with the Free and Informed Consent Term (ICF), and the objectives and importance of the study to the scientific community were explained, as well as possible doubts were answered.

Still regarding the collection, it was mediated by a structured questionnaire, prepared for the research, which was composed of sociodemographic questions, about the presence of possible signs of dehydration and about water intake habits.

After collecting data through the questionnaire, the data were typed, grouped in related areas and coded in electronic spreadsheets, using the Microsoft Office Excel 2013 program. From this, the results were submitted to simple statistical operations (percentages) to allow the formulation of tables which show the information provided by the analysis. Then, the values found in the results were compared with other studies in the literature, in order to identify whether there was a risk of dehydration and whether daily hydration was adequate.

Finally, obeying the ethical criteria of resolution CNS/CONEP 466 of 12 December 2012, which deals with research with human beings⁽¹²⁾, data collection was carried out after approval of the research project by the research ethics committee of the University of the State of Pará by opinion No. 2,099,674 and CAAE 68196317.2.0000.5170.

RESULTS

Regarding the quantitative and sex of the research participants, the sample consisted of 40 elderly people who attend the FHS, 28 (70%) of whom were female and 12 (30%) of male.

Table 1: Perception of the elderly regarding thirst, dry mouth, dry armpits and dry skin.

Variável	N	%
Percepção de sede		
Masculino	10	25
Feminino	24	60
Total	34	85
Percepção de boca seca		
Masculino	5	12,5
Feminino	14	35
Total	19	47,5
Percepção de axilas secas		
Masculino	1	2,5
Feminino	2	5
Total	3	7,5
Percepção de pele seca		
Masculino	6	15
Feminino	13	32,5
Total	19	47,5

Source: Data research, 2017.

Table 2: Amount of defecation of the elderly

Quantidade	N	%
1 vez		
Defecação durante 1 dia	33	82,5
Defecação durante 1 semana	0	0
2 vezes		
Defecação durante 1 dia	6	15
Defecação durante 1 semana	0	0
3 vezes		
Defecação durante 1 dia	0	0
Defecação durante 1 semana	1	2,5
Mais de 3 vezes		
Defecação durante 1 dia	0	0
Defecação durante 1 semana	39	97,5

Source: Data research, 2017.

Table 3: Consumption of various types of drinks and food during a day by the elderly.

Bebida/Alimentos	Sexo	1x/dia	2x/dia	3x/dia	4x/dia	5 ou mais x/dia
Água	Feminino	1	0	1	4	22
	Masculino	0	0	2	0	10
Chá	Feminino	16	2	0	0	0
	Masculino	6	0	0	0	0
Sumos	Feminino	18	6	3	1	0
	Masculino	11	1	0	0	0
Refrigerantes	Feminino	4	0	0	0	0
	Masculino	0	0	0	0	0
Laticínios	Feminino	18	8	1	0	0
	Masculino	7	4	0	0	0
Hortícolas	Feminino	7	16	5	0	0
	Masculino	2	7	3	0	0
Frutas	Feminino	12	12	2	2	0
	Masculino	4	5	3	0	0
Sopas	Feminino	26	2	0	0	0
	Masculino	6	0	0	0	0

Source: Research data, 2017.

Table 4: Amounts of drinks and food consumed over 24 hours by the elderly

Bebidas ou alimentos	N	%
Água (L)		
Menor	4	10

Assessment of signs suggestive of dehydration

Regarding signs suggestive of dehydration, 34 (85%) of the participants stated that they had a good feeling of thirst. Still, 19 (47,5%) of the elderly admit to feeling dry mouth (mucosa and tongue), 3 (7,5%) feel dry armpits and 19 (47,5%) feel dry skin (Table 1).

Regarding the frequency of defecation, 39 (97,5%) elderly people surveyed defecate daily, of which 33 (82,5%) defecate, on average, once a day and 6 (15%) go to the bathroom, on average, twice a day, the other elderly person reported defecating three times a week (Table 2).

Assessment of water and food-rich eating habits

This category deals with issues related to the frequency of consumption of drinks and food during a day, the amount of drinks and food consumed over the course of a day and the amount of water ingested during 24 hours.

Regarding the type of drinks and foods consumed during a day and the frequency of their consumption, variable responses are found, with water being consumed more frequently, 32 (80%) reported drinking five times or more a day, and soda being consumed less frequently, 4 (10%) reported taking it once a day (Table 3).

When questioning the most consumed foods and drinks during a 24-hour period (Table 4), it was found that 36 (90%) elderly people consume juices and water daily, which are the most consumed drinks. Regarding food, it was found that vegetables and fruits are the most consumed, the first being consumed by 31 (77,5%) individuals and the second by 26 (65%). In addition, teas and soft drinks are the least consumed drinks, 40 (100%) elderly people said they ingest less than 1 liter per day, and soup is the least consumed food, given that 39 (97,5%) responded to taking less than 1 portion per day.

Maior ou igual	36	90
Total	40	100
Chá (L)		
Menor	40	100
Maior ou igual	0	0
Total	40	100
Sumos (L)		
Menor	4	10
Maior ou igual	36	90
Total	40	100
Refrigerante (L)		
Menor	40	100
Maior ou igual	0	0
Total	40	100
Laticíneos (L)		
Menor	37	92,5
Maior ou igual	3	7,5
Total	40	100
Hortícolas (Porção)		
Menor	9	22,5
Maior ou igual	31	77,5
Total	40	100
Frutas (Peças)		
Menor	14	35
Maior ou igual	26	65
Total	40	100
Sopa (Porção)		
Menor	39	97,5
Maior ou igual	1	2,5
Total	40	100

Source: Research data, 2017.

Table 5: Water consumption over a day

Variável	N	%
<1L/dia		
Masculino	1	2,5
Feminino	4	10
1-2L/dia		
Masculino	9	22,5
Feminino	21	52,5
2-3L/dia		

Finally, specifically, regarding water consumption, 30 (75%) of the elderly interviewed admitted to drinking between 1 to 2 liters of water daily, 5 (12,5%) drink between 2 to 3 liters of liquids over the course of a day and only 5 (12,5%) drink less than 1 liter of water (Table 5).

DISCUSSION

About the research participants, these were mostly elderly. The fact that women are the majority is justified by the fact that this is the sex that most commonly seeks health services.⁽¹³⁾

Regarding the assessment of signs suggestive of dehydration, as we age, there is a decrease in the proportion of water in the body that varies according to sex and age, there is a decrease in the feeling of thirst, which contributes to the non-replacement of lost liquid, contributing to the onset of dehydration.⁽¹⁴⁾ Relating this thought to the research carried out, we can say that the majority of the elderly in the study do not face this problem, given that 85% have a good feeling of thirst.

According to a study by Bennett⁽¹⁵⁾, patients diagnosed with dehydration had the following symptoms: dry mouth, mucous membranes, armpits and skin, which allows us to use these signs as clinical indicators of dehydration. The results of the present study, fortunately, showed that less than half of those surveyed have such clinical signs.

As we know, one of the main causes of dehydration is low fluid intake, this inadequate intake associated with low fiber intake can also cause constipation, characterized by a decrease in the frequency of defecation, which is considered to be at least three times a week.⁽¹⁶⁾ Taking into account the respondents' responses, we can infer that, in this study, all elderly people do not have constipation, as it is within what is considered normal for a frequency of bowel movements.

Regarding the assessment of drinking habits and water-rich foods, we have to

Masculino	2	5
Feminino	3	7,5
>3L/dia		
Masculino	0	0
Feminino	0	0
Total	40	100

Source: Research data, 2017

drink liquid, prepared, it is the main way to avoid dehydration, as well as to maintain body homeostasis in good quality.⁽¹⁷⁾

The amount of water we need to drink each day is very variable and depends on several factors, including the person's age and weight, the physical activity they perform and the climate and temperature of the environment where they live. It is important to be aware of daily water consumption to avoid cases of dehydration, especially on very hot days. It is worth remembering that sugary drinks (such as soft drinks and industrialized juices) should not replace water. A tip is to flavor the water with mint or fruit, such as slices and orange or lemon peels.⁽¹⁸⁾

It is possible to verify that the elderly, in the present study, have a healthy diet, helping them not to develop dehydration. Adequate food is essential for good quality of life, including maintaining the hydration status, especially for the elderly, we must highlight the consumption of fruits, vegetables and healthy drinks.^(19,20) When we talk about hydration, soft drinks should be avoided, since they are carbonated drinks, capable of abdominal cramps, nausea and diarrhea, in addition to containing low levels of sodium, being ineffective for times of rehydration.⁽²¹⁾

In a study by Klaus et al.⁽²²⁾, which had as sample 87 elderly people, of which only 22 consumed 1.5 to 2 liters of water per day, proved that only these 22 had good hydration, while the rest were showing signs of dehydration. Fortunately, the present study was contrary to the author's findings, allowing us to un-

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derstand that the majority of the elderly have adequate daily water intake and no signs of dehydration.

Finally, we can say that the elderly, participating in the research, have good hydration. Fortunately, it was possible to verify that they have good habits, such as healthy eating and good water intake, which contributes to not showing signs of dehydration.

CONCLUSION

Observing the results and taking into account the objectives, the study problem and the whole theoretical basis presented, it is possible to conclude that the thematic dehydration in the elderly is undoubtedly a problem that deserves special and continuous attention. Despite this, the results showed that the elderly participants in the research are well informed about the importance of drinking water and follow the appropriate recommendations.

However, even with this result with a small sample of the population, it is known that it is necessary to develop health education programs to emphasize, especially for the elderly and caregivers, on the recognition of the importance of hydration for a healthy life, strategies as forms of preventive measures to facilitate access to water and consequently the ingestion of it, and that are considered before the recommendations not only the consumption of water, as well as the consumption of foods and drinks rich in water.

COLLABORATION OF AUTHORS

Benedito do Carmo Gomes Cantão, Genislaine Ferreira Pereira and Ana Gabriela Sabaa Srur de Andrade contributed with a relevant critical review of the intellectual content, Grazieli Neves Melo, Samily Braga dos Santos and José Benedito dos Santos Batista Neto contributed with the writing of the article, analysis and interpretation of the data. ■

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