22 - ASSESSMENT OF THE PREVALENCE OF CHANGES IN FEET OF ELDERLY

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INTRODUCTION

The increasing elderly population in Brazil is growing rapidly. Statistics show that age group with the highest growth in most developing countries is over 60 years. The projection for the elderly population grew from 8.6% in 2000 to approximately 15% in 2020. In absolute terms, is the population in 2025, represent the sixth elderly population worldwide, representing about 32 million people over 60 years (PAVARANI et al., 2005).

The aging process brings with morphofunctional modifications in the human body, emphasizing the present and persistent changes in the feet, which may result in modification of ambulation and therefore the quality of life for seniors. Such changes are associated with bones muscles, joints, peripheral nerves, blood vessels and skin. Several of these changes can be prevented and / or treated effectively without resort to several treatments with high investment (PINTO, 2002).

With aging, foot disorders can be triggered and / or potentiated in the presence of other diseases such as diabetes. In these cases the changes are associated with: peripheral neuropathy, bone deformities and vascular compromise. Risk factors for diseases in the feet are the low visual acuity, abnormal gait and co-morbidities.Since the risk of amputations of the toes and metatarsals level increases with age and risk factors (PATAKY; VISCHER, 2007).

Foot injuries caused by wearing shoes is common in the elderly, particularly in diabetic patients, which may with the disease present and subsequent hypoesthesia to mechanical stimulus to develop plantar ulcers and / or dorsal (CHANTELAU; GEDE, 2002).

In the elderly there is also the increased prevalence of superficial fungal infection in the foot, and onychomycosis infection most commonly seen. However, aspects of preventive and therapeutic measures for these infections are reported infrequently in the literature (PIERARD, 2001).

The foot pain was described as the factor that generates dependence in the elderly, to cause changes in the balance, gait and increase the risk of falls (Leveille et al., 2002). The complaint of foot pain is reported by up to 20% to 30% of seniors do not institutionalized (DUNN et al. 2002; CIENA et al. 2009), but other ailments, were found in an even larger share of elderly in the feet (GARROW et al., 2000).

The present study aims to evaluate the prevalence of changes in the feet of elderly people admitted to the Hospital Universitário do Oeste do Paraná (HUOP).

MATERIALS AND METHODS

Following the precepts of Ethics, this study had characteristic cross prior approval of the Ethics in Research involving Human Subjects of the Union, Campus Cascavel-PR, as record number 017611/2006.

The survey was conducted in the ward of the Hospital Universitário do Oeste do Paraná (HUOP) in the city of Cascavel - PR, from March 10 to April 2006 for both the research was done to assess the feet of 180 patients, 54 women and 126 men, mean age 78 7.98 years, admitted to the ward HUOP, who signed for the Term of free will Consent, featuring a stratified random sample, which satisfy the following inclusion criteria: age greater than or equal to 60 years, according to Ordinance N°. 1.395/GM the National Health Policy for the Elderly (BRAZIL, 2006).

Exclusion criteria were: acute orthopedic trauma in the feet or lower limbs and patients in a coma. For the evaluation procedure of the feet, we used a structured questionnaire made by the authors for this purpose, through an interview / assessment standardized patient, being reported and determined only by the evaluator. The patients responded verbally information about age, gender, pain, and through the evaluator reported the presence of the questionnaire: palpation localized pains, cyanosis, or flat feet cavus, hallux valgus, calluses, plantar keratosis, nail disorders, hammertoes, paresthesias (peripheral neuropathy) and other deformities. In the structured questionnaire were not addressed the socio-cultural and occupational of this patients, evaluated and interviewed in this study.

Was observed the representativeness of the sample through the Shapiro-Wilk test, data were analyzed using descriptive statistics and analytical using the chi-square and Fisher, adopting the significance level of 5%, p <0.05 through the program Graph Pad Prism 2.0.

RESULTS

The results showed that 60 (40%) patients had localized pains in the feet, and of these 12 men. When evaluating the presence of paresthesia and calluses, the results showed prevalence in men only, 18 (10%) and 36 (20%), respectively. Hallux valgus was observed in 18 (10%) and 72 women (40%) men, with a total prevalence of 90 (50%) of patients included. The lower extremities with cyanosis were observed in 8 (10%) and 54 women (30%) men, reaching a total of 72 (40%) of the elderly.

The values in percentage of total observed and p values are shown in Table 1, and we noted with an asterisk those items on which differences were observed between genders.

Table 1: Representation of the prevalence of the symptoms found in the feet and the elderly (p < 0,05).

Change	Patients n= e (%)	Male %	Feminine %	Value of P
Pain	72 (40,00)	28,57	66,67	0,006 *
Paresthesia	18 (10,00)	14,29	-	0,165
Callosity	36 (20,00)	28,57	-	0,011 *
Hálux valgus	90 (50,00)	57,14	33,33	0,091
Cyanosis	72 (40,00)	42,86	33,33	0,490
Flat foot	90 (50,00)	42,86	66,67	0,091
Cracks in nails	129 (71,67)	88,09	33,33	0,0001 *
Plantar keratosis	90 (50,00)	57,14	33,33	0,091
Finger gripper	36 (20,00)	14,29	33,33	0,091

DISCUSSION

Few studies are currently concerned with the issue of the integrity of the feet of the elderly population. However, one of the first reports of this issue was described by Williamson et al. (1964) reported that changes in the feet are common causes of disability in the elderly and are often regarded as an inevitable accompaniment of aging.

In this study, the results showed high prevalence of abnormalities in the feet of the elderly in the analysis. These data are consistent with studies that associate with normal aging changes in anatomical structures of the feet, and certain conditions can affect the integrity of skin and nails, which can compromise the motion and initially reflected in the quality of life of older individuals (PINTO 2002).

In this study, pain was one of the most cited changes among respondents (40%). These data resemble those found in the study by Menz et al. (2006), where 36% of seniors reported localized pains in the feet. Foot pain affects between 20 and 30% of the elderly is associated with coma and impaired ability to perform activities of daily living (BENVENUTO et al. 1995; THOMAS et al., 2004).

The high incidence of hallux valgus and cyanosis found in the sample, 50 and 40% respectively may have contributed to highlight the high rate of complaints of pain.

To Chaiwanichsiri et al. (2009) the pain is reported as a major symptom of hallux valgus. Hemodynamic changes such as cyanosis can be one of the original factors of foot pain (Jensen, Larson, 2001).

Chen et al. (2003) reports that there is an association between symptoms in the feet with pain in other regions of the human body. Menz et al. (2006) reported an association between pain and less movement of the plantar arch in his study. However, Garrow et al. (2004) dismiss the association between foot flat and foot pain.

The prevalence of callosities and paresthesia were found in 20% and 10% of the sample, respectively. Novaskoski and Mendes (2000) found even higher prevalence of callosities on the feet of older, about 81.4% had this change. Springett et al. (2003) reports that the calluses are a frequent complaint, but a lack of adequate epidemiological registry problem.

Changes in the feet, nails, claw toes and plantar keratosis focused on the sample. Although, have not been found in the studied literature figures reveal that the incidence of such changes in the elderly population, some findings corroborate the findings of this study. Pinto (2002), in his illuminating work called "The feet of the elderly and their impact on quality of life", cites the most common changes that affect the feet of the elderly, with emphasis on the changes of the nails, paresthesia, edema, hallux valgus, claw toe, hyperqueratotics injury, vascular disorders and pain.

However, it is believed that the high prevalence of abnormalities in the feet of the elderly is caused by factors related to the aging process and its interaction with chronic diseases such as diabetes, osteoarthritis, arthritis, osteoporosis, overweight and external factors, use of inappropriate shoes and carelessness with their feet. However, the changes found in the legs of the elderly, should be seen as a limiting factor for functionality of the elderly, which affects negatively the quality of life.

CONCLUSION

We conclude that there is a high prevalence of abnormalities in the feet of the elderly, found cracks in the nails, hallux valgus, plantar keratosis and pain. It should be noted that these changes can generate prominent negative impact on quality of life of elderly individuals, which indicates the need for preventive measures in order to prevent permanent installation of deformities and complications.

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ASSESSMENT OF THE PREVALENCE OF CHANGES IN FEET OF ELDERLY

ABSTRACT

The alterations in level of the feet as hallux valgus, amputations, fingers in hammers and pains are observed with large frequency in the elderly, due to factors related to their age or associated pathologies. The present work had as objective to evaluate the elderly individuals' feet admitted to the University Hospital of West Paraná (HUOP) and to describe the found alterations. Were evaluated 180 patients of both sex, with medium age of 77.8 years old. A structured questionnaire was used that searched for information about the presence of pain in the feet, plane foot or concavous, hallux valgus, callosities, keratoses to plant, alterations in the fingernails and fingers hammers. The results showed that 40% of the individuals related pain in the feet, 50% presented hallux valgus, 50% plane foot, 72% fissures in the fingernails and 10% parestesies in the feet. It concludes that there is a high incidence of alterations in the elderly's feet that composed the sample that can affect the quality of these individuals' life negatively, what aims the need for preventive measures.

ÉVALUATION DE LA PREVALENCE DE VARIATION DES PIEDS DE PERSONNES AGEES

RÉSUMÉ

Les modifications du niveau et de l'hallux valgus pieds, les amputations, orteils en griffe et la douleur sont plus fréquemment observées chez les personnes âgées, en raison de facteurs liés au vieillissement lui-même et / ou des pathologies associées. La présente étude vise à évaluer la prévalence des changements dans les pieds des personnes âgées admises à l'Hôpital de l'Université de l'Ouest du Paraná (HUOP). Nous avons évalué 180 patients des deux sexes avec une moyenne d'âge de 77,8 ans. Nous avons utilisé un questionnaire structuré pour recueillir des informations sur la présence de douleur au pied, le pied plat ou creux, hallux valgus, durillons, kératose plantaire, modifications des ongles et des orteils en griffe. Les résultats ont montré que 40% des sujets ont signalé des douleurs dans les pieds, 50% avaient un hallux valgus pied plat à 50%, 72% de fissuration des ongles et des pieds paresthésies 10%. Nous concluons qu'il ya une prévalence élevée d'anomalies dans les pieds des personnes âgées qui constituaient l'échantillon qui peut affecter négativement la qualité de vie des individus, ce qui souligne la nécessité pour les mesures préventives afin d'empêcher l'installation permanente des déformations et des complications.

EVALUACIÓN DE LA PREVALENCIA DE LOS ALTERACIONES EN LOS PIES DE LOS ANCIONES

RESUMEN

Las alteraciones acerca de los pies como hallux valgus, amputaciones, dedos en garra y el dolor se observan con mayor frecuencia en los ancianos, debido a factores relacionados con el envejecimiento en sí mismo y / o patologías asociadas. El presente estudio tiene como objetivo evaluar la prevalencia de alteraciones en los pies de los ancianos ingresados en el Hospital de la Universidad del Oeste de Paraná (HUOP). Se evaluaron 180 pacientes de ambos los sexos con edad media de 77,8 años. Se utilizó un cuestionario estructurado para recopilar información sobre la presencia de dolor en el pie, pie plano o cavo, hallux valgus, callosidades, queratosis plantar, alteraciones en las uñas y dedos en garra. Los resultados mostraron que 40% de los pacientes reportaron dolor en los pies, 50% hallux valgus, 50% pie plano, 72% teniam grietas en las uñas y 10% parestesias en los pies. Llegamos a la conclusión de que existe una alta prevalencia de anormalidades en los pies de las personas mayores que integraban la muestra, que puede afectar negativamente a la calidad de vida de las personas, lo que apunta a la necesidad de medidas preventivas para evitar la instalación permanente de las deformidades y las complicaciones.

AVALIAÇÃO DA PREVALÊNCIA DE ALTERAÇÕES NOS PÉS DE IDOSOS

RESUMO

As alterações em nível dos pés como hálux valgo, amputações, dedos em garra e dores são observadas com maior freqüência em idosos, devido a fatores relacionados ao próprio envelhecimento e/ou patologias associadas. O presente estudo tem como objetivo avaliar a prevalência de alterações nos pés de indivíduos idosos internados no Hospital Universitário do Oeste do Paraná (HUOP). Foram avaliados 180 pacientes de ambos os gêneros, com idade média de 77.8 anos. Utilizou-se um questionário estruturado que angariava informações sobre a presença de dor nos pés, pé plano ou cavo, hálux valgo, calosidades, queratose plantar, alterações nas unhas e dedos em garra. Os resultados mostraram que 40% dos indivíduos relataram dores nos pés, 50% apresentaram hálux valgo, 50% pé plano, 72% fissuras nas unhas e 10% parestesias nos pés. Conclui-se que há alta prevalência de alterações nos pés dos idosos que compuseram a amostra o que pode afetar negativamente a qualidade de vida destes indivíduos, o que aponta a necessidade de medidas preventivas com a finalidade de evitar instalação permanente de deformidades e complicações decorrentes.