
NEED OF ASSISTENCE FOR MAINTAINING OF ORAL HYGIENE AMONG INSTITUTIONALIZED ELDERLY

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Abstract: The need of help from others in carrying out everyday activities, as well as maintaining the oral hygiene among institutionalized elderly is quite high. With the increasing of the number of elderly, the need for the persons responsible for them to become familiar with the basic aspects and characteristics of oral hygiene in these persons is increasing as well. Oral health care has an even greater and more significant role among institutionalized elderly because there is an association of dental status with mortality and morbidity in the elderly population. The most frequently observed obstacle for good oral hygiene is that caregivers do not consider oral health as a priority or as part of their main responsibilities of hygiene activities for patients. Most of the institutionalized elderly have at least one chronic disease, while the number of individuals in this category with two or more such diseases should not be underestimated. The health of all structures localized in the oral medium is an important socio-medical problem, hence the interest in the etiology and epidemiology of dental caries, periodontitis and other oral diseases. Taking into account the aforementioned facts about oral health, the presence of numerous dental problems, as well as the increased health needs and impaired health of institutionalized elderly people, the aim of this paper was to determine the need for assistance in maintaining oral hygiene of institutionalized elderly people. The investigation included a total number of 70 subjects older than 65 years. In these institutions, most of the persons are functionally-dependent individual and have dependence from foreign assistance. We were evaluating the need of assistance for maintaining adequate oral hygiene. Based on the results of this research, it was noted that a large number of institutionalized elderly people (68.5%) have a subjective feeling that they are not capable for independent living and have subjective need for help. Although most of the subjects (73.97%) subjectively do not need help in maintaining oral hygiene, the number of persons who need help with tooth brushing was not neglected (26.03%). Of the patients who need help to maintain oral hygiene, only 10.59% of the subjects subjectively assessed their oral health as good or excellent. The mean value of the simplified OHI index (referring to the presence of dental plaque and calculus together) for the research population was 4.24 ± 1.21 . However, the biggest problem is the number of people who do not maintain regular oral hygiene (68.5% of the examined elderly). We can conclude from this research that there is a great need of help for every day activities among the institutionalized elderly, especially in carrying out the activities related to the maintenance of the general as well as for the oral hygiene. Also, there is small percentage of people who maintain daily hygiene of the remaining teeth.

Keywords: oral hygiene institutionalized elderly, assistance, long-term patients.

1. INTRODUCTION

The number of elder individuals is growing proportionately much faster than any remaining age group worldwide. It is estimated that by 2050 the percentage of people over 60 in developed countries will reach over 80 percent of the total population.(United Nations Population Division, 2003) These conditions are due to the increased average life expectancy, which in 1900 was only 47 years, while in 1990 it was 75 years.(World's Health Organization, 2003) Along with the increasing number of elderly people, their health problems and needs are also increasing. Numerous data confirming this can be seen in the modern scientific literature.

The increasing number of elderly people in Western European countries is a serious economic, social and medical problem. Some European countries have decided to raise the retirement age for citizens to deal with the serious problem caused by the growing number of retirees. Prolonged life also leads to increased needs of the elderly population in context of health, due to which increased costs have both health and insurance companies. As the proportion of older people increased from 16.4 percent in 1975 to 20,75 percent in 2005, highly developed countries pay much more attention to preventive health programs. What these countries can be proud of is the advanced social

protection, especially the long-term care for the elderly, and numerous highly specialized institutions for their care are presented. (Giannakouris, 2008)

Among institutionalized elderly people, a particularly important problem they face is their functional and mobility disabilities. Gerontological functional disability is most often caused by a number of diseases that are predominant in the elderly. (Radasevic, 2006) Two main groups that cause geriatric disability are fracture-caused disabilities, which are the cause of significant disability as well as internal-disease disabilities, which originates from the numerous chronic diseases that the elderly have. A lot of factors increase the vulnerability of the elderly to fractures. These are, above all, the factors that affect the balance of the elderly as well as those that affect the perception of the environment. (Milanovic et al, 2007) Therefore, the functional disability of the elderly is a major health feature of the elderly.

Oral health care has an even greater and more significant role among institutionalized elderly because there is an association of dental status with mortality and morbidity in the elderly population. Holmlund et al (2010) concluded that tooth loss may indicate an increased risk of serious general disease. Most of the institutionalized persons have at least one chronic disease, while the number of individuals in this category with two or more such diseases should not be underestimated.

The health of all structures localized in the oral medium is an important socio-medical problem, hence the interest in the etiology and epidemiology of dental caries, periodontitis and other oral diseases. Unsatisfactory oral health and hygiene in institutionalized elderly have also been verified by one research from Rihs et al (2009), demonstrating a high percentage of lost teeth and a high incidence of anodontia. According to Vadiz et al (2012), indicators indicating the quality of oral hygiene among non-institutionalized elderly people are better than those among institutionalized if a comparison is made with groups of the same age. The most frequently observed obstacle for good oral hygiene is that caregivers do not consider oral health as a priority or as part of their main responsibilities of the hygiene activities for patients. Therefore, according to Gil-Montoya et al (2006) in health policies and protocols for the long-term care of the elderly with severe functional dependence, sufficient attention must be targeted to oral hygiene.

According to one study from Gil-Montoya et al (2015) oral hygiene in institutionalized older adults is not adequate. According to the same authors, poor oral hygiene is associated with systemic infections, the most common of which are respiratory infections as well as nutritional disorders and vitamin deficiency. According to Wårdh et al (2012), around 90 per cent of patients institutionalized in long-term care institutions consider oral health care should be an important part of good nursing. According to the same authors, despite the positive attitude towards oral health, it is important to provide formal education for the staff, especially focusing on the prevention of as many teeth as possible.

According to Dellavia et al (2009) it is desirable to achieve the same level of oral hygiene in the elderly with certain disabilities, physical or mental, as in people without of disabilities. Dental care should compensate for all deficits in people, thus achieving the same standard of oral health. The basic principles in providing adequate oral health care for the frail and diseased elderly, according to Nitschke et al (2021) are: mastering appropriate treatments, adapting to standard treatments, taking into account the limited adaptability of the elderly, and of course significantly more attention should also be targeted to the role of family members and medical staff in charge for the care of institutionalized elderly people. With the existence of dental teams in the care centers for the elderly, a significant reduction of dental problems in the elderly can be achieved. (Petrovski & Terzieva-Petrovska, 2018)

Taking into account the aforementioned facts about oral health, the presence of numerous dental problems, as well as the increased health needs and impaired health of institutionalized elderly people, the main aim of this paper was to determine the need for assistance in maintaining oral hygiene of institutionalized elderly.

2. MATERIAL AND METHOD

In this paper are presented results from an evaluation of conditions related to oral health and hygiene among institutionalized persons older than 65 years. The presented data originate from the research conducted in the period from April to July 2018, in the department "Mother Teresa", PHI Gerontological Institute "13th of November" - Skopje.

The research included a total number of 70 subjects older than 65 years. In this long-term care institution, most of the institutionalized persons are functionally-dependent individuals, mostly caused by chronic diseases. This multimorbidity leads to serious disability or dependence from other people's help, which indicates that these elderly people need long-term care and attention.

Before performing the clinical examination in order to obtain a complete picture for the performance of activities for oral hygiene in the institutionalized elderly from this institution, the subjects were firstly interviewed. An analysis of the subjective assessment of the needs for care and assistance of the institutionalized elderly was performed. In cases

where there was an inability to obtain relevant data from the patient, there were obtained in cooperation with the doctors or other persons responsible for them, after complementary study of the medical histories and notes for the patients. Prior to the interview, the vocabulary was adapted to the required level and the details and the objectives of the research were explained to the patients using appropriate terminology. The interviews were conducted after obtaining verbal consent of the patient to participate in the examination. Interviews were conducted in patients' rooms or in a doctor's office, always respecting the basic postulates for preserving the privacy and dignity of the patient.

In order to make an objective assessment of oral hygiene status among the institutionalized elderly, an oral examination was performed and the simplified OHI index of Green Vermilion was performed.

3. RESULTS

In this part, the data related to the subjective attitudes of the subjects about oral health and oral hygiene are presented. Based on the results of this research, it was noted that a large number of institutionalized elderly people (68.5%) have a subjective feeling that they are not capable for independent living and have subjective need for help. After processing the data related to their subjective opinion about their oral health, slightly more than half (57.53%) of the subjects objectified the health of their teeth, gums or dentures as satisfactory. Only 23,29% of the respondents think that they have poor oral health. (Fig. No. 1.) Of those who had five or fewer teeth left in their mouth, only 30% estimated that they had satisfactory oral health, while the remaining 70% considered that they had poor oral health.

The number of people who do not maintain regular oral hygiene (percentage of people who do not brush their teeth at all) is quite large and was 68.5% of the examined elderly people.

Although most of the persons (73.97%) believe that they do not need help in maintaining oral hygiene, still the persons who need help in brushing their teeth should not to be neglected (26.03%). (Fig. No. 2.) Of the patients who need help to maintain oral hygiene, only 10.59% of the respondents subjectively assessed their oral health as good.

Objective assessment of the state of oral hygiene in this study is made using the simplified OHI index of Green Vermilion. The mean value obtained for the presence of dental plaque is 2.33 ± 0.51 (range from 1.33 to 3.00, with Confidence interval from 2.15 to 2.51) (Fig. No. 3.) The mean value of the simplified OHI index, which refers only to the presence of dental calculus in individuals, is 1.93 ± 0.58 (range 0.66 to 3.00, with Confidence interval from 1.64 to 2.02) (Fig. No. 4.). The mean value of the simplified OHI index (referring to the presence of dental plaque and calculus together) for the study population was 4.24 ± 1.21 .

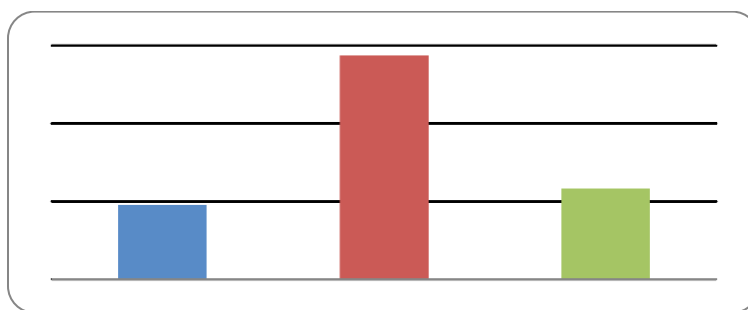


Fig. No. 1. Subjective assessment of oral health in institutionalized elderly

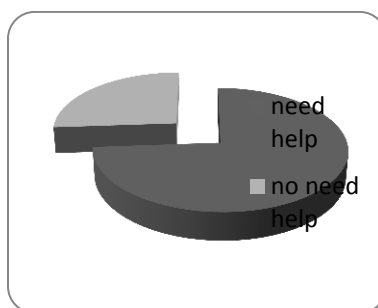


Fig. No. 2. Need for help in maintaining oral hygiene among institutionalized elderly people

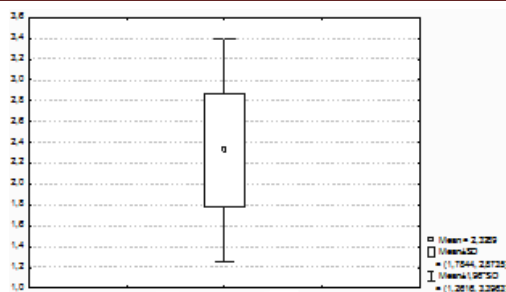


Fig. No. 3. Average value for the simplified OHI index for dental plaque in the examined elderly who have natural teeth.

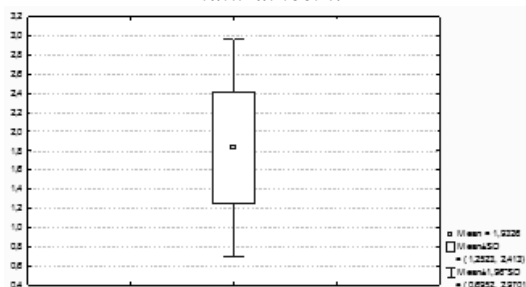


Fig. No. 4. Average value for the simplified OHI index dental calculus in the examined elderly who have natural teeth.

The mean value obtained for the simplified OHI index which refers to the presence of dental plaque among females was 2.41 ± 0.58 , while the mean value which refers to the presence of dental plaque in males was 2.25 ± 0.51 . After statistical processing, it was found that there is no statistical significant difference in the specific simplified OHI index between males and females, which is larger in females.

Most of the subjects have values above 2.00 for the simplified ONI index and for the presence of dental plaque and the presence of dental calculus. It was found that 68.58% of the subjects have a value above 2.00 for the presence of dental plaque, while 28.57% of the respondents have a value below 2.00 for the presence of tartar. If the persons are divided according to the value of the simplified OHI index, it can be noticed that there is not a single respondent who has excellent oral hygiene, while most of the respondents have unsatisfactory oral hygiene (28 respondents or 73.68% of the subjects with natural teeth).

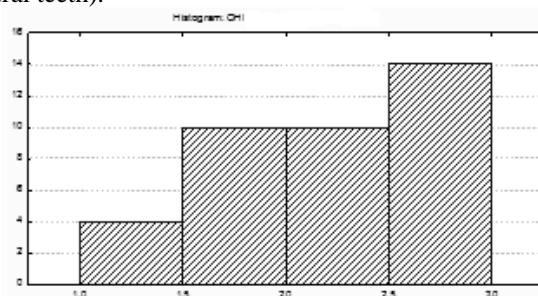


Fig. No. 5. OHI among institutionalizes elderly

4. DISCUSSION

At the beginning it must be noted that comparison of the data from this study with other epidemiological studies is complex due to the existence of numerous variations in context of diagnostic methodology and criteria between different studies. A special problem is the lack of numerous published data regarding the oral health of the institutionalized elderly in our country.

The main features of oral health in institutionalized elderly are the presence of a large number of untreated roots, root caries, mobile teeth, teeth with inadequate fillings or advanced caries and tooth lost compared to the elderly living alone. (Comfort et al, 2004) According to Dogan and Gokalp (2012) - age, regular dental check-ups and health insurance are associated with toothlessness.

The need of help for maintaining oral hygiene is most often related to the need for help in dressing and washing. The inability to maintain their own hygiene, including oral hygiene, is a characteristic specific only to this population. The percentage (26.03%) of institutionalized elderly people who need help for regular oral hygiene in our study is similar with the data presented by Marin-Zaluaga et al (2012), while the percentage is lower than the published data from Ruiz-Medina et al (2005) and Marchini et al (2006). According to Philip et al (2012) the number of teeth with active caries is related to oral hygiene and the need for assistance in performing it among institutionalized elderly people.

We used the simplified OHI Green Vermilion Index to assess oral hygiene among the examined population. The reason why this index is used is primarily because it is fast and practical, because the determination of the presence and quantification of dental plaque is done only on a certain group of teeth and of course because the teeth are not colored. The representative groups of teeth according to the authors of this index are first left and right upper molars, the right upper and left lower central incisors on the vestibular side, and on the lower first molars on the lingual side. The presence of dental plaque is determined by sliding of a probe along the surfaces of the tooth. A special problem during the examination was the lack of representative teeth. Adequate modification of the index was made if one of the molars was missing and it was replaced with the first tooth which is located distal to the second premolar, and if one of the representative incisors was missing, then one of the opposite central incisions was considered. In case of lack of some of the replacements (absence of all central incisions or absence of teeth distal to the second molar) then that tooth was not replaced, and the assessment was obtained as an average value of the existing examined areas.

Our results showed that the average value of the simplified OHI index was 2.33 ± 0.51 . If an analysis is made of the results related to oral hygiene obtained in this study, as well as numerous studies, it can be noticed that the oral hygiene is unsatisfactory in institutionalized elderly, with a big amount of dental plaque. The prevalence of poor oral hygiene is associated with poor oral health. Poor oral hygiene in these people is due to the irregular practice of oral hygiene or the inadequate quality or inability to perform activities to maintain adequate oral hygiene. Excellent oral hygiene was not observed in any of the respondents included in our study. In contrast to our results, Vidzis et al (2012) in their research conducted on institutionalized elderly, found a higher percentage of respondents who have good oral hygiene. Unsatisfactory oral hygiene in our study was observed in 73.68%, which is significantly higher than the data presented by Zuluaga et al (2012) and Marin-Zaluaga et al (2012). The mean value of the simplified OHI index obtained in our study is similar with the results of Zuluaga et al (2012) and Angelillo et al (1995), while it is higher than those obtained in the research from Carter et al (2004). Higher value of S-OHI is presented by Barysenka in Belarus.(2018)

5. CONCLUSION

From this research we can noted that there is a great need of help for everyday activities among the institutionalized elderly, especially in carrying out the activities related to the maintenance of the general as well as for the oral hygiene. Also, there is small percentage of people who maintain daily hygiene of the remaining teeth.

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