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Oral Cavity Complications of Elderly in Georgia and its Impact on Quality of Life

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Abstract: ***Introduction: Oral diseases are one of the most common chronic diseases and pose a significant public health problem. Maintaining oral health is quite difficult in the elderly, due to less interest in dental services. Adequate nutrition is a vital factor for the health and well - being of the elderly. Strengthening dental "supervision" / services for the elderly can increase their oral health and, consequently, their quality of life. Goal: The purpose of our study was to conduct a comparative analysis of subjective and objective examination of the oral cavity of the elderly patients to determine the perception of oral complaints and the impact on the quality of life. Methods and Materials: The paper is a prospective study of a pre - selected group of deeply elderly people, which uses the methods of survey, interview and researcher examination (objective examination) and comparative analysis of the results obtained. Results and Conclusion: Based on the obtained results, we came to the following conclusion: Oral pathologies detected at the end of the life of the elderly aged 85 years and older are largely manageable and the provision of adequate sanitation of their oral cavity has the potential to improve the quality of life of this contingent.***

Keywords: Elderly, Quality of Life, Oral health

1. Introduction

Oral health is part of general health and it is considered to be an important component in determining quality of life (Spanemberg JC et al., 2019). Of course, most oral problems are not the cause of rapid death, but they significantly reduce the quality of nutrition, thus contributing to the development of chronic pathologies, in addition, they cause pain and functional disorders (which sometimes lead to feelings of suffering), as well as aesthetic, speech and psychological problems, thereby lowering the quality of life (Spanemberg JC et al., 2019). Oral diseases are one of the most common chronic diseases and pose a significant public health problem (WHO 2003).

Maintaining oral health is quite difficult in the elderly, given that the elderly are less interested in dental services due to their physical or mental condition. (Razak PA et al., 2014). Adequate nutrition is a vital factor for the health and well - being of the elderly. Improper nutrition can accelerate physical and mental degeneration. Poor oral condition is a crucial factor for nutritional status and, consequently, health. Toothache, insufficiency of teeth or poor (inappropriate) dentures usually reduce the desire for food, complicate chewing and cause a decrease in the perception of food taste (Razak PA et al., 2014).

With all of the above in mind, enhancing dental "supervision" services for the elderly can increase their oral health and, consequently, their quality of life.

In Georgia, caring for the elderly is considered a tradition and a family debt, as well as a matter of dignity. Moreover, this debt is "daily", given that the elderly make up a quarter of the country's population (Kordzaia D. et al., 2011).

When planning palliative care for the elderly, in addition to ethno - traditions, the needs and requirements of each of them should be taken into account, as well as their attitudes towards meeting the needs and relationships with them (Besdine R. et. al., 2005; Kordzaia D, 2011–2015).

Studies have shown that end - of - life attitudes, needs and requirements in humans are largely similar, regardless of what determines the limitation of the remaining life expectancy - incurable disease or deep old age. Narratives that fit the upper echelons of Abraham Maslow's needs and wants, in particular the needs of social relationships, love, respect, and transcendence, clearly prevail in both categories of people (Chikhladze N, 2016). Problems with the oral cavity were reported in only a few cases during the study. This was somehow unexpected, as age - related problems of the oral cavity and teeth are well known in the elderly (Chikhladze N, 2018).

Goal and objectives:
The purpose of our study was to conduct a comparative analysis of subjective and objective examination of the oral cavity of the elderly patients to determine the perception of oral complaints and the impact on the quality of life.

2. Materials and methods

The paper is a prospective study of a pre - selected group of deeply elderly people, which uses the methods of survey, interview and researcher examination (objective

examination) and comparative analysis of the obtained results.

The selection criteria for the elderly were:

- Age - 85 years or more;
- Absence of life - threatening disease (e. g., cancer);
- Adequate cognitive function (confirmed by a family doctor);

All individuals participating in the study had to be able to speak Georgian; Also, their physical condition and neurological status had to allow them to understand the question correctly and participate in the interview; They had also had the opportunity to familiarize themselves with the form of "informed consent" and to agree or disagree with it.

The exclusion criteria from the study were:

- Lack of knowledge of Georgian language;
- Inadequate awareness.

Participated in the study:

- Elderly people who were selected by "random sampling principle" in the city of Batumi and surrounding areas (Adjara region);

A questionnaire was used as a research tool, the first part of which was answered by the participants through a simple outline of one of the proposed versions. Questionnaire included questions about own sensations in oral cavity like taste disturbance, mouth sores, difficulty chewing, difficulty speaking and etc.

After completing the questionnaire, the person involved in the study was interviewed in depth and the additional information provided by them on the “oral cavity problem” was recorded. The record was then in the process of decryption and subjected to quantitative and qualitative analysis along with the survey data.

The second part of the questionnaire was completed by the researcher - dentist, based on the survey data of the persons involved in the study and the information obtained from the examination of the oral cavity. Patients’ oral cavity examination was performed in the ward or at home with the help of medical staff or family members. We used a disposable spatula for the cheek and a disposable dental mirror for detailed examination. An additional source of light was a lamp.

3. Results and Discussion

Out of 56 elderly people examined by the dentist, 29 elderly people agreed to fill in the 1st part of the questionnaire. The reasons for the refusal were various: lack of mood (hurt), helplessness, difficulty reading and more. Out of the 29 individuals who completed Part 1 of the questionnaire, 13 were male and 16 were female.

The data of the 1st part of the questionnaire filled out by them are presented in the form of figure 1. The data in the figure are grouped according to the sex of the patients.

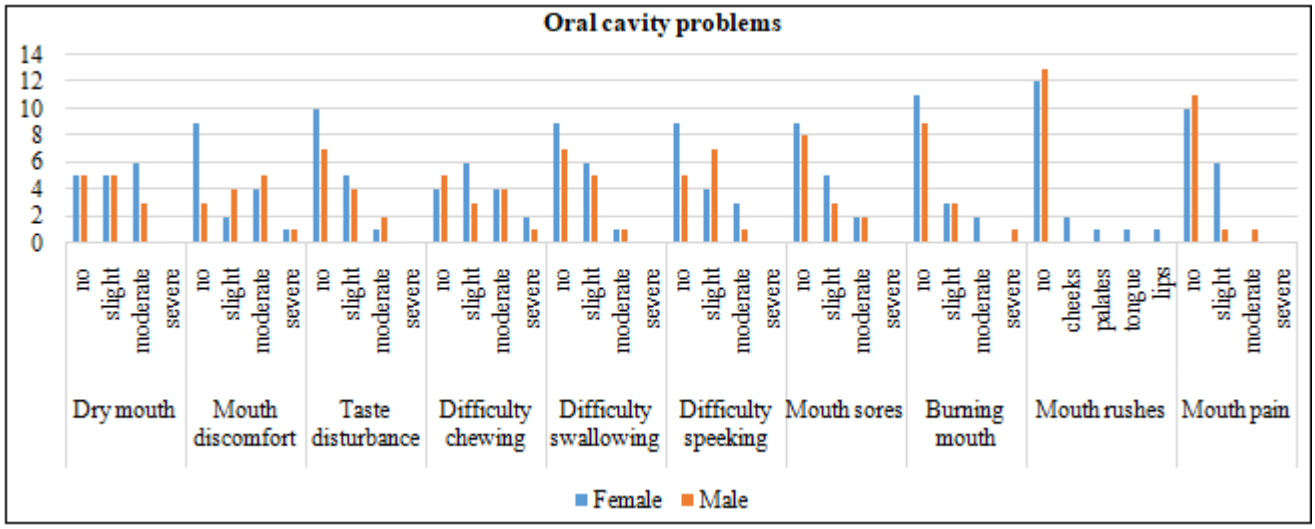

Figure 1: Oral cavity symptoms of elderly in accordance with gender

Out of the given 29 elderly people, only 1 woman believes that her quality of life has not changed. Out of the remaining 28 individuals, 13 (45%) indicated that their quality of life had changed (decreased) significantly with increasing age (including 6 males and 7 females). The average change in quality of life is noted by 9 elderly people (31%) - 3 women and 6 men. Particularly noteworthy are the 6 women who indicate that their quality of life has changed slightly (5 persons) or not at all (see Figure N2).

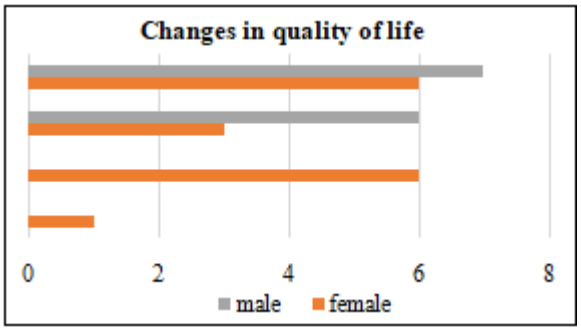

Figure 2: Changes in quality of life

On the one hand, this can be explained by the traditional "comfort" in their families, which, first of all, is manifested in the emphasized respect for the elderly. In an environment of high attention, human warmth and respect, the elderly may not complain of deteriorating quality of life even when they have limited movement due to various chronic diseases (including diseases of the musculoskeletal system) and also have a lack of teeth (sometimes including complete dentition).

Out of 29 elderlies, 25 (86%) reported changes in the oral cavity. In addition, 4 elderly people - 2 men and 2 women - deny any change (Figure N3). Presumably, they should belong to the category of the elderly who consider changes in the oral cavity and its complications (or problems associated with these changes) to be "natural" and do not consider them worth mentioning as "changes" (Razak PA et al., 2014). It is noteworthy that none of the elderly people in the questionnaire crossed out the answer - "I do not know", which indicates the awareness of such an attitude. This further reinforces this provision.

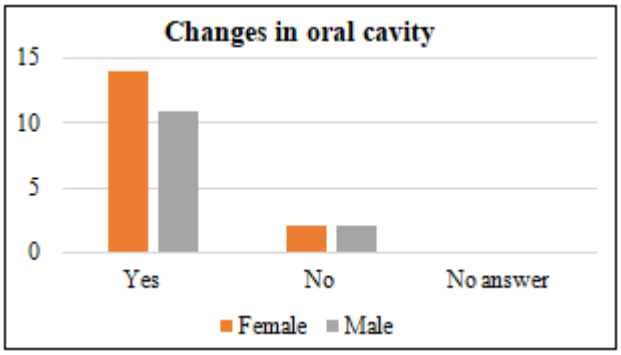

Figure 3: Changes in oral cavity

Out of 29 elderly people surveyed, 21 (72%) had this or that type of prosthesis: 8 (28%) elderly people were not using dentures, 4 of them were men, 4 - women. It is interesting to note that one of these four people was the one who did not confirm the development of changes in the oral cavity. This is another, additional argument in favour of the above rule of "natural change of age".
Out of 21 prosthetic patients, 15 (71%) indicated satisfaction with the prosthesis, the remaining 6 were dissatisfied with the prosthesis.

In many developed societies, 50% of the elderly are toothless without proper prosthetics (Holm - Pedersen P. et al., 2015). Deciding on treatment (prosthetics) and predicting outcomes depends on many factors, including, for example, patients' presented (previous) experience with prosthetics (Papas AS et al., 1991; Razak PA et al., 2014).

Decreased salivation or xerostomia is the most common and least treatable disease in the elderly (Van der Putten GJ et al., 2014). Decreased saliva secretion is mainly a side effect of taking various medications, such as psychotropic agents, or is the result of another disease, particularly diabetes (Razak PA et al., 2014). Xerostomia is followed by poor retention of dentures, traumatic injuries, and infection of the mucous membrane. During xerostomia, it is important for prosthetic patients to use "artificial" saliva and chlorhexidine - containing saliva to avoid similar complications (Razak PA et al., 2014).

It should be noted that 10 out of 29 elderly people (34%) do not report dry mouth, which is quite a high figure. It is no less remarkable that no old man mentions "severe" dryness. "Slight" and "moderate" strength dryness was reported by 10 (34%) and 9 (31%) elderly, respectively.

Such a "wet" ("moist") oral cavity indicates more or less adequate functioning of the salivary glands, which in turn should be considered as a result of less use of psychotropic or other similar medications by the elderly (Razak PA et al., 2014; Vissink A. et al., 1996). In addition, in maintaining the function of the salivary glands, it is possible that the traditional diet of the residents of the Adjara region may be "guilty".

Since saliva prevents the infection of the mouth, upper respiratory and digestive tract, its reduction can lead to many pathologies (Holm - Pedersen P. et al., 2015).

17 seniors (59%) complain on discomfort in oral cavity resulted by different reasons, that can be caused by different oral cavity symptoms.12 patients regret discomfort at all, 12 patients deny such discomfort even though all the elderly had at least one symptom. On the one hand, this may indicate that the contingent surveyed is not well aware of the essence of the question, or on the other hand, is not well aware of the association of "general discomfort" with any particular symptom.
Only two elderly people (1 male and 1 female) reported severe discomfort.

Changes in taste sensation are a fairly common symptom in the elderly. It is believed that taste disturbance is associated with dry mouth (for example, due to dysfunction of the salivary glands), poor hygiene, oral infections; It can be a side effect of medication or the result of neurological problems (Ripamonti C. Et al., 2015; Imoscopi A. Et al., 2012).

Against this background, it is interesting to note that more than half of the elderly we surveyed - 17 (59%) - deny the taste disturbance. In addition, out of the remaining 12 elderly, 9 indicate only a slight change in taste and only 3 - a strong change.

These data are correlated with the data that confirm the maintenance of salivary gland function, which, presumably, may also be related to the traditional diet of the inhabitants of the Adjara region, especially the diet of the elderly (Khavitsi, Doshorva, Sinori, Asuta, Sutli and others).

20 (69%) elderly people, including 8 men and 12 women, complain of chewing problems caused by various reasons. In addition, only 1 male (8%) and 2 female (12.5%) reported severe chewing complication. In other cases, slight and moderate complication of chewing prevails.9 elderly (31%) did not have difficulty chewing.

On the one hand, these data are considered in correlation with prosthetic satisfaction data; As mentioned, 71% of

prosthetists are satisfied with the prosthesis and therefore should not have any chewing problems. On the other hand, what matters is how many and which teeth are preserved.

For good chewing function it is necessary to have at least 10 pairs of tooth antagonists (Gil - Montoya JA et al., 2015). The elderly have insufficient (weak) grip strength, they need a lot of time to chew. Added to this is the lack of teeth (sometimes, complete adentia), which, along with the reduction of the chewing effect, leads to the transition to softer foods.

The main cause of tooth loss in Georgia is caries and periodontal diseases (Makhviladze G. et al., 2016; Puturidze S. et al., 2019).

Rejection of chewing problems by the elderly can be considered by adapting the elderly to appropriate foods. The elderly refuse fruits and vegetables and eat foods adapted to them. In addition, studies show that good prosthetics can improve chewing efficiency (ZhuY. et al., 2014; Morais JA et al., 2003).

Difficulty swallowing are reported in 13 elderly people (45%), which should be considered a fairly high rate of this complaint; In addition, the frequency of this symptom is somewhat dissonant with the frequency of any discomfort in the oral cavity, which is probably, as mentioned above, a problem of perception and comprehension. In addition, it should be noted that the complication of swallowing is not manifested in severe form. Complications of moderate severity of swallowing were reported in 2 patients (1 male and 1 female). Eleven elderly people reported a slight complication of swallowing.

Swallowing problems can also be caused by dryness, chewing disorders, organic problems and impaired innervation of the muscles involved in the swallowing process. (Lieu PK et al., 2001).

Speech complications were reported by 15 elderly people (52%), including 11 of minor degree and only 4 of moderate degree. It can be assumed that incorrect prosthetics and dry mouth can disrupt articulation. Dryness also makes it difficult for the tongue to move, which will interfere with normal speech.

Sour taste is not a common symptom in the oral cavity. It is associated with the inability to temporarily neutralize the acidic environment created in the mouth. Neutralization of the acidic environment in the oral cavity depends on saliva (Harding J., 2018). In our case, dry mouth is not a widespread symptom and, consequently, many old people do not complain of sour taste in the mouth.

Out of 29 elderly people surveyed, 13 (45%) reported this symptom. Here, too, the rate of "slight strength" prevails - it was observed in 8 cases (3 men and 5 women). Moderate acidity was noted in 2 males and 2 females. Strong sour taste was not mentioned in either case.

Nausea and vomiting were a fairly rare symptom in the surveyed elderly. It was mentioned by only 8 (28%) persons - 3 men and 5 women, with slight strength.

Only 9 elderly people (31%) also reported burning mouth symptom. Only 1 of them indicated strong mouth burning.2 women were found to have a burning mouth of medium strength. In the other 6 cases the burning of the mouth was weakly expressed.

Pain was found to be a rather rare symptom in the contingent we examined. Only 1 man complained of moderate pain in the oral cavity, and 1 man and 6 women complained of minor pain, a total of 7 elderly people, which is 24% of the total number.

25 out of 29 elderly people deny the presence of any rash (atypical morphological elements) on the mucous membrane, which is 86%. Single cases of mucosal rash have been reported on the cheeks, palatine, tongue, and lips. This indicates that the oral mucosa in the contingent we studied has more or less well maintained protective function.

Analysis of the above data indicates that the incidence of chewing problems, burning sensation in the mouth, sour taste in the mouth, swallowing, speech problems, nausea, vomiting or other similar symptoms is not very high in the elderly aged 85 and over. These symptoms are much more common and, moreover, more pronounced in studies by other authors. (PetersenPE et al., 2010; MurrayThomsonW., 2014). The lower frequency and intensity of these symptoms in the contingent we studied should be related to the maintenance of "moisture" in the mouth of these elderly people, which may be related to both genetic and local dietary factors.

When asked what is the share of oral problems in the general condition of the elderly, none of the elderly gave a specific answer. The response of all the interviewed elderly was that they were not bothered by the oral cavity in any way.

We (dentist) examined 56 elderly people (33 women and 23 men).

Of the surveyed contingent, although all were carriers of one or more comorbidities, only 32 (57%) patients received medical treatment.

39 patients (70%) had normal lip condition, 17 (30%) had cracks in the lips and corners of the mouth. The frequency of this symptom was approximately the same in men and women.

Occlusion is mainly observed in the form characteristic of the elderly (the lower third of the face decreases in height, due to which the elderly mainly has deep occlusion (Miyazaki H. et al., 2005) 39 elderly (15 males and 24 females). This is a fairly high rate for both sexes. For the group and makes up 73% of women and 65% of men.

A total of 3 cases of distal occlusion were observed, while mesial - only 1. In other cases, the occlusion was close to

orthognathic, which may be due to the surviving teeth or timely prosthetics. (Miyazaki H. Et al., 2005).

41 elderly (73%) - 16 males and 25 females - were in full adenity. The remaining 15 patients (27%) had survived several teeth.

34 out of 56elderly patients had prosthetics, of which 29 (52%) had removable prostheses and 5 (9%) had partial ones.22 old people needed prosthetics.

This figure is in line with international statistics, which show that in many countries more than 50% of the elderly are toothless without proper prosthetics (Holm - Pedersen P et al., 2015).

Out of 15 patients who had a few teeth left, 11 cases had poor oral hygiene (only 4 cases had good oral hygiene) and, consequently, all 11 cases had different periodontal diseases.

Periodontal diseases in the elderly are usually the result of ongoing age - related changes in periodontal tissues. This may be due to prolonged exposure to plaque on periodontal tissues (Suresh R., 2006). Which, in turn, is due to improper oral hygiene.

4. Conclusion

Oral complaints in elderly are not particularly annoying complaints and are completely ignored, while the problems observed by the dentist as a result of the examination of the oral cavity of persons aged 85 years and older far outweigh the problems reflected by the subjective complaints of the same contingent, both quantitatively and qualitatively;

Finally, as we see, oral pathologies detected at the end of the life of the elderly aged 85 years and older are mostly manageable and providing adequate sanitation of their oral cavity has the potential to improve the quality of life of this contingent.

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