



PRESERVE THE ORAL HEALTH OF THE GERIATRIC PATIENT TO MAINTAIN QUALITY OF LIFE, MASTICATION AND ADEQUATE DIGESTION

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Article Received on 05/11/2019

Article Revised on 25/11/2019

Article Accepted on 15/12/2019

ABSTRACT

Preserving the general and oral health of the geriatric patient is important. Inadequate dental or prosthetic hygiene favors the proliferation of microorganisms, generating periodontal disease, tooth decay, dental loss. Partial or total edentulism favors chewing, digestion and bowel movements, leads to alterations in terms of feeding, favors the patient to consume a soft diet, nutrient deficiency frequently due to difficulty in chewing, decrease fluid intake, affecting evacuation. Descriptive, cross-sectional, comparative, observational, clinical study, 60-70 years, both sex. The Oral Health Impact Profile-Profile instrument (OHIP-14), informed consent was applied to 200 healthy geriatric patients and its diagnosis and treatment was performed. Considering the mean, the pre and postoperative treatment results were obtained: poor oral hygiene 92%/15%, periodontal disease 80%/23%, poorly adjusted prosthesis 43%/14%, difficulty evacuating 75%/16%. The dimensions with the greatest impact on oral health were general disability question (Q)14 Have you been totally unable to perform your daily activities? (63.5%) (Q)13 Have you felt that life in general has been less pleasant? (56.5%), psychological disability (Q)10 Have you felt embarrassed about problems with your mouth? (68%) (Q)9 Have you found difficulty resting? (70%) functional limitation (Q)1 Have you had trouble pronouncing words? (60%) physical pain (Q)4 Have you had painful discomfort in your mouth? (58%) (Q) Have you had painful discomfort in your mouth? (57.5%). Therefore, the oral condition affects the quality of life, it is convenient to implement preventive measures that influence the preservation of dental organs and avoid edentulism.

KEYWORDS: Geriatric, edentulism, periodontal disease, evacuate.

INTRODUCTION

By increasing the perspective of life for medical advances and high technology, different investigations have been undertaken considering the needs of geriatric patients, and thus offer them better health care, since the aging process generates physical, psychological, biological changes and social changes. The increase in geriatric patients among the population in our country predicts that the requirements in stomatological care will be greater in further years, "The System of Epidemiological Surveillance of Oral Pathologies (SIVEPAB), reflected, that, during 2015, in the group of 65 and more, of a total of 16,034 patients, 56.8% presented some degree of periodontal disease and an average of 10 missing teeth". To preserve general and oral health, it is necessary to look for alternatives.

Inadequate dental hygiene or prosthesis, mismatches of this, hyposalivation and xerostomía, brings on the proliferation of microorganisms, generating periodontal disease, tooth decay and dental loss in the oral cavity. Preventing it, keeps the dental organs in the oral cavity

and the periodontium in good condition, avoids functional limitations, physical pain, malaise and psychological incapacity, physical disability as well as allowing adequate chewing and swallowing nourishing, the gastrointestinal state remains functional, affecting in the economic, general and social health aspects, and therefore, geriatric patients quality of life.

Understanding as quality of life, according to the World Health Organization (WHO) as "the individual's personal perception of their life situation, within the sociocultural context and values in which they live, in relation to their objectives, expectations and interest" and that they interrelate with numerous factors (WHOQOL Group 1996^[1]; de la Fuente-Hernández et al., 2010^[2]).

According to the previous definition, the concept of quality of life interrelates several factors, including oral health. Sánchez García^[3] (2007) defines oral health as "the physical, psychological and social well-being in relation to the state of the dentition, as well as hard and soft tissues of the oral cavity" in addition, Sischo &

Broder^[4], (2011); Gabardo^[5] et.al., (2013) mention that oral health is affected by the interaction of the oral health condition, environmental factors and general health, reflecting the individual's satisfaction with their oral health.

There are different instruments focused on the analysis, evaluation of the quality of life and oral health in geriatric patients, one of the most used and with good results is the Quality of Life Related to ORAL Health (CVRSO). The instrument to measure the quality of life according to the oral state is subjective as it is influenced by different factors, which cannot be directly observed, which is why measurement instruments have been developed represented by dimensions that value the personal psychosocial perception of each individual, used to estimate and complement the physical evaluation (de la Fuente-Hernández^[2] et.al. 2010).

The Oral Health Impact Profile known by its acronym OHIP (Oral Health Index Profile) is one of the most used instruments for the evaluation of oral health perception in geriatric patients and its impact on the quality of daily life (López-Jornet^[6] et.al., 2009).

Although there are other instruments for measuring the quality of oral life, the original version OHIP was simplified to a 14-item version (OHIP-14), which has proven to be an accurate, validated questionnaire (Castrejón-Pérez^[7] et.al 2010) and reliable to assess oral health and the quality of life of the geriatric patient. Despite being short (Montero-Martín^[8] et.al.). It has been the most studied and used.

For the present investigation, the OHIP-14 instrument "Oral Health Impact Profile" was used, which assesses relevant aspects for the investigation, such as identifying whether there are any(s) of geriatric patients interviewed, diagnosed and treated) limitation(s), in addition to estimating the pre/postoperative period regarding the efficacy of the health services offered in oral health, that is, dysfunctions at the level of the oral cavity.

The Oral Health Impact Profile (OHIP) was developed with the objective of providing a comprehensive measure of self-report dysfunction, discomfort and disability attributed to oral conditions. According to Reissmann^[9] (2013), these impacts were intended to complement the traditional oral epidemiological indicators of clinical disease, thus providing information about the "disease burden".

Reissmann and Remmler^[10] (2012) mention that the assessment of oral health needs impacts oral conditions of quality of life, because clinical indicators alone cannot describe the satisfaction or symptoms of dental patients, or their ability to perform daily activities.

This instrument seeks to respond to how natural teeth or dental prostheses positively or negatively affect the

social, psychological, biological functions and quality of life of geriatric patients positively or negatively, it also assesses the periodicity with which an individual experiences problems to carry out certain actions of daily life due to oral problems. When the index is high, the need to visit the dentist / stomatologist is perceived and therefore there are signs of difficulty eating, chewing and swallowing by the geriatric patient and in the fulfillment of their daily activities.

Therefore, the ability to chew should be taken into account, as it is an important determinant of oral well-being, particularly for geriatric people and is threatened when there is an absence of dental organs, that is, in the presence of less than twenty functional teeth. According to Humphrey P and Russell T.A^[11] (2001) chewing efficiency has fundamental benefits in the formation of the bolus, in the digestion of food and contributes to physical and mental well-being, so it is necessary to develop research on the relationship between masticatory efficiency, general health and quality of life.

The chewing determines the satisfaction of people. It influences if there are dental losses and its replacement is adequate without hurting, that the remaining dental organs are in good condition together with the periodontal tissue, that at the time of chewing there are no impediments as pain, lack of saliva or laceration of surrounding tissues.

There are studies that frame that chewing stimulates salivary flow, which helps maintain the health of hard, soft oral tissues and protects the body against pathogens, if salivary flow is lost (xerostomia) or to decrease (hyposalivation) the Chewing efficiency may be associated with psychosomatic problems, higher incidence and prevalence of caries and periodontal conditions. If the problem persists, the dental organs can be lost. When there is loss or replacement of the dental organs in poor conditions, Kogawa M^[12] (2006) mentions that abnormal occlusions can occur resulting in a masticatory deficiency, which leads to the risk of food complications, or change in the type of diet, stress, pain and temporomandibular joint disorders, affecting the patient's quality of life.

OBJECTIVE

Disseminate alternatives that preserve the oral health of the geriatric patient through the present study that allow to maintain a correct chewing and digestion that positively affect the patient's quality of life.

MATERIALS AND METHOD

Descriptive, cross-sectional, comparative, observational, clinical study, 200 geriatric patients who come to request dental service at the Faculty of Stomatology of the Autonomous University of Puebla, Mexico, (FEBUAP) age 60-70 years, both sex, school year 2018.

Pre-postoperative radiographs, gum, mucosa, caries, prostheses, oral hygiene, feeding were observed. The filling and signing of the informed consent was made individually following the ethical principles for investigations in human beings including the investigation of the human material and identifiable information of the Helsinki declaration, the collection of general data through the General Clinical History, pressure taking arterial. The question was asked about the consumption, type and frequency of food, characteristics and number of evacuations per day. Oral clinical history that included the odontogram and periodontogram.

OHIP-14 (Oral Health Impact Profile) was applied. To identify the perception of Quality of Life related to oral health. Prophylaxis, restorations in required dental organs, endodontics and extraction of dental organs with irreversible conditions were performed, it was reviewed and if it is convenient, adjustment of new prostheses or prostheses was made. Upon obtaining the results (OHIP-14) and finalizing appointments, it was reported in writing about a balanced diet, fluid consumption, exercise, oral hygiene, use and washing of prostheses if necessary.

The OHIP-14 used corresponds to the Spanish version of 14 items. Each item has 5 response options with the

assigned score: 0 never, 1 Rarely, 2 occasionally, 3 Sometimes, 4 Many times. The sum of all the ordinal values of the responses was made, placed in Excel tables and added to extract the total per item. This will allow evaluating the percentage of participating geriatric patients, whether or not they maintain their natural teeth or dental prostheses, whether or not they consider social, psychological, biological and quality of life functions.

When performing the OHIP-14 analysis, those who report greater severity in the items "Sometimes and Many times", indicates an alteration in the quality of life.

RESULTS

Of the 100% of the patients included, 10.6% were not rehabilitated to 100% due to economic factors, in addition, 35% presented deficiencies to brushing, so their prostheses were not required.

Preoperative: Taking into account the average of the patients for both groups, Table 1 indicates that the oral hygiene index (IHO) 95% is poor. Difficulty chewing 77% and to evacuate 75%.

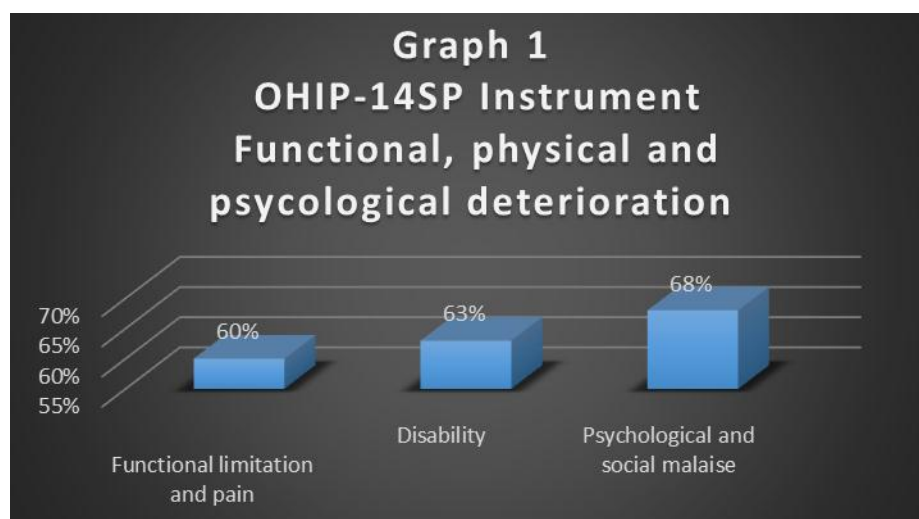
Postoperative: After having rehabilitated 89.4% of the geriatric population, Table 1 indicates IHO deficient 35%, difficulty chewing 24% and evacuating 16%.

Table 1 SEX	NUMBER	AVERAGE BY AGE	PRE OP DEFICIENT BRUSHING	PRE OPE DIFFICULTY WHEN CHESTING	PRE OP DIFFICULTY TO EVACUATE	POS OP DEFICIENT BRUSHING	POS OPE DIFFICULTY WHEN CHESTING	POS OPE DIFFICULTY TO EVA CUATE
Female	115	65	58%	40%	45%	20%	11%	9%
Male	85	67	37%	37%	30%	15%	13%	7%
GRAND TOTAL	200	66	95%	77%	75%	35%	24%	16%

When applying the OHIP-14SP instrument (Graf.1, Table2) focused on the analysis, evaluation of the quality of life and oral health in geriatric patients, according to the different dimensions evaluated and when assessing their oral status. The results indicate functional, physical and psychological deterioration, (coinciding with the results of Montero^[8]) due to the fact that they have certain limitations considering the evaluation of the perception of oral health and its impact on the quality of daily life in geriatric patients.

From the results obtained through the OHIP-14sp questionnaire, according to frequency, a greater general tendency to the response was identified many times with 136 patients (68%), especially in question 10 of the dimensions of psychological disability; regarding functional limitation and physical pain (coinciding with the results of Gabardo^[5]), they range from 60 to 57.5% questions 1-4 and handicap questions 13 and 14 from 66.5% to 65.5%, so they represent a considerable impact on oral health on the quality of life in the population studied, where the dimension with the greatest impact

was 5 (psychological incapacity) (Table 2). For Ugalde^[9] the dimensión goesto second place. No question was detected with a percentage of 100%.



This questionnaire was designed to assess how your oral condition and oral status or use of prostheses if you are a carrier, whether or not it has affected your quality of life, in the last month.

For each of the following questions, mark with an X the answer you consider to be the best.

Table 2: Questions by dimensions OHIP-14SP.

Oral health impact profile OHIP14	Never	Rarely	Occasionally	Sometimes	Many times
Functional limitation					
1.- Have you had trouble pronouncing words?	8	18	30	34	120 (60%)
2.- Have you felt that the taste of your food worsened?	5	5	40	52	98 (49%)
Physical pain					
3.- Have you had painful discomfort in your mouth?	5	7	38	45	115 (57.5%)
4.- Have you had painful discomfort in your mouth?	5	7	29	43	116 (58%)
Psychological discomfort					
5.- Have you been worried about problems with your prostheses or lack of teeth?	5	9	31	65	90 (45%)
6.- Have you felt stressed?	17	12	39	54	78 (39%)
Physical disability					
7.- Have you had an unsatisfactory diet or changed your food?	3	23	28	54	92 (48%)
8.- Have you had to interrupt your food?	5	19	27	49	100 (50%)
Psychological disability					
9.- Have you found difficulty resting?	9	13	29	35	114 (70%)
10.-Have you felt embarrassed about problems with your mouth?	12	14	17	21	136 (68%)
Social disability					

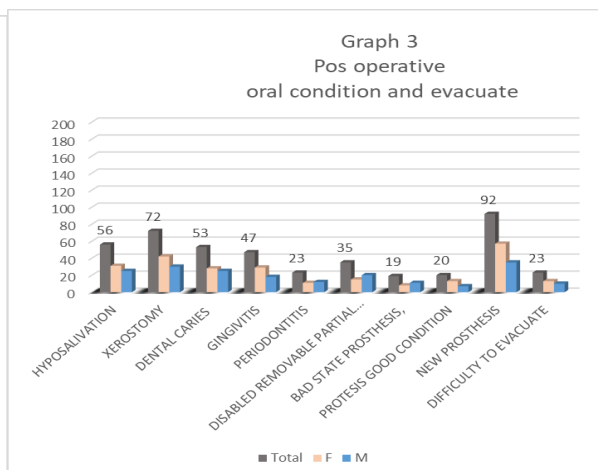
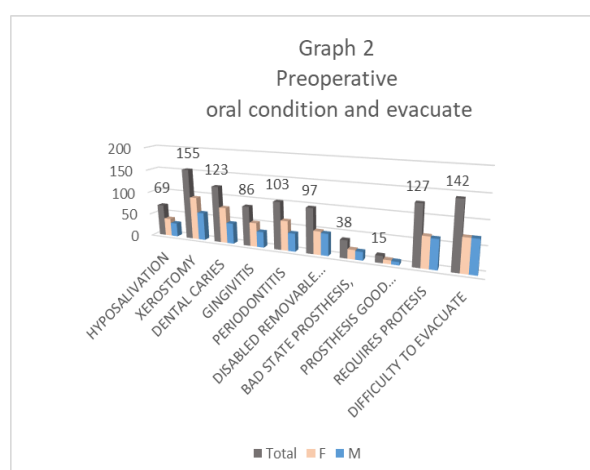
11.-Have you been irritable due to oral problems?	2	15	25	49	109 (54.5%)
12.- Have you had difficulty performing your daily activities?	6	11	37	45	101 (50.5%)
Minusvalia in general					
13.- Have you felt that life in general has been less pleasant?	0	10	21	36	133 (66.5%)
14.- Have you been totally unable to perform your daily activities?	0	5	22	46	127 (63.5%)

When the general and oral clinical history was emptied, it is summarized that after performing prophylaxis (oral cleaning) it was diagnosed by total number of patients:

Preoperative (Graph 2)

Gingival disease 86, periodontal disease 103%, patients with poorly fitted prostheses 97 patients and deficiency to evacuate 142.

Postoperative (Graph 3) Gingival disease 47, periodontal disease 23, patients with poorly fitted prostheses 35 patients and deficiency to evacuate 23, all this for the group average.



Regarding the acquisition of prostheses corresponding to 127 patients, 72% managed to acquire it and 27% of 97 patients were able to adjust. Patients (123) who presented with cavities and periodontal problems were rehabilitated 43% and 22.5%. All of the above allowed patients to improve chewing and swallowing food. By feeling better in their daily activities, consumption of another consistency of food and greater water intake, they improved their perspective of life and when asking about their general condition, only 16% of 142 of the patients continued to have problems when they evacuated.

Regarding the oral conditions, the results of the pre and postoperative level of significance (Graph 2-3) in the female is the $P(T \leq t)$ two tails = 0.0072. The results of the pre and postoperative level of significance in the male is the $P(T \leq t)$ two tails = 0.0015.

CONCLUSIONS

With the application of OHIP14, it is perceived that the state of oral health of geriatric patients who go to the faculty clinics, has an impact on the ability to perform

their daily activities, which is considered to affect their quality of life.

The oral health of the geriatric patient avoids periodontal problems and caries. The adjustment of prostheses and the placement of prostheses when required, are basic elements that allow chewing, digesting food and evacuating in a healthy way. Visiting the dentist, consuming water, eating a diet rich in fiber and walking will improve your metabolism. Educate geriatric patients in their oral health and in their general health, through a healthy lifestyle, will favor a healthy aging process, reducing extra expenses of family members, the patient and health services when the patient has access to health services.

REFERENCES

1. Grupo WHOQOL. Evaluación de la Calidad de Vida. 1994. ¿Por qué Calidad de Vida?, Grupo WHOQOL. En: Foro Mundial de la Salud. Ginebra: OMS, 1996.

2. de la Fuente-Hernández, J.; Sumano-Moreno, O.; Sifuentes-Valenzuela, M. C. & Zelouatecatl-Aguilar, A. Impacto de la salud bucal en la calidad de vida de adultos mayores demandantes de atención dental. *Univ. Odontol.*, 2010; 29(63): 83-92.
3. Sánchez-García Sergio, Juárez-Cedillo Teresa, Reyes-Morales Hortensia, de la Fuente-Hernández Javier, Solórzano-Santos Fortino, García-Peña Carmen. Estado de la dentición y sus efectos en la capacidad de los ancianos para desempeñar sus actividades habituales. *Salud pública Méx*[revista en Internet]. 2007 Jul [citado 2019 Nov 09]; 49(3): 173-181. Disponible en: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342007000300002&lng=es.
4. Sischo, L. & Broder, H. L. Oral Health-related Quality of Life. *J. Dent. Res.*, 2011; 90(11): 1264-70.
5. Gabardo, M. C. L.; Moysés, S. T. & Moysés, S. J. Self-Rating of oral health according to the oral health impact profile and associated factors: a systematic review. *Rev. Panam. Salud. Publica*, 2013; 33(6): 439-45.
6. López-Jornet, P.; Camacho-Alonso, F., Lucero-Berdugo, M. Measuring the impact of oral mucosa disease on quality of life. *Eur. J. Dermatol.*, 2009; 19(6): 603-6. EN Díaz-Reissner Clarisse Virginia, Casas-García Irma, Roldán-Merino Juan. Calidad de Vida Relacionada con Salud Oral: Impacto de Diversas Situaciones Clínicas Odontológicas y Factores Socio-Demográficos. Revisión de la Literatura. *Int. J. Odontostomat.* [Internet]. 2017 Abr [citado 2019 Nov 10]; 11(1): 31-39. Disponible en: https://scielo.conicyt.cl/scielo.php?script=sci_arttext&pid=S0718381X2017000100005&lng=es. <http://dx.doi.org/10.4067/S0718-381X2017000100005>.
7. Castrejón-Pérez et al. *Rev Panam Salud Publica*, 2010; 27: 321-9.
8. Montero-Martín J, Bravo-Pérez M, Albaladejo-Martínez A, Hernández-Martín LA, Rosel-Gallardo EM. Validación del Perfil de Impacto en la Salud Oral (OHIP-14sp) para adultos en España. *Med Oral Patol Oral Cir Bucal.*, 2009; 14: E44-50. [PubMed] [Google Scholar]
9. Reissmann, D. (2013). Interpreting one oral health impact profile point. *Health and Quality of Life Outcomes.* 11, 12. En Ugalde Meza, E. (2014). Perfil de la Salud Oral (OHIP-14) en pacientes de la Clínica U Dental, con base en la incapacidad psicológica según el sexo. *Revista electrónica de la Facultad de Odontología, ULACIT., Costa Rica*, 7: 2.
10. Reissmann, D. y Remmler, A. (2012). Impact of response shift on the assessment of treatment effects using the Oral Health Impact Profile. *Eur J Oral Sci.*, 120, 520-525. En Ugalde Meza, E. (2014). Perfil de la Salud Oral (OHIP-14) en pacientes de la Clínica U Dental, con base en la incapacidad psicológica según el sexo. *Revista electrónica de la Facultad de Odontología, ULACIT., Costa Rica*, 7: 2.
11. Humphrey P, Russell T. A review of saliva: Normal composition, flow, and function. *J Prosthet Dent*, 2001; 85: 162-169.
12. Kogawa M, Calderón S, Lauris P, Araujo R, Conti R. Evaluation of maximal bite force in temporomandibular disorders patients. *Journal of Oral Rehabilitation*, 2006; 33: 559-565.