

Evaluation of the Oral Manifestations in Chronic Renal Disease Patients in a Renal Therapy Center in Teresina-Piauí

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Abstract: The oral cavity is one of the sites that presents in the most cases manifestations resulting from chronic renal failure. Through several studies was noticed that there are changes in the mucosa, periodontal, taste, breath, and ulcerative lesions. For this study, electronic documents were used - articles published in magazines and periodicals (Portal Capes, BVS, Bireme) and printed documents such as books, undergraduate and graduate studies and dissertations. This work aimed to document the prevalence of oral manifestations in chronic renal patients at the Renal Therapy Center, in Teresina - Piauí, through a succinct assessment with PPE's, tongue lowering and artificial lighting, in addition to a questionnaire. This work is approved by the ethics and research committee of the UNINOVAFAPI university center and complies with Resolution 466/12 of the National Health Council. After the collection, the participants who need more attention were referred to the CEO in the capital. Thus, individuals with CKD may present, in addition to the systemic changes resulting from the disease, a more aggravated state of oral health in relation to healthy people. Among the main oral manifestations is caries, periodontal disease, dental calculus, dry mouth, and edentulism. The lack of information about the importance of oral care, the low motivation with patients' dental care and a greater concern with systemic care have a major contribution to the situation of poor oral hygiene in this part of the population.

Keywords: Chronic Kidney Disease, Dentistry, Periodontal disease, Chronic renal failure, Immunosuppression

Date of Submission: 20-02-2020

Date of Acceptance: 04-03-2020

I. Introduction

The Chronic Kidney Disease (CKD) is caused by a bilateral, progressive and irreversible renal structural alteration that reduces the glomerular ability of filtration. The kidney has essential functions on the regulation of plasmatic acid-base and hydroelectric balance, erythropoietin synthesis, hydroxycholecalciferol and renin and in the excretion of nitrogenous compounds, catabolites and drugs. The reduction or loss of renal function cause complications that may be considered at medical and/or dental service. Among them are hemorrhages, greater susceptibility to infections and intolerance or synergism of drugs. As oral manifestations, xerostomia, halitosis, uremic stomatitis, bone lesions, and greater tartar formation are more frequent [1], [2].

The CKD can be caused by nephrosclerosis secondary to long-term hypertension, diabetic nephropathy, glomerulonephritis, polycystic kidney disease, interstitial nephritis, diabetic glomerulosclerosis, autoimmune diseases, recurrent urogenital infections, kidney poisoning caused by abuse of self-medication as any pathologic process with nephron-vascular disorders [9], [10].

Ulcerations in the mucosa, called "uremic stomatitis", can appear anywhere on the mucosa, although the floor of the mouth and mucosal surfaces of the anterior region appear to be involved more frequently. Ulcerations may vary in size, but are non-specific and may simply represent a manifestation of the reduced healing capacity of the oral mucosa in patients with uremia. Generally, these injuries tend to be painful, and the hypothesis has been raised that this is the result of a tissue reaction to salivary urea [11], [14].

The socio-economic condition of patients with CKD undergoing hemodialysis has an influence on their prognosis of the disease, in addition to the existing barriers to complete treatment having an impact on the increase in social inequality. A qualitative study was carried out in a public hospital located in southern Brazil

using a sample of 11 people on hemodialysis and 5 family members. Through semi-structured interviews, the data obtained showed that the participants said they had received good care from health professionals in the treatment of hemodialysis. They also recognized free access to medicines, exams, hospitalizations, transportation, food and others [7], [13].

The CKD prevalence is increasing in the world and dental surgeons must be prepared for the management of possible oral and systemic complications due to this disturbance [12]. The medical doctor-dentist relation must be narrowed considering that previous dental treatments maintain a healthy dentition and perform the control of oral infections, being fundamental and crucial for the maintenance of oral health during the treatment of chronic kidney disease and for patients who are candidates for kidney transplantation [5]. As an example, the previous extraction of dental elements with an unfavorable prognosis can prevent the development of bacterial infections and periodontal problems in the operated patient. The immunosuppression protocols predispose the patient to the development of infections and gingival enlargement, emphasizing the obligation of such prior dental treatment. Such special patients manifest low immunity due to the use of medications, the clinical condition and the treatment itself. For this reason, any and all infections, including oral infections, are at higher risk [4], [6], [11].

The aim of this study was to document the prevalence of oral manifestations in chronic renal patients at the Renal Therapy Center, in Teresina - Piauí, through a succinct assessment with PPE's, tongue lowering and artificial lighting, in addition to a specific questionnaire.

II. Methods

An updated integrative literature review was carried out, using electronic and printed documents. The following descriptors were used: chronic renal failure, dentistry, periodontal diseases, chronic kidney disease, immunosuppression. A survey of scientific production related to the presented theme was carried out based on more relevant studies and with more appropriate methodologies. Scientific articles that addressed this topic were used in the VHL (Virtual Health Library) database, Capes Portal, Bireme and others.

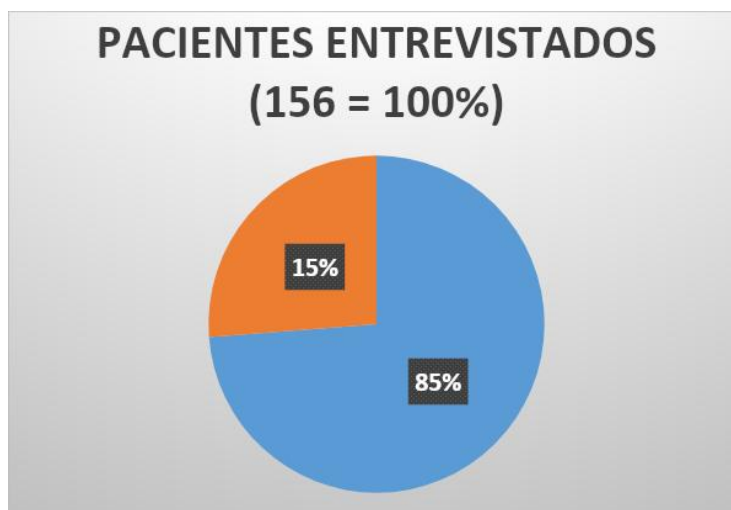
Data collection was carried out through questionnaires with closed questions that will range from sociodemographic information to the variables that led to the results, which were the time of the last visit to the dentist; the presence of instructions regarding oral hygiene performed by a professional; amount of daily brushing, flossing or the presence of toothache. Through a succinct clinical analysis, with the aid of tongue depressor and artificial light, there will be the presence of lesions in the oral cavity, the appearance of gingival bleeding, presence of halitosis, tongue coating, ulcerative lesions, gingival hyperplasia, xerostomia, recession gingival, dental mobility and dental calculus.

The patient, unable to answer or understand the terms of the informed consent form (IC), was asked to have a guardian present to assist in the answers or to accompany him during the procedure. The questionnaires were applied through presential interviews made by the authors of this research after the acceptance and signature of IC.

The study was sectional with a quantitative approach. The chosen place was the Renal Therapy Center located at Rua Governador Raimundo Artur de Vasconcelos, 670, mezzanine S. 01M to 13M, Centro - Teresina, PI; CEP 64000-450. The universe of 183 patients was used for the study. Patients diagnosed with CKD less than a month, women in pregnancy or lactation, with facial trauma or buccomaxillary fractures, severe systemic diseases not related to CRF, use of alcohol, drugs or smoking and under 18 years of age will not participate in the study.

III. Results And Discussion

A total of 183 patients were interviewed. Only 156 (85%) agreed to participate in the study, while the rest did not accept it for personal reasons, because of malaise or they met the exclusion criteria adopted in this study. Based on the literature found, the following oral manifestations were sought: halitosis, tongue coating, ulcerative lesions, gingival hyperplasia, xerostomia, gingival recession, mobility, and dental calculus. During the study, a large number of total or partial edentulism (more than 92%), and the use of prostheses was noticed. All of them, had it manufactured more than six months ago and do not have a dentist or maintenance perspective.



85%: ACCEPT TO PARTICIPATE IN THE STUDY (156 CASES)
15%: DID NOT ACCEPT TO PARTICIPATE IN THE STUDY (27 CASES)

The presence of heart diseases was observed in the patients examined; such as cardiomegaly or arrhythmia. According to [2], [8], the risk of developing cardiovascular disease is increased among patients with CKD, due to the higher prevalence of traditional risk factors for cardiovascular disease and the presence of non-traditional risk factors (related to the CKD). Other parameters observed, such as the need for dental follow-up during kidney treatment in the patient's view, brushing periodicity and basic information regarding the importance of dental treatment given at the time of CKD diagnosis, among other data, were later reported at the end of the study. for a better foundation and practical confirmation [3], [10].

Codes have been established for statistical and ethical purposes in order to better quantify and preserve the patient's identity. Each patient had their code assimilated at the time of the interview, where this relationship was only held by the researchers in order to be able to assimilate each result with their respective patient code. The patient's identity was preserved. As a result of the research, a table was created with the appropriate percentages according to the number of patients interviewed. As expected, all documented manifestations had their share of patients, with greater emphasis on periodontal context manifestations such as calculus and gingival recession, followed by tongue coating, halitosis, ulcerative lesions, dry mouth, gingival hyperplasia, and mobility.

MANIFESTATION	NUMBER OF PATIENTS	PERCENT
HALITOSIS	27	17,3%
TONGUE COATING	16	10,2%
ULCERATIVE LESIONS	11	7%
GINGIVAL HYPERPLASIA	14	8,9%
XEROSTOMIA	18	11,5%
GINGIVAL RECESSION	20	12,8%
MOBILITY	11	7%
DENTAL CALCULUS	39	25%

IV. Conclusion

Individuals with CKD may present, in addition to the systemic changes resulting from the disease, a more aggravated oral health status in relation to healthy people. Among the main oral manifestations are caries, periodontal disease, dental calculus, dry mouth, and edentulism. The lack of information about the importance of oral care, the low motivation with patients' dental care and a greater concern with systemic care have a major contribution in the context of poor oral hygiene in this part of the population [2].

Therefore, the dental calculus presents the most prevalence in CKD patients, followed by halitosis and gingival recession with 17,3 e 12,5 respectively.

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Gardene Paiva MAGALHÃES, et al. "Evaluation of the Oral Manifestations in Chronic Renal Disease Patients in a Renal Therapy Center in Teresina-Piauí." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(3), 2020, pp. 39-42.