It may be hard for patients to take care of their oral health. Visiting a dental professional can help to improve oral health.

Role of the Dental Hygienist

- Educating the patient to the effects of CKD in the mouth and the side effects of the medications.
- Maintaining proper oral health for the patient as they are in an immunosuppressed state. Time between recall visits should be reduced to 3 months intervals.
- Instruct patients to perform appropriate home care as they are more vulnerable to periodontal disease.
- Encourage patient and show that you care. Improving a patient morale will never bring any harm.

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The Correlation Between Periodontal Disease and Kidney Disease

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The Correlation Between Periodontal Disease and Kidney Disease

https://www.ucsf.edu/news/2013/06/106406/there-link-between-oral-health-and-kidney-function

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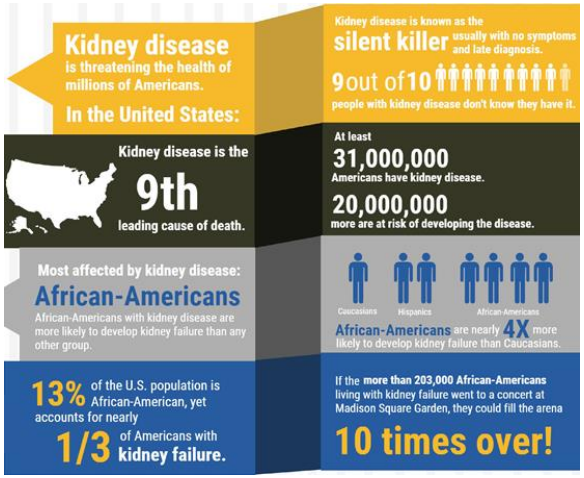
Kidney Disease

Kidney disease is characterized as systemic condition that causes the kidney to gradually lose its function over time. It decreases the kidney's ability to make renin and erythropoietin, maintain balance of water and minerals, and remove by-products from blood, which eventually causes waste to build up in the blood.



http://www.kidneyfund.org/kidney-today/kidney-disease.html

Periodontal Disease

Periodontal Disease is broken into two parts. Gingivitis, which is bacteria in the mouth that cause inflammation to the gingiva and Periodontitis, which is increased inflammation that causes the loss of attaching fibers and supporting bone. In relation to systemic changes in each stage of kidney disease, the immunologic response causes depression and a general state of disability that plays a critical role in the oral health status. Data showed aggravated statuses of gingival, periodontal, and oral hygiene as the disease progressed, all the while significantly increased caries, decayed, and missing teeth were presented.

Effects on Oral Health during the Progression of Kidney Disease

Studies show that there is a direct correlation with the progression of Chronic Kidney Disease (CKD) and the decline of oral health. The greater the stage of CKD, the greater the risk of periodontal disease.

Table 3. Periodontal status as determined by CPI among kidney disease patients and healthy subjects.

	No bleeding, no calculus, no pathological pocket	Bleeding on probing gingival margin, no calculus, no pathological pocket	Bleeding on probing gingival margin, calculus, no pathological pocket	Bleeding on probing gingival margin, calculus, shallow periodontal pockets	Bleeding on probing gingival margin, calculus, deep periodontal pockets
Stage 2 CKD	0	0	13(68.4%)	6(31.6%)	0(0.00%)
Stage 3 CKD	0	0	8(50.0%)	8(50.0%)	0(0.00%)
Stage 4 CKD	0	0	0(0.00%)	8(40.0%)	12(60.0%)
Stage 5 CKD	0	0	1(5.3%)	3(15.8%)	15(78.9%)
All Stages	0	0	22(29.7%)	25(33.8%)	27(36.5%)
Controls	14(9.3%)	59(39.4%)	48(32%)	29(19.3%)	0(0.00%)

Kruskal-Wallis chi square value between the stages of CKD, 45.341 p= 0.0001. Fisher exact test value between CKD patients of all stages and healthy controls, 80.542 p= 0.0001. Correction added on 17 July 2013, after first online publication: The percentage values of the first four figures in the Controls row were corrected from 4.7%, 19.6%, 32.4% and 18.9% to 9.3%, 39.4%, 32%, and 19.3%, respectively.

Patients with stage 5 Kidney also known as End Stage Kidney Disease (ESKD) show the highest probability of having periodontal disease. Patients with ESKD are on dialysis and are in need of a kidney transplant making it more difficult for them to maintain proper oral hygiene. There is no proven cause for this correlation, but various medications could be a factor.

Symptoms

Patients with End Stage Renal Disease (ESRD) and patients who have had kidney transplantation have shown similar symptoms such as dry lips. However, there is a higher occurrence of uremic stomatitis among patients without kidney transplantation.

(Uremic Stomatitis)

This is due to decrease of salivary flow and tissue irritation by high levels of salivary urea. A prevalent condition for ESRD patients is gingival enlargement which is a side effect of the medications taken by kidney transplantation patients. (Gingival Enlargement below)

http://pocketdentistry.com/24-periodontal-problems-in-children-and-adolescents/

Cyclosporine, taken to prevent the rejection of the new kidney, effects the oral cavity by causing hypertrophy and hyperplasia. Thus, interdental papillae are spongy and enlarged. Gingival enlargement leads easily to plaque accumulation in the deep pockets, which can be difficult to remove.