

Oral hygiene habits in people on hemodialysis: : a multinational prospective cohort study

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Background Data describing oral hygiene habits in people with end-stage kidney disease on hemodialysis are sparse.

Objective In this prospective cohort study, we prospectively surveyed global oral hygiene habits in a large outpatient hemodialysis population.

Methods ORAL-D is an ongoing multinational prospective cohort study of oral diseases in people on hemodialysis. We consecutively enrolled adults on hemodialysis in 75 outpatient clinics selected randomly from a collaborative dialysis network in Europe and South America. We assessed oral hygiene habits using standard self-administered patient questionnaires. We summarized data using descriptive statistics.

Results 4324 hemodialysis patients (mean age 61 years (SD 16)) in the participating clinics from Italy, Hungary, Poland, Argentina, Portugal, France and Spain responded to the questionnaire. Of these, 2237 (52%) did not remember when they had last visited a dentist or reported they did not have a regular dental practitioner. 1171 (27%) reported their first dental visit at 30 years or older, 494 (11%) never brushed their teeth, 1570 (36%) used mouthwash and only 295 (7%) used dental floss. 1389 (32%) participants changed their toothbrush as needed, and only 1339 (31%) spent more than 2 minutes on daily oral hygiene cares.

Conclusion Using validated instruments to evaluate oral hygiene, nearly half of adults on hemodialysis do not regularly visit a dental practitioner and many have poor oral hygiene habits. Additional studies of whether these variables on oral hygiene have any influence on clinical outcomes may be warranted.

1. Characteristics of the Oral-D patients

Characteristic	Total population (N=4324)
Age (mean, SD)	61 (16)
Gender	
Male	2501 (58%)
Female	1822 (42%)
Race	
White	4103 (95%)
Black	115 (2.7%)
Asian	7 (0.2%)
African American	58 (1.3%)
Other	24 (0.5%)
Country	
Italy	695 (16%)
France	48 (1%)
Spain	188 (4%)
Portugal	776 (18%)
Argentina	1750 (40%)
Hungary	549 (13%)
Poland	318 (7%)
Education	
None	351 (8%)
Primary School	2312 (53%)
Secondary School	1194 (27%)
University Degree	232 (5%)
Living Situation	
Lives Alone	535 (12%)
Lives with spouse	2598 (60%)
Occupational Status	
Unemployed/student	686 (16%)
Currently Works	530 (12%)
Retired	2916 (67%)
Primary renal diagnosis	
Diabetes	950 (22%)
Hypertension/Nephrosclerosis	795 (18%)
Glomerulonephritis	489 (11%)
Other	2090 (48%)
Myocardial Infarction	340 (8%)
Diabetes	937 (22%)
Time on Dialysis (days)	1640 (954-2789)

* Data given as mean ± standard deviation or percentage as applicable

2. Habits of oral hygiene in the OralD patients

Oral hygiene habits	Overall population (N=4324)
Time since latest dental visit	
< 3 months ago	626 (14%)
3-6 months ago	494 (11%)
1 year ago	899 (21%)
unknown	2237 (52%)
Age of first dental visit	
<18 years	1730 (40%)
About 20 years	805 (18%)
About 20 years	541 (12%)
>30 years	1171 (27%)
Teeth brushing	
Never	494 (11%)
Once daily	1065 (25%)
Twice daily	1772 (41%)
Thrice daily	917 (21%)
Use of mouthwash	1570 (36%)
Use of dental floss	295 (7%)
Change of toothbrush	
Every 3 months	1413 (33%)
Every 6 months	934 (21%)
Every year	441 (10%)
As occur	1389 (32%)
Time spent on oral hygiene	
About 1 minute	778 (18%)
About 2 minutes	1183 (27%)
More than 2 minutes	1339 (31%)
I don't know	915 (21%)

* Data given as percentage

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