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Clinical Study

Effect of Educational Level on Oral Healt Peritoneal and Hemodialysis Patients

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Abstract

Background. In previous studies, the oral and dental health st peritoneal dialysis (PD) patients without taking into account the e aimed to make a comparison of these parameters based upon the 76 PD (33 males, 43 females-mean age: 44±12 years) and 100 H patients were included. The number of decayed, missing and fille and plaque index (PI) values were assessed. *Results*. Significantly PI values (P<.01) in the PD group were detected with higher educ in the HD group. Higher DMFT index values were assessed in the l patients (P<.05). Higher numbers of filled teeth (P<.05) were det This difference was even more significant in the high school level (who were found to be in a higher educational level, are more carin

1. Introduction

Dialysis treatment aims to clear blood from toxins by using a ser chronic renal failure (CRF). Either the patient own peritone semipermeable synthetic membrane (hemodialysis (HD)) is used fo

To date, there have been studies evaluating the oral hygiene a comparison to healthy controls (Cs). The mostly observed oral believed to result from a combination of direct gland involvemen breathing [2–4]. Epstein et al. [5] reported that salivary sodiu dialysis patients, but potassium tended to be higher in these patie higher phosphate values, but no decrease in salivary calcium level compensatory decrease in calcium when phosphate was elevated. been reported in these patients, which was attributed to elevated this was reported to contribute to remineralization of decayed dent patient group [7]. However, conflicting data exists on the prevalen Levy [8] reported a lower prevalence of caries in these patient detect higher [6, 9] decayed (D), missing (M), and filled (F) tee determine the oral and dental health statuses [10], as well as Furthermore, several studies [13–16] evaluating plaque accum indices (PIs) in the oral neglect of these patients.

Detecting oral problems in dialysis patients is of utmost importance recent studies of the healthy population have shown that oral in systemic complications like atherosclerosis [18], chronic obstructiv outcomes [20]. Due to the usage of the patient own peritoneal m complete a hygiene training program at the onset of therapy in orc training program, the patients are instructed in the rules of PD patients elected for the PD instruction program, educational level fact, people with higher educational level are obviously more capab

In our literature search, one study was found evaluating the effe other factors like age, gender, and clinical parameters [21]. But relationship between the educational level and dental parameters c

Hence, it was the aim of this study to analyze and compare the ef missing and filled teeth, and DMFT index and PI values in a group c

2. Subjects and Methods

In this cross-sectional study, 76 PD patients (PD group-test group and 100 HD patients (HD group-test group: 56 males, 44 females in Istanbul School of Medicine and Faculty of Dentistry out-p participants gave informed consent to take part in this study.

Patients on dialysis for more than 6 months were included in th session with 300–350 mL/min blood flow rate and with a dial dialyzed with standard bicarbonate containing dialysate bath. All P buffered glucose-based PD solutions. Fifty five of PD patients we 2000 mL) and remaining 21 patients were on APD. Twenty eig reason for ESRD in 23 patients.

In 2 of HD patients (2%) and 1 of PD patients (1%), hepatitis B positive in 19 (19%) of HD patients and 12 (16%) of PD patien patients and the remaining 10 (10%) had AVG. There was not an infection.

2.1. Clinical Examination and Indices

Prior to clinical examination, a detailed medical history including level was recorded for all the participants. Intraoral evaluation standard methods and criteria [22]. Decayed, missing, and filled te using a mirror and a probe in all participants.

The thickness of microbial dental plaque on the tooth surface nea and Löe Plaque Index (PI). After the teeth were dried, the mic periodontal probe and evaluated by unaided eye [23].

2.2. Statistical Analyses

Statistical analyses were performed using a software (SPSS for Inc., Chicago, Ill, USA).

Student' s *t*-test was used to calculate the means and to assess parameters of PD and HD groups. The difference between the dis was analyzed with Pearson' s chi-square test. Differences betw analyzed using Mann-Whitney U test.

The median (min-max) values and statistical difference of the num index and PI values were assessed using Kruskal-Wallis test.

The differences of the number of decayed, missing, and filled teet HD groups based upon their educational levels was assessed significance was set at $P < .05$.

3. Results

No statistically significant differences were found between the dist time on dialysis among PD and HD groups. BUN ($P < .001$) and significantly higher in HD than PD patients, while creatinine and bl (Table 1).

Table 1: Distribution of age, gender, and time HD groups.

Distribution of educational level in the PD and HD groups is given i of 37% of patients in the uneducated and primary school levels, level. In the HD group, these proportions were 72% and 7%, resp and HD groups was found to be comparable (23% and 21%, resp.)

Table 2: Distribution of educational level in th

Median (min-max) values and statistical comparisons according
decayed, missing, and filled teeth; DMFT index; PI values are s
significantly higher numbers of filled teeth ($P < .001$), but lower PI

Table 3: Median (min-max) values and statis
teeth, DMFT index, and PI values in the PD gro

Median (min-max) values and statistical comparisons according
decayed, missing, and filled teeth; DMFT index; PI values are sho
between the educational levels and dental parameters or oral hygie

Table 4: Median (min-max) values and statis
teeth, DMFT index, and PI in the HD group.

Mean (±SD) values and statistical comparisons according to th
decayed, missing, and filled teeth; DMFT index; PI values are s
school levels, DMFT index values were statistically significantly
secondary school level, higher numbers of filled teeth, but lower
group ($P < .05$). In the high school level statistically significantly h
higher numbers of filled teeth ($P < .001$) were detected in the PD th

Table 5: Mean (±SD) values and statistical co
DMFT index, and PI in the PD and HD groups b

4. Discussion

It was shown in this study, conducted based upon the educationa
level the number of filled teeth was higher and oral hygiene sta
(Tables 3 and 5). Although not statistically significant, the oral hyg
with higher educational level (Table 4). Comparisons of dental
educational levels between PD and HD groups revealed clearly that
DMFT index, and PI values was better in PD than HD patients. In
remarkable (Table 5).

There were 5 times more patients in the higher educational level
hygienic rules PD patients get at the beginning of therapy, the aut
caring for their oral hygiene. The higher numbers of filled teeth a
supporting this opinion.

In the present study, the comparison of the dental parameters
educational levels revealed no statistical significant differences. In
lowest in the patient group with higher educational level (Table 4)
in the uneducated and primary school levels are 2 times more i
authors believe that this patient group is neglecting their dental
also confirm that oral hygiene negligence would cause higher plaq
this fact in that HD patients would be more dependent on a dialys
bound to a dialysis machine for approximately 4 hours several
patients would be in a depressive state because of their life
uncooperative during dental treatment and would further neglec

usually capable of continuing their treatment outside a dialysis cer
a more free life, they are supposed to care more for their oral hy
find any study comparing dental parameters and oral hygiene st
patient groups. Hence, we are unable to compare our results with

In conclusion, regular dental visits and remotivation in plaque cc
health in dialysis patients in order to prevent rejection of the allogr
[24].

The authors suggest that further studies on this topic should be co
to get data from large patient groups.

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