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The evaluation of the need for prosthetic treatment in dialyzed patients in Nephrology Clinic of PSK 4 clinical hospital of Lublin

Renal insufficiency is a polysymptomatic condition of a developing character in the treatment of which most patients end up with looking for kidney donor for a transplant (4). From a point of view of the dentist, patients with renal insufficiency constitute the group of patients requiring specific care. In their waiting for kidney transplantation, in the period of chronic haemodialyzo-therapy, there comes to the greatest bone loss in the illness course (1). This comprises the whole skeleton and also the bones of the jaw. In patients prior to the dialyzes and in the course of haemodialyzo-therapy, a pronounced osteopeny of jaw bones was reported (the lowering of alveolar process in the jaw and mandible) (1, 2). This leads to the premature loss of teeth, which is preceded by their loosening (5, 6). In this period the patients should make sure to eliminate inflammation sites from the oral cavity area. Decayed teeth must be treated and teeth with gangrene and periapical changes must be extracted. Oral cavity sanitation in dialyzed patients should also consider eliminating of acute and chronic inflammatory states of parodontium and getting rid of the tartar (4, 5, 6, 7).

Dialyzed patients require more elaborate therapeutic effort, the conservative one and surgical and prosthetic ones as well. Crucial and final therapeutic effect as far as the oral cavity is concerned is prosthetic rehabilitation, the realization of which is a major condition for regaining and maintaining its main functions. Prosthetic treatment should cover fixed restoration as well as movable restorations. Fixed restorations require fitting of the crowns and bridges pillars to teeth tissues to eliminate diastemas that could be the reservoir of bacteria. As far as the implanting of teeth is concerned, there are no strict contraindications for application of this type of treatment (4).

MATERIAL AND METHODS

Fifty-eight patients (22 female and 36 male) comprised the study group (Tab. 1). The patients dialyzed in the Nephrology Clinic of PSK 4 clinical hospital of Lublin were divided in respect of their living place into patients from a big city (34), small city (8) and the country (16) patients (Tab. 3). The patients were also divided according to age groups (Tab. 2): 1) 18–30 years of age, 2) 31–45 years of age, 3) 46–80 years of age.

The study was conducted under artificial lighting with the use of a bougie and a mirror. The methodology of the procedure was consistent with the guidelines of World Health Organization; the results were put into records by WHO standards as well (3). Quantitative study of teeth loss, the demand for dental prosthesis with the division into fixed and removable ones, and describing the need to apply fixed and removable prostheses was carried out.

Table 1. The number of dialyzed patients

The number of dialyzed patients (total)	58 (100%)
Women	22 (37.9%)
Men	36 (62.1%)



Table 2. Distribution of the patients in age and sex groups

Age group	I (18–30 years old)	II (31–45 years old)	III (46–80 years old)
Total	1 (1.72%)	9 (15.52%)	48 (82.76%)
Women	0	5	17
Men	1	4	31

RESULTS

In the examined group of 58 patients (100%) quantitative tooth absence was reported, in 33 patients (56.9%) a profound absence of teeth was reported (above 15 teeth). Nine patients had fixed prostheses (15.5%), 17 patients – removable prostheses (partial and complete) (29.3%), combination of fixed and removable prostheses was reported in four patients (6.9%), 28 patients (48.3%) did not present any prosthetic supplementation (Tab. 5). The need for prosthetic treatment was reported in 53 patients (91.4%). Fixed prostheses were needed in nine patients (15.5%) out of this number five patients required bridges and four required crowns and bridges as well (Tab. 6). The need for removable prostheses was found in 35 patients (60.3%), 21 patients (36.2%) required partial prostheses, 10 patients (17.2%) – complete prostheses. Four patients (6.9%) needed complete prostheses and removable ones (Tab. 7). Nine patients (15.5%) were reported to need fixed and removable prostheses as well (Tab. 8).

Table 3. Distribution of the patients in respect of their living place

Total	58 (100%)
Big city	34 (58.6%)
Small city	8 (13.8%)
Country	16 (27.6%)

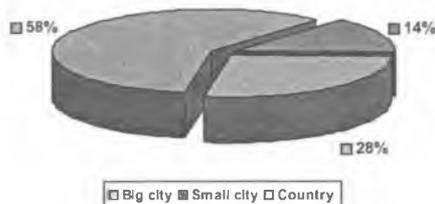


Table 4. Quantitative study of teeth loss

Quantitative study of teeth loss	Below 5 teeth loss	5–15 teeth loss	Above 15 teeth loss	Toothlessness
Total	6 (10.34%)	19 (32.76%)	24 (41.38%)	9 (15.52%)
Women	3	10	6	3
Men	3	9	18	6

Table 5. The number of fixed and removable prostheses in upper and lower jaw

The number of fixed and removable prostheses in upper and lower jaw	Fixed prostheses	Removable prostheses (partial and complete)	Combination of fixed and removable prostheses	Patients without prostheses
Total	9 (15.5%)	17 (29.3%)	4 (6.9%)	28 (48.3%)
Women	5	7	2	9
Men	4	10	2	19

Table 6. The need for fixed prostheses treatment in age groups

The need for fixed prostheses treatment	Crowns	Bridges	Crowns + bridges
Total	0 (0%)	5 (8.62%)	4 (6.9%)
I (18–30 years old)	0	0	0
II (31–45 years old)	0	2	2
III (46–80 years old)	0	3	2

Table 7. The need for removable prostheses treatment in age groups

The need for removable prostheses treatment	Partial prostheses	Complete prostheses	Partial+complete prostheses
Total	21 (36.21%)	10 (17.24%)	4 (6.9%)
I (18–30 years old)	0	0	0
II (31–45 years old)	2	0	0
III (46–80 years old)	19	10	4

Table 8. The need for both fixed and removable prostheses treatment in age groups

The need for both fixed and removable prostheses treatment in age groups (total)	9 (15.5%)
I (18–30 years old)	0
II (31–45 years old)	2
III (46–80 years old)	7

CONCLUSIONS

1. In the dialyzed patients a greater destruction of the masticatory organ was reported as compared with the rest of the population.
2. All the studied patients need prosthetic rehabilitation.
3. Prosthetic rehabilitation of the dialyzed patients should encompass treatment with fixed and removable prostheses with the prevalence of the movable ones.
4. Around 50% of the patients requiring prosthetic intervention do not present any prosthetic implementation and the rest requires repeated prosthetic supply.
5. Regarding an unsatisfactory teeth condition of the dialyzed patients, this group should be provided with special dental care.

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SUMMARY

Renal insufficiency is a poly-symptomatic condition of a developing character. From the point of view of a dentist, patients with renal insufficiency constitute the group of patients requiring specific care. Dialyzed patients require more elaborate therapeutic effort, as well as conservative, surgical and prosthetic ones. Fifty-eight patients of both sexes dialyzed in the Nephrology Clinic of SPSK 4 clinical hospital of Lublin were examined. Quantitative study of teeth loss, the demand for dental prosthesis with the division into fixed and removable ones, the need to apply fixed and removable prostheses was carried out. In the examined group of 58 patients (100%) quantitative tooth absence was reported. The need for prosthetic treatment was reported in 53 patients (91.4%). Around 50% of the patients requiring prosthetic intervention do not present any prosthetic implementation and the rest requires repeated prosthetic supply.

Ocena zapotrzebowania na leczenie protetyczne u pacjentów dializowanych
w Klinice Nefrologii SPSK nr 4 w Lublinie

Niewydolność nerek jest schorzeniem wieloobjawowym o postępującym charakterze. Z punktu widzenia stomatologa chorzy z niewydolnością nerek stanowią grupę chorych wymagających szczególnej opieki. Pacjenci dializowani wymagają zwiększenia potrzeb leczniczych, zarówno zachowawczych, chirurgicznych, jak i protetycznych. Badaniem objęto 58 pacjentów obojga płci dializowanych w Klinice Nefrologii SPSK nr 4 w Lublinie. Badano ilościową utratę uzębienia, użytkowanie protez zębowych z podziałem na protezy stałe i ruchome oraz potrzeby leczenia protezami stałymi i ruchomymi. W badanej grupie u 58 osób (100%) wykazano ilościowe braki w uzębieniu. Konieczność leczenia protetycznego stwierdzono u 53 pacjentów (91,4%). Około połowa osób wymagających leczenia protetycznego nie posiadała żadnych uzupełnień protetycznych, a pozostali wymagali ponownego zaopatrzenia protetycznego.