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The evaluation of the mastication ability loss and needs for the particular types of prosthetic restoration among the persons over 30 years old in the Lublin region

Ocena utraty zdolności żucia oraz zapotrzebowanie na wykonanie określonych typów uzupełnień protetycznych wśród osób powyżej 30 roku życia w województwie lubelskim.

INTRODUCTION

The social and economic situation makes patients search for the free medical centres. Within the clinical practice, the Dentistry students often treat people staying on the dole, the indigent or the unemployed ones. Such treatment is very popular, especially among the citizens of Lublin as well as neighbouring towns and villages. The patients are very contented and satisfied with this type of treatment [1,2,3,4].

The scope of the thesis aimed at the evaluation of the mastication ability loss and medical requirements concerning prosthetic treatment.

MATERIAL AND METHODS

The random sample of 126 persons was selected for the research. (70 women and 56 men). The sample was divided into 2 groups, in view of the type of prosthetic restoration: the first being younger people (84 persons) aged 30-44 years (42 women and 42 men, the average age – 36.25 years), the second group of older people (42 persons) aged 45-77 years (28 women and 14 men, the average age – 56.70 years). The research took into consideration the domicile as well as the degree in the loss of mastication ability for the particular age groups or gender (Table1).

Tab. 1 The division of patients according to their age, gender and origin. The percentage of chewing ability loss in particular groups.

Group	I		II	
Age	30-44 years old average (36,25)		45-77 years old average (56,70)	
Gender	F (42) average (37,20)	M (42) average (35,33)	F (28) average (57,40)	M (14) average (56,00)
City	20 (47,61%)	24 (57,14%)	20 (71,43%)	14 (100%)
Town	2 (4,76%)	10 (23,80%)	0	0
Village	20 (47,61%)	8 (19,04%)	8 (28,57%)	0
Total	42	42	28	14
	84		42	
The percentage of chewing ability loss	56,23%	53,13%	63,33%	62,57%
The average	54,68%		62,95%	

The research results were recorded in the epidemiological cards (according to the WHO standards). An epidemiological card shows apart from the overall condition of the oral cavity, the condition and the needs concerning prosthetic restoration. It also presents the percentage in the loss of mastication ability.

The calculations were made with Statistica 6.0 software.

RESULTS

The rate in the loss of mastication ability in the group of younger people came to the average of 54.68%, including 56.23% of women and 53.13% of men. The loss of teeth mostly concerned those in the lateral areas, molar and premolar teeth. These were usually lateral missings. Within the female group there were 2 cases of toothlessness in the jaw and 1 case of toothlessness in the lower jaw. Yet, mostly those were interdental loses, which were qualified to be completed with fixed dentures.

In the older group the proportion of the mastication ability loss came to the average of 62.55%, including 63.33% of women and 62.57% of men. Mostly the loss of teeth concerned the lateral areas, with numerous interdental loses, missed teeth in the front areas caused by dental decay complications and parodontosis. There were 2 cases of toothlessness in the jaw and lower jaw. The state of prosthetic restoration and the needs of prosthetic treatment are presented in Table 2. The numerous missing teeth in the lateral areas demand installing fixed dentures such as dental bridges or single crowns.

In the group of younger people the needs come to 36 dental bridges to be installed into the jaw of 20 women and 6 dental bridges in the group of 4 men. Eighteen dental bridges are to be installed into the lower jaw of 10 men and 22 dental bridges in the group of 16 women. Twenty two (22) women and 52 men need to have partial dentures, (women - 8 in the jaw and 14 in the lower jaw and men - 30 in the jaw and 22 in the lower jaw).

In the group of older people, 24 women need 40 dental bridges and 6 men need 12 dental bridges. Jaw partial denture was planned for 6 women (21.42%) and 8 men (57.14%). Lower jaw partial dentures were needed for 4 men and 16 women (28.57% and 57.14%).

Tab. 2 The state of prosthetic restoration in particular groups and the needs of prosthetic treatment.

Types of prosthetic restoration	The condition of prosthetic restoration						The needs of prosthetic treatment					
	30-44			45-77			30-44			45-77		
	F	M		F	M		F	M		F	M	
	no.of people	no.of D.Bridges	no.of people	no.of D.Bridges	no.of people	no.of D.Bridges	no.of people	no.of D.Bridges	no.of people	no.of D.Bridges	no.of people	no.of D.Bridges
Dental bridges	2	4	2	4	4	0	36	58	14	24	40	6
Jaw	2	4	2	4	0	0	20	36	4	6	20	0
Lower Jaw	0	0	0	4	4	0	16	22	10	18	20	6
	no.of people	%	no.of people	%	no.of people	%	no.of people	%	no.of people	%	no.of people	%
Partial Dentures	14		0		8		22		52		22	
Jaw	8	19,04	0	4	14,28	6	8	19,04	30	71,42	6	8
Lower Jaw	6	14,28	0	4	14,28	2	14	33,33	22	52,38	16	4
	no.of people	%	no.of people	%	no.of people	%	no.of people	%	no.of people	%	no.of people	%
Complete Dentures	6		0	6		0	0		0		6	0
Jaw	4	9,52	0	4	14,28	0	0		0		4	0
LowerJaw	2	4,7	0	2	7,14	0	0		0		2	0
Denture repairs	2		0	0		0	0		0		1	0

DISCUSSION

Our research shows that the most expensive medical needs of both younger and older patients, as regards dental prosthetics, involve completing with fixed dental bridges and/or partial dentures especially in lateral areas. These people are unable to chew mostly because of missing premolar and molar teeth, increasing this way the percentage of mastication ability loss mainly in antagonist and lateral missings which require dentures.

It is known from the literature that the demand for particular prosthetic restoration depends on the type of lost teeth, age group and the place of residence [5,6,7,8]. The need of fixed dentures (dental bridges) was observed among 48.88% of people of the Lublin region [9] and among 18.33% of people of the Cracow region [10]. The demand for lower jaw partial dentures was higher than for upper partial dentures with Lublin district citizens [9], the Łódź macroregion [11] as well as the Gdańsk region [12]. The individual research showed the occurrence of toothlessness in both younger and older age groups. In the regions of Cracow and Gdansk, there were cases of patients aged 35-44 who needed complete dentures [10,12] as opposed to the Lublin region, where there were not any cases of complete toothlessness in this age group [9].

Young people try to complete their teeth on account of the attractiveness of their appearance. However, in older age this matter is of much less importance, mostly due to financial aspects. The health care is limited to pain-killing through the teeth extraction.

The needs for the particular types of prosthetic restoration depend on the type of missing teeth, age group and the place of residence.

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ABSTRACT

OBJECTIVE: The work aimed at the evaluation of mastication ability loss and medical needs concerning prosthetic treatment.

MATERIAL/METHODS: The random sample of 126 persons aged 30 or over was selected for the research. The sample was divided into 2 groups. The first one comprising the persons aged 30-44 (the average age was 36.25 years). The second group included 45-77 year-olds (the average age was 56,7years). The research results were recorded in the epidemiological cards (according to the WHO standards).

RESULTS: The proportion in the loss of mastication ability in the group of younger people came to the average of 54.68% including 56.23% of women and 53.13% of men. In the group of older subjects, the proportion in the mastication ability loss came to the average of 62.55%, including 63.33% of women and 62.57% of men.

CONCLUSIONS: The needs for the particular types of prosthetic restoration depend on the type of teeth loss, age group, and the place of residence.

STRESZCZENIE

CEL PRACY: Celem pracy była ocena utraty zdolności żucia oraz zapotrzebowania na leczenie protetyczne.

MATERIAL I METODY: Zbadano 126 pacjentów w wieku powyżej 30 r.ż. Badanych podzielono na dwie grupy wiekowe: I – średnia wieku 36,25 lat i II – średnia wieku 56,7 lat. Dane zapisano na kartach w/g WHO

WYNIKI: W grupie ludzi młodszych odsetek utraty zdolności żucia wynosił średnio 54,68%, w tym 56,23% u kobiet i 53,13% u mężczyzn. W grupie osób starszych odsetek utraty zdolności żucia wynosił średnio 62,55%, w tym 63,33% u kobiet i 62,57% u mężczyzn. **Wnioski:** Zapotrzebowanie na wykonanie uzupełnień protetycznych zależy od rodzaju braków zębowych, kategorii wiekowej oraz miejsca zamieszkania

Keywords: mastication ability loss, state of prosthetic restoration, needs for prosthetic treatment

