# ASPECTS OF NON SPECIFIC PREPARATION INVOLVED IN EXTENDED PARTIAL EDENTATION THERAPY

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The present study proposes testing the correlation between the partially extended edentation, the presence/absence of the removable prosthetic treatments and the presence of the oral mucosa lesions.

Key words: Edentation; Chi-Square test; Prosthetics; Oral mucosa lesions.

# **INTRODUCTION**

The present demographic trends, revealing a growth of the elder population quota, induces the increasing interest in solving the complex oral pathology for this particular demographic group. Therefore, the partially extended edentation, including its extreme, definitive form "subtotal edentation" inducts into series of specific changes for the prosthetic level. The long-time care for the elder subject with partially extended edentation means more than clinical intervention and treatment, requiring a multi-disciplinary approach.

Among the dominating pathological forms of edentation, partially extended edentation affects a large number of patients, globally.

The prosthetic treatment of the partially extended edentulous patient is a hard task for the dentist, as it is performed on an often changes pathological of tissue, with major psychological modification since the growing age.

The successful therapy for this group of patients is determined by the complex diagnosis and therapeutical approach of the oral mucosa disorders implied by the removable prosthetic treatments.

Treatment of oral mucosa lesions is generally surgical excision and removal or modification of the irritating factor  $^{1}$ .

Wounds in younger patients heal considerably more rapidly than wounds in elderly patients, and the rate of healing appears to be in inverse proportion to the age of the patient  $^2$ .

The accurate and complete oro-dental diagnosis, the determination of the anatomopathological diagnosis and the general and local gero-index impose the therapeutical decisions for each clinical case, following these standards will bring the success and the endurance of prosthetical restaurations  $^{3}$ .

The conservation of the results is possible only by an active dental surveillance of the subjects.

# **MATERIAL AND METHOD**

The studied batch included 202 clinical complex cases of partial / total edentation, with oral mucosa lesions, whose investigation steps imposed comparing clinical and paraclinical of the oral mucosa pathology and the hierarchization of the therapeutical works, which implied interventions on the mucosa or on the prosthetic treatments, therefore meaning adapting or remaking them.

*The retro-prospective study* was done on two statisticallyrepresentative lots, made by partial/ total edentulous patients, with / without prosthetics, with oral mucosa lesions.

*The histological and immunohistochemical study* was performed in order to identify the morphological aspects of the mucosa modifications and to correlate them with the clinical healthy.

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#### Statistical data integration

As in our study we investigated mostly qualitative variables, the calculation of the absolute and relative frequences was necessary; we also used the  $\chi^2$  (Pearson Chi-Square) test for the statistical significance of the observed differences.

For the quantitative variables we calculated the central trend indicators: average, standard deviation and standard error.

# **RESULTS AND DISCUSSIONS**

From the total of 202 selected subjects, 138 patients (68.30%) were treated in the private dental office of the MD Girtan Mihaela and 64 patients (31.70%) were directed to the Clinic of Maxillofacial Surgery of the "Sf. Spiridon" Universitary Hospital from Iasi for diagnosis and treatment (Fig. 1).

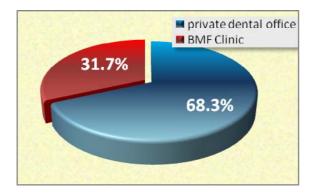


Fig. 1. Total batch structure – by the treatment location.

The allotment of the patients by sex shows a balanced distribution, with a slight domination of the female lot -107 (53.00%), towards 95 (47.00%) male; the approach of the patients coming for dental treatment, by sex, is also slightly female-dominated - Table 1.

The synthetic data presented in Table 2 do not reveal any connection between gender and the type of mucosa affection, as both the denture stomatite and the chronic ulceration were equally found at both sexes (Table 2, Fig. 2).

The most frequent mucosa pathology diagnosed and ambulatory treated at the private MD was represented by: epithelic-conjunctive hyperplasia – 45 cases (22.30%) and the chronic ulceration – 45 cases (22.30%) – Table 3.

Denture-induced fibrous hyperplasia is a common lesion that occurs in the vestibular mucosa where the denture flange contacts tissue <sup>1</sup>.

Most of the pacients from the batch were in the group of age (50–79 years old), but the age limits were broader: minimal age being 30 years and the maximum one -83 years - Table 4.

The results of the statistical significance tests show a bigger frequence (p<0.0001) of the diagnosed mucosa lesions at pacients over 50 years old (Table 5).

Considering that the most affected group of age is 60–69 years (Table 6, Fig. 3) the treatment plan followed specific criteria for the aged patient, that determine the choice of adequate therapeutical solutions.

Structure of the cases – sex vs. oral lesions presence								
	Oral lesions presence							
Sex	Absent		Present		Total			
	No.	%	No.	%	No.	%		
Female	6	35.30	101	54.59	107	52.97		
Male	11	64.70	84	45.41	95	47.03		
Total	17	100.00	185	100.00	202	100.00		

Table 1

 Table 2

 Alotment of cases – sex vs. type of oral lesion

			Type of oral lesion						
Sex			No.	Epithelic- conjunctive- Hyperplasia	Chronic ulceration	Denture stomatitis	Bone precancerous lesions	Total	
	Female	n	6	43	37	18	3	107	
		%	35.30	58.90	50.70	56.30	42.90	53.00	
	Male	n	11	30	36	14	4	95	
		%	64.70	41.10	49.30	43.80	57.10	47.00	
Total		n	17	73	73	32	7	202	
		%	100.00	100.00	100.00	100.00	100.00	100.00	

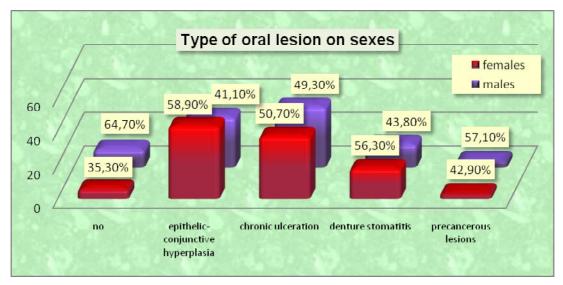


Fig. 2. Allotment of cases in the total batch - sex vs. type of oral lesion.

		Type of oral lesion						
	Location		No	Epithelic- conjunctive- hyperplasia	Chronic ulceration	Denture stomatitis	Precancerous lesions	Total
	Private MD	n	17	45	45	31	0	138
		%	100.00	61.60	61.60	96.90	0	68.30
	BMF clinic	n	0	28	28	1	7	64
		%	0	38.40	38.40	3.10	100.00	31.70
Tot	al	n	17	73	73	32	7	202
		%	100.00	100.00	100.00	100.00	100.00	100.00

*Table 3* Allotment of cases – location *vs.* type of oral lesion

### Table 4

#### Allotment of cases - age stretch vs. presence of the oral lesion

		Presence of the oral lesion							
Age stretch	Abs	Absent		Present		Total			
	No.	%	No.	%	No.	%			
30–39 years	3	17.65	4	2.16	7	3.47			
40-49 years	1	5.88	9	4.86	10	4.95			
50–59 years	6	35.29	40	21.62	46	22.77			
60–69 years	3	17.65	65	35.14	68	33.66			
70–79 years	4	23.53	55	29.73	59	29.21			
over 80 years	0	0	12	6.49	12	5.94			
Total	17	100.00	185	100.00	202	100.00			

#### Table 5

### Results of the statistical significance test - for age stretch vs. presence of the oral lesion

	CHI – SQUARE TEST PRESENT. ABSENT ORAL LESION					
Applied significance tests	Calculated value	df	Statistical significance step (p)			
Pearson Chi-square	14.806	5	0.011			
Probability report	11.150	5	0.048			
Contingence coeficient	0.261		0.011			
N (no. of cases)	202					
			*SS			
			Weak relationship			

\*SS-statistical semnificative

			Type of oral lesion						
Age str	Age stretch		Epithelio- conjunctive- hyperplasia	Chronic ulceration	Denture stomatitis	Precancerous lesions	Total		
30–39 ye	ears n	3	2	2	0	0	7		
	%	17.60	2.70	2.70	0	0	3.50		
40–49 ye	ears n	1	3	6	0	0	10		
	%	5.90	4.10	8.20	0	0	5.00		
50–59 ye	ears n	6	19	14	6	1	46		
	%	35.30	26.00	19.20	18.80	14.30	22.80		
60–69 ye	ears n	3	22	26	13	4	68		
	%	17.60	30.10	35.60	40.60	57.10	33.70		
70–79 ye	ears n	4	21	22	10	2	59		
	%	23.50	28.80	30.10	31.30	28.60	29.20		
80 years	n	0	6	3	3	0	12		
	%	0	8.20	4.10	9.40	0	5.90		
Total	n	17	73	73	32	7	202		
	%	100.00	100.00	100.00	100.00	100.00	100.00		

 Table 6

 Allotment of cases – age stretch vs. type of oral lesion

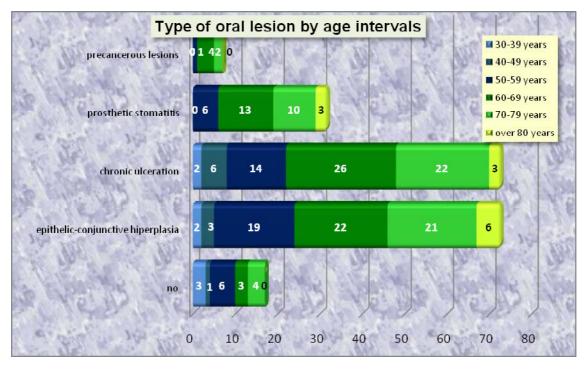


Fig. 3. Allotment of cases for the whole batch of the study - age stretch vs. type of oral lesion.

Clinical examination revealed a more important traumatic ulcer in group of age 60-69 years (26 cases – 35.60%). These ulcers are small, painful, irregulary shaped lesions usually covered by a delicate gray necrotic membrane and surrounded by an inflammatory halo. If treatment is not instituted, there sometimes may be beginning proliferation of tissue around the periphery of the lesion on an inflammatory basis. The treatment for the traumatic denture ulcer consists in correction of

the underlying cause: relief of the flange, removal of a tiny sequestrum or relief of high spots  $^{2}$ .

The elder patients' state of oral health is far from optimal, imposing a strictly adapted plan of treatment, which respects the biological status of each subject and also the socio-economical status. All these can influence the short-term and the longterm success of the therapeutical solution decided for the specific elder patient.

#### CONCLUSIONS

The pathological state of extended partial edentation is a very common clinical case, frequently met in the dentistry praxis, that integrates complex systemic alterations.

We consider that the clincal and physical limits of the pacient must be evaluated before conceiving the therapeutical plan.

The diagnosis, prognosis and treatment of different oral mucosa lesions depended almost exclusively on the histological alterations of the oral epithelium.

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