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Prosthetic Modalities Used to Treat Cleft Palate Patients in a University Clinic: A 10-Year Review

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A B S T R A C T

Cleft palate patients are not usually seen in general dental clinics, but this congenital anomaly is one of the most frequent of cases. General dental practitioners are usually unwilling or/and not sufficiently trained to treat such patients for whom rehabilitation and interdisciplinary cooperation is often needed. The aim of this study was to determine the incidence of prosthetic modalities most frequently used by licensed prosthodontists for prosthetic rehabilitation of cleft palate patients. Participants in this study were 56 cleft palate patients (aged 23–66 years) who received prosthetic treatment between 2000 and 2010. Patients' dental status and prosthetic modalities used were noted from patient records archived at Department of Prosthodontics, School of Dental Medicine, University of Zagreb. Data analyses revealed that combined prosthetic constructions (fixed + removable, $p<0.05$) were the most frequently used. In a group of molar teeth, the most frequent fixed prosthetic modalities were crowns with rests; in a group of premolar teeth, telescopic crowns; on canines, metal ceramic crowns and telescopic crowns; and in a group of incisors, metal ceramic pontics ($p<0.05$). Understanding the distribution of prosthetic modalities for cleft palate patients could serve to guide dental practitioners towards planning adequate prosthetic treatment for their patients since only a well-planned prosthetic therapy will result in satisfactory function and alleviation of the deformities.

Key words: *cleft palate, prosthodontics, dental prosthesis*

Introduction

Cleft lip/palate is one of the most common and serious deformities in the orofacial region[1]. It is a congenital abnormality of the face and cranial bones with functional consequences on feeding, speaking and hearing and a possible adverse impact on the psychosocial status of individuals[2–5].

The incidence of orofacial clefts in Croatia is 1.717 per 1000 live-births, or 1 orofacial cleft per 581 live-births[1], corresponding to the cleft frequency in Europe that ranges from 1.0 to 2.21 per 1000 live-births[1]. In general, males (58%) are more often affected. Females are more affected by clefts involving only secondary palate. Clefts involving the left side of the face (52%) are frequent[6].

Clefts are usually of two types, cleft lip with or without cleft palate (primary with or without secondary palate) and isolated cleft palate (secondary palate)[7,8], with very broad phenotypic range (from minimal scars on the upper lip to overt clefts of the lip and palate)[9]. The possible etiological factors are environmental and genetic (gene mutation and chromosomal aberration) or an interaction of the two[10,11]. Cleft lip could also be hereditary since one-third to one-half of the patients had a previous occurrence of this anomaly in their family[12].

Morphological variations of clefts (including tooth loss and various bone defects) are so large and that every cleft is unique[13]. The treatment of cleft lip/palate with long-term involvement is very complex[14]. A multidisciplinary approach involving different medical and dental specialties is required for the treatment of such complex cases[12,13,15–17]. Dental specialists such as oral surgeon,

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orthodontist, pedodontist, and prosthodontist are involved because of the wide range of care services needed for the patient[12,14,16,18]. If cleft palate was discovered soon after birth, the help of an orthodontist is immediately sought. An orthodontist provides help in feeding the child with the use of palatal appliance, corrects the morphology and stimulates the growth of palatal segments before a surgery may needed to be performed sixth months after birth. The involvement of an orthodontist in the therapy increases with the eruption of primary and secondary dentition[19]. Surgical therapy is necessary to correct anatomical abnormalities, to restore normal function, and later on, to establish the aesthetics. However, surgical therapy may have a negative effect on maxillary growth, including scar tissue development, and on dental arches as a consequence of maxillary contraction in sagittal and transverse planes[13], also resulting in crossed bite[16]. Maxillary deficiency in all dimensions may develop, together with concave facial skeleton profile in adulthood. In addition to abnormal growth and development of maxilla, other dental anomalies such as irregular number of teeth, their position and size, crown malformations and delay in tooth development could also be expressed[16]. It is important to obtain satisfactory alveolar arch form and acceptable interocclusal relation during adolescence, and three-dimensional growth should be finished before definitive prosthetic rehabilitation is considered[20].

In several cases, the tasks of a prosthodontist include restoring the missing teeth and hard and soft tissues, thus restoring functional occlusion, function, aesthetics and phonetics[12,21]. Overall, prosthodontics is an essential aspect of global treatment of these complex patients[17]. Prosthetic rehabilitation of cleft patients involves using different types of fixed, removable or combined prosthetic modalities[14,22]. Moore et al.[22] gave an overview of possible prosthetic treatments in cleft palate patients: overdentures with the purpose of retention/preservation of hard/soft tissues and the use of remaining teeth; resin-bonded splint/attachments and resin-retained cantilever bridges to restore small spans, particularly when replacing maxillary lateral incisors; multiple unit fixed bridges to replace missing teeth and to stabilize the maxillary arch; and partial removable prostheses. Several authors[13–15,17,20] have published case reports of their treatment approaches to cleft palate patients, and such treatment modalities are usually variations of multi-unit (composite or ceramic veneered) fixed and removable dentures; also they often fabricate removable partial prostheses with metal clasps, crowns with extracoronal attachments, telescopic crowns and root copings. Goiato et al.[23] described a case of oronasal communication of cleft palate patient presenting for prosthetic rehabilitation fabricating an obturator prosthesis. Compared to conservative treatments, an invasive treatment approach is a combination of bone grafting and implant-supported fixed or removable prostheses[20,24,25]. Sometimes, it is considered that prosthetic restoration of compromised morphologic conditions (due to the lack of tissue) is only effective if dental implants are used as prosthesis-supporting elements[26,27]. Fukuda et al.[24] reported two cases of using endosseous implants in dental rehabilitation of cleft palate patients with very good results. Dental implants in cleft palate patients often rely on bone grafting techniques in order to obtain a suitable implant site. It should be emphasized that nearly one-third of patients with orofacial deformities reject classical implant therapy primarily due to difficulties coping with additional implant surgery and time constraints[28]. Also, it is not always possible to predict the incidence of complications for implants and implant-supported prostheses; there seems to be a greater number of clinical complications associated with implant-supported prostheses than with any other type of prostheses evaluated[29]. In the light of the aforementioned facts, the aim of this study was to examine the incidence of prosthetic treatment modalities used for prosthetic rehabilitation of cleft palate patients at the Department of Prosthodontics, School of Dental Medicine, University of Zagreb, and to test the assumed hypothesis that there is a difference in the incidence of prosthetic constructions (fixed, removable, combined) for different cleft types and that some prosthetic modalities are more frequently used in certain groups of teeth.

Participants and Methods

The participants of this study (approved by the Ethics Committee of School of Dental Medicine, University of Zagreb) were 56 cleft palate patients (23 females and 33 males, aged 19–66 years) who were treated during the past 10 years (from 2000 to 2010) at the Department of Prosthodontics, School of Dental Medicine, University of Zagreb, Croatia.

Therapy planning and prosthetic treatments were performed by licensed prosthodontists (at least 5 years of practice as prosthodontist), as described below. For each patient, complete anamnesis (case history) was taken, full mouth radiographs checked, impressions of dental arches taken and diagnostic casts poured; centric relation records and vertical dimension were recorded and diagnostic casts mounted in an articulator to analyze intermaxillar relations. After a careful therapy planning, including all the remaining teeth, prosthetic treatment was performed. Different prosthetic constructions (fixed, removable, and combined) for different prosthetic modalities, including metal crowns with polymer veneers, metal pontics with polymer veneers, crowns with rests, telescopic crowns, root copings with attachments, metal-ceramic crowns, metal-ceramic pontics, complete removable dentures, and partial removable dentures with metal base, were made.

Data about patient's age, gender, type of cleft, dental status in maxilla, and prosthetic modality fabricated for each tooth in maxilla were taken from medical records kept in the department's archive and noticed in the appropriate form created especially for this study. Statistical analysis was performed on the data using descriptive statistics and Fisher's exact test in computer software

SPSS 15.0 (SPSS Inc., Chicago, IL) with significance level of 0.05.

Results

The study included 56 participants (33 male and 23 female), aged 19–66 years. The average age was 32.6± 14.9 years with the following distribution: 41 patients (73.2%) in 19–30 years, 4 patients (7.1%) in 31–50 years, and 11 patients (19.7%) older than 50 years.

Among treated patients, unilateral cleft palate was recorded in 21 patients (37.5%): 9 were men (42.9%) and 12 were women (57.1%). Bilateral cleft palate was recorded in 35 patients (62.5%): 11 were women (31.4%) and 24 were men (68.6%). Fisher's exact test revealed that correlation between gender and type of cleft was not statistically significant (p=0.092).

The distribution of prosthetic modalities by cleft type and gender is shown in Table 1. Fisher's exact test revealed statistically significant (p=0.001) correlation between the type of cleft and the type of prosthetic construction performed in the maxilla, but there was no correlation between gender and type of prosthetic construction (p=0.738, Table 1).

Mandible cleft palate patients did not require any prosthetic treatment (34 patients, 60.7%). Fixed prosthetic appliance was performed in 14 cases (25%), removable in 2 (3.6%), and combined in 6 cases (10.7%).

With regard to the number of remaining teeth in the right frontal region, patients with unilateral cleft had an average of 1.14 teeth while bilateral had 0.74 teeth (p=0.002). In the left frontal region, the distribution of remaining teeth was not quite the same, but similar (unilateral 1.24, bilateral 1.08; p=0.000). Considering the remaining teeth in the whole frontal region, the unilateral cleft palate patients had an average of 2.14 teeth, while the bilateral cleft palate patients had on average 1.91 teeth, which was also statistically significant (p=0.000).

When the remaining frontal teeth (male 2.06, female 2.09) were correlated with patients' gender, no statistically significant difference was observed (p=0.437).

In the right lateral region, patients with unilateral cleft had an average of 1.71 teeth while those with bilateral cleft had 3.28 teeth (p=0.001). In the left lateral region, the distribution of remaining teeth was similar (unilateral 1.80, bilateral 3.37; p=0.001), thus giving an average count of 3.52 remaining teeth in both lateral regions in unilateral cleft palate patients and 6.65 teeth in bilateral cleft palate patients, and this difference was also statistically significant (p=0.000).

When all the remaining lateral teeth (male 5.64, female 5.26) were correlated with patients' gender, no statistically significant difference was observed (p=0.265).

The frequencies and percentages of all fixed prosthetic modalities done on maxillary teeth are shown in Table 2.

With respect to the use of prosthetic appliances, 194 fixed prosthetic units combined with removable partial denture with metal base were made. The distribution of fixed prosthetic modalities in combined prosthetic constructions is shown in Figure 1.

The distribution of all fabricated fixed prosthetic modalities by tooth groups and statistical significances of the frequently made prosthetic modalities within tooth groups are shown in Figure 2.

Discussion

The study revealed the distribution of prosthetic modalities made by licensed prosthodontists for a successful prosthetic treatment of cleft palate patients. The results will be useful for dental practitioners when planning and performing prosthetic treatment for cleft palate patients, especially in the light of the fact that treatment of cleft palate patient presents psychosocial[14] as well as a significant prosthetic challenge[13,14].

TABLE 1
DISTRIBUTION OF PROSTHETIC APPLIANCES BY CLEFT TYPE AND GENDER

Prosthetic appliances in maxilla	Cleft						Gender					
	Unilateral		Bilateral		Total		Male		Female		Total	
Fixed appliance	6	28.6% 37.5%*	10	28.6% 62.5%*	16	28.% 100%*	10	30.3% 62.5%*	6	26.1% 37.5%*	16	28.6% 100%*
Removable appliance	7	33.3% 100%*	0	0% 0%*	7	12.0% 100%*	3	9.1% 42.9%*	4	17.4% 57.1%*	7	12.5% 100%*
Combined appliance	8	38.1% 24.2%*	25	71.4% 75.8%*	33	58.0% 100%*	20	60.6% 60.6%*	13	56.5% 39.4%*	33	58.9% 100%*
Total	21	100% 37.5%*	35	100% 62.5%*	56	100% 100%*	33	100% 58.9%*	23	100% 41.1%*	56	100% 100%*
Statistics	χ^2=13.84, p=0.001						χ^2=0.935, p=0.738					

* percentages of certain prosthetic constructions correlated with different cleft type and gender; (no *) percentages of different prosthetic constructions correlated with certain cleft type and gender

TABLE 2
FREQUENCIES AND PERCENTAGES OF FIXED PROSTHETIC MODALITIES MADE ON UPPER TEETH

Teeth	56 participants		Fixed prosthetic appliances on remaining teeth										Fixed prosthetic appliances for missing teeth					
	Remaining teeth	Missing teeth																
Mark	N	N1	1		2		2		4		5	Total	6		7		Total	
17	30/53.5%	26/46.5%	0	0%* 0%	3	60%* 6.1%	0	0%* 0%	2	40%* 4.5%	0	0%* 0%	5	100%* 2.1%	0	0%* 0%	0	0%* 0%	0	0%* 0%
16	38/67.8%	18/32.2%	0	0%* 0%	6	60%* 12.3%	3	30%* 3.8%	0	0%* 0%	1	10%* 2%	10	100%* 4.3%	0	0%* 0%	0	0%* 0%	0	0%* 0%
15	40/71.4%	16/28.6%	1	5.3%* 8.3%	6	31.5%* 12.3%	11	57.9%* 13.9%	0	0%* 0%	1	5.3%* 2%	19	100%* 8.1%	1	100%* 10%	0	0%* 0%	1	100%* 2.1%
14	38/67.8%	18/32.2%	0	0%* 0%	4	13.4%* 8.2%	19	63.3%* 24.1%	0	0%* 0%	7	23.3%* 13.7%	30	100%* 12.8%	0	0%* 0%	1	100%* 2.6%	1	100%* 2.1%
13	29/51.8%	27/48.2%	2	7.1%* 16.75%	0	0%* 0%	10	35.7%* 12.7%	4	14.3%* 9.1%	12	42.9%* 23.5%	28	100%* 11.9%	0	0%* 0%	1	100%* 2.6%	1	100%* 2.1%
12	6/10.7%	50/89.3%	1	20%* 8.3%	0	0%* 0%	1	20%* 1.2%	3	60%* 6.8%	0	0%* 0%	5	100%* 2.1%	2	13%* 20%	13	87%* 4.2%	15	100%* 31.2%
11	18/32.2%	38/67.8%	3	17.6%* 25%	0	0%* 0%	1	6%* 1.2%	9	52.9%* 20.5%	4	23.5%* 7.9%	17	100%* 7.2%	0	0%* 0%	9	100%* 23.7%	9	100%* 18.7%
21	27/48.2%	29/51.8%	2	7.7%* 16.75%	1	3.8%* 2%	0	0%* 0%	16	61.5%* 36.4%	7	27%* 13.7%	26	100%* 11.1%	1	16.7%* 10%	5	83.3%* 13.2%	6	100%* 12.5%
22	7/12.5%	49/87.5%	0	0%* 0%	1	17%* 2%	0	0%* 0%	2	33%* 4.5%	3	50%* 5.9%	6	100%* 2.6%	3	25%* 30%	9	75%* 23.7%	12	100%* 25%
23	30/53.6%	26/46.4%	1	4.1%* 8.3%	1	4.1%* 2%	7	29.2%* 8.9%	6	25%* 13.6%	9	37.6%* 17.6%	24	100%* 10.2%	1	100%* 10%	0	0%* 0%	1	100%* 2.1%
24	38/67.8%	18/32.2%	0	0%* 0%	4	13.8%* 8.2%	18	62.1%* 2.8%	0	0%* 0%	7	24.1%* 13.7%	29	100%* 12.3%	1	100%* 10%	0	0%* 0%	1	100%* 2.1%
25	36/64.3%	20/35.7%	1	5.9%* 8.3%	8	47%* 16.3%	7	41.2%* 8.9%	1	5.9%* 2.3%	0	0%* 0%	17	100%* 10%	1	100%* 10%	0	0%* 0%	1	100%* 2.1%
26	41/73.2%	15/26.8%	1	7.7%* 8.3%	10	76.9%* 20.4%	2	15.4%* 2.5%	0	0%* 0%	0	0%* 0%	13	100%* 5.5%	0	0%* 0%	0	0%* 0%	0	0%* 0%
27	35/62.5%	21/37.5%	0	0%* 0%	5	83.3%* 10.2%	0	0%* 0%	1	16.7%* 2.3%	0	0%* 0%	6	100%* 2.6%	0	0%* 0%	0	0%* 0%	0	0%* 0%
Total	413	371	12	100% 5.1%*	49	100% 20.9%*	79	100% 33.65*	44	100% 18.7%*	51	100% 21.7%*	235	100% 100%*	10	100% 20.8%*	38	100% 79.2%*	48	100% 100%*

N – number and percentage of remaining teeth, N1 – number and percentage of missing teeth, 1 – metal crown with polymer veneer, 2 – crowns with rests, 3 – telescope crowns, 4 – copings, 5 – metal ceramic crown, 6 – metal pontic with polymer veneer, 7 – metal ceramic pontic, 17 – upper right second molar, 16 – upper right first molar, 15 – upper right second premolar, 14 – upper right first premolar, 13-upper right canine, 12 – upper right second incisor, 11 – upper right first incisor, 21 – upper left first incisor, 22 – upper left second incisor, 23 – upper left canine, 24 – upper left first premolar, 25 – upper left second premolar, 26 – upper left first molar, 27 – upper left second molar.
* percentages of different prosthetic modalities made on certain upper tooth; (no *) percentages of certain prosthetic modality made on different upper teeth.

The study revealed that cleft palate patients were treated with only fixed, only removable and combined prosthetic constructions. Combined prosthetic modalities were the most frequently used type of prosthetic constructions, and this number for bilateral cleft patients was statistically significantly higher, so the assumed hypothesis was confirmed. According to the study, combined prosthetic constructions provided good retention and, at the same time, allowed reconstruction of the upper dental arch and substituting bone loss, thereby eliminating upper and lower jaw disproportion and offering better facial contour[22]. Mese et al.[14] and Vojvodic et al.[30] fabricated combined prosthetic constructions in prosthetic rehabilitation of cleft palate patients, while Abadi

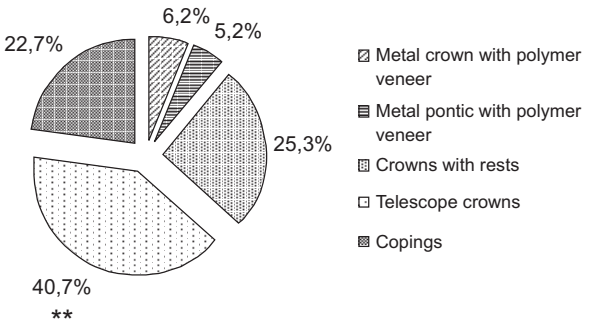

*Fig. 1. Distribution of fixed prosthetic modalities in combined prosthetic constructions. **p=0.000, χ^2=84.91.*

et al.[21] reported cases of prosthetic treatment using just removable prosthesis with a high degree of success.

Well-retained removable partial prostheses are especially suitable for patients with different tissue deficiency, several fistulae, soft palate dysfunction, or uncoordinated nasopharyngeal sphincter action[14]. Such removable partial dentures could be beneficial for cleft palate patients with multiple missing teeth and in whom edentulous space is too long to be spanned by a fixed restoration[14] but also in case when lip support is insufficient due to poor bone quality[15]. Also, prosthesis may improve the psychological status of patients as well as their quality of life[14]. Fabrication of removable prostheses might be a necessity in some patients in order to seal a residual cleft palate defect or to correct an inadequate pharyngeal vault that can complicate speech[17].

Statistically significant number of complete dentures was made for unilateral cleft palate patients. These edentulous cleft palate patients often pose increased difficulties due to scar tissue on lips and palate, thus influencing retention and stability of complete dentures[17]. Lin et al.[31] reported prosthetic rehabilitation of a patient with »never repaired« cleft palate fabricating the complete removable prosthesis with palatal obturator in order to fulfill required oral functions.

All fixed prosthetic constructions, as this study reports, were made for young patients, indicating improved pre-prosthetic treatment. Moore et al.[22] stated some advantages of fixed dentures over removable prosthesis: maintaining good standard of oral hygiene and good health of oral hard and soft tissues, maintaining the maxillary arch stability, modification of unaesthetic teeth, better retention, and patient's tolerance to this modality type.

As for the number of remaining teeth in cleft palate patients, it was noticed that more teeth were missing in the frontal region of patients with bilateral cleft, which is logical due to »double« cleft defect. Also, in patients with bilateral clefts, greater tissue defects, esthetic and phonetic problems were present; a possible psychological effect could be more expressed. Unexpectedly, more teeth were missing in the lateral regions in patients with unilateral cleft. A possible explanation for more lateral teeth remaining in bilateral cleft patients could be better oral hygiene. Although several reports[14–16,32] revealed poor oral hygiene (in general) in cleft patients, those with bilateral clefts may be more conscious in this sense. On the contrary, some authors[14,16,32] report that patients, embarrassed by their facial appearance, are frequently less motivated for good oral hygiene or to seek dental care, thus resulting in gingivitis, loss of bone support, and increased tooth loss[14,16,32]. Also, poor plaque control is determined by badly positioned teeth, defects in arch length, and crossed bite[16], symptoms often present in cleft palate patients. Also, for that reasons only classical prosthetic therapy was involved in this study.

Although reports about the frequency of prosthetic modalities used in cleft palate patients are rare in literature, many authors[14–17,19,20,30,32,33] have described prosthetic treatments of cleft palate patients in different clinical situations. According to this study, the most frequently made prosthetic modalities on molar teeth were crowns with rests and telescope crowns, probably because these lateral regions of the maxilla were partially normally developed providing satisfactory tooth position and interocclusal contacts. So, the assumed hypothesis that some prosthetic modalities are more frequently used in certain groups of teeth was confirmed. These crowns were used to protect the remaining teeth and ensure adequate retention of partial removable prostheses. Mese et al.[14] and Hickey et al.[32] treated cleft palate patients using crowns with rests and partial removable prostheses with

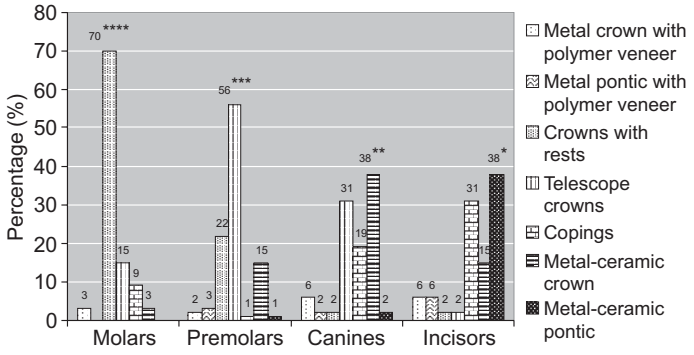

*Fig. 2. Distribution of all fixed prosthetic modalities by tooth groups. *p=0.000, χ^2=98.73, **p=0.000, χ^2=338.37, ***p= 0.000, χ^2=104.89, ****p=0.000, χ^2=23.41.*

clips. Ayna et al.[15] produced crowns with rests and extracoronal attachments in order to satisfy aesthetic and functional needs of cleft palate patients.

The most frequently produced prosthetic modalities on premolar teeth were telescopic crowns, followed by crowns with rests and metal-ceramic crowns. Once again, the assumed hypothesis was confirmed. The double-crown concept ensures maximally favorable masticatory load transmission and, if used just as retentive element, provides somehow greater freedom in artificial tooth positioning of partial removable prosthesis[17]. It is very important in the light of the fact that inadequate intermaxillary relations are often present in this region. Because secondary prosthetic structures are easy to be removed, the hygiene of dental abutments is also better when compared to the cleaning difficulties associated with conventional fixed bridge[17]. Also, telescopic crown provides fabrication of fixed prosthesis removable under professional supervision. Telescopic crowns were also used by Ferer et al.[17] and Pellecchia et al.[33] in their reported cases of prosthetic rehabilitation.

The most common modality on canines was metal-ceramic crown as a bridge anchor, followed by telescopic crown, root coping and crown with polymer veneers. Mese et al.[14] reported cases where metal-ceramic crowns were produced for teeth in the frontal region for aesthetic purposes.

The most frequent prosthetic modality on incisors was metal-ceramic pontic, followed by root coping and metal-ceramic crown. In cleft palate patients, lateral incisors are usually missing due to the cleft itself and performed surgical treatments. For these cases, pontics were the most frequent type of prosthetic appliance used after a pre-prosthetic therapy, which allowed a completely fixed prosthetic construction. Bone grafting and use of dental implants in the place of missing maxillary lateral incisors (due to the cleft) present a possibility to avoid abutment teeth preparation[24]. In cases where favorable intermaxillary relations between premaxilla and mandible are not present, incisors could be endodontically treated and root copings with attachments made. This prosthetic appliance provides greater freedom for correct artificial tooth positioning and favorable loading conditions for the abutment root with regard to a disproportion between the two alveolar ridges[13,30]. From the above, it may be concluded that statistically significant differences exist in the distribution of prosthetic modalities fabricated on different teeth groups as was assumed in the hypothesis.

Conclusions

The study offers the following conclusions: (1) majority of cleft palate patients were younger and receiving first prosthetic work; (2) combined prosthetic constructions (fixed + removable) were the most frequent prosthetic therapy for cleft palate patients; (3) crowns with rests (70%) and telescope crowns (15%) were the most frequent fixed prosthetic appliance on molar teeth; (4) most frequently produced prosthetic modalities on premolar teeth were telescope crowns (56%), followed by crowns with rests (22%) and ceramic crowns (15%); (5) most common appliances on canines were metal-ceramic crowns (38%), followed by telescopic crowns (31%), root copings (19%) and crowns with polymer veneers (6%); (6) most frequent prosthetic appliance on incisors was metal-ceramic pontic (38%), followed by root coping (31%) and metal-ceramic crown (15%).

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VRSTE PROTETSKIH RADOVA UPORABLJENIH ZA ZBRINJAVANJE PACIJENATA S RASCJEPIMA NEPCA NA SVEUČILIŠNOJ KLINICI: DESETOGODIŠNJI PREGLED

S A Ž E T A K

Pacijenti s rascjepom nepca ne viđaju se redovito u općoj stomatološkoj ordinaciji, mada je ova kongenitalna anomalija jedna od najčešćih. Opći stomatolozi obično nisu skloni, ili nisu dovoljno educirani, tretmanu takvih pacijenata čija rehabilitacija zahtijeva interdisciplinarni pristup. Svrha ovog istraživanja bila je utvrditi učestalost protetskih radova koje su specijalisti stomatološke protetike najčešće primjenjivali za protetsku rehabilitaciju pacijenata s rascjepom. Ispitanici u ovom istraživanju bili su pedesetšest pacijenata s rascjepom nepca (starosti od 23 do 66 godina) koji su protetski zbrinuti u vremenskom periodu od 2000 do 2010. Zabilježen je zubni status pacijenata i vrsta izrađenog protetskog rada preuzeti iz evidencije pacijenata arhivirane na Zavodu za protetiku Stomatološkog fakulteta. Analiza podataka pokazala je kako su kombinirani radovi (fiksni+mobilni) bili najčešće primjenjivani ($p<0,05$). Od fiksnih protetskih radova na kutnjacima su najčešće primjenjivane modificirane krunice, na pretkutnjacima teleskopske krunice, na očnjacima metal keramičke i teleskopske krunice te na sjekutićima metal keramički međučlanovi ($p<0,05$). Prikazana raspodjela protetskih radova kod pacijenata s rascjepima nepca mogla bi poslužiti kao vodilja općim stomatolozima u planiranju i provođenju odgovarajuće protetske terapije jer će samo dobro planirana protetska terapija rezultirati zadovoljavajućom funkcijom i estetskim ublažavanjem deformacije.