Original Research Article

Assessment of knowledge and attitude towards prosthetic rehabilitation of maxillectomy patients among interns and post-graduate students of dental colleges in Belagavi and Dharwad city – A cross sectional study

ABSTRACT

AIM- To assess and compare the knowledge and attitude towards prosthetic rehabilitation in patient with maxillectomy defect among interns and post-graduate of dental colleges in Belagavi and Dharwad city.

MATERIAL AND METHODS: The survey was conducted using the online questionnaire form with 20 questions among interns and post-graduate students. This questionnaire study was divided into three parts: demographic details, knowledge and attitude. The questions were further separated into two parts. The questionnaire was circulated. The initial 11 questions were to analyze the knowledge and 9 questions were to analyze the attitude towards prosthetic rehabilitation in the maxillectomy patient. The sample size of the study consisted of a total 496 postgraduates and interns.

RESULTS: On statistical analysis there was a statistically significant result seen among the interns and post-graduates towards prosthetic rehabilitation in patients with maxillectomy. The results were highly significant when comparison of knowledge was observed amongst the post-graduates.

CONCLUSION: Study concluded that there is a need to increase the knowledge and attitude among interns and post-graduates towards prosthetic rehabilitation in patients with maxillectomy. A proper emphasis on improving the knowledge regarding the subject is of highest importance amongst the interns.

KEYWORDS: maxillectomy, rehabilitation, intervention.

INTRODUCTION:

The concept of maxillectomy was first described by Lazars in 1826. Maxillectomy is defined as surgical excision of complete or a portion of the maxilla (upper jaw). The resection of malignant tumours from the palate and maxillary sinus can result in acquired palatal defects.

The magnitude of the defect depends on the several factors like location, size and behaviour of the tumour. The rehabilitation of the defect after resection may be either by a primary surgical closure or with a prosthetic obturator. The decision to choose one among these two treatment options is multi-factorial and requires a multi-disciplinary team approach.[1]

The different treatment modalities for prosthetic rehabilitation in these patients are Obturator, cast partial dentures and Implant supported.[2]

Maxillary obturator prosthesis minimizes leakage of oral fluid to the nasal cavity, helps improve deglutition by preventing food bolus from impacting the surgical site, improves mastication and esthetics by replacing the teeth removed during surgery, and enhances speech by permitting separation between oral and nasal cavities and minimizing hypernasality.[2]

The stages of treatment for patients undergoing maxillectomy may be described as surgical, interim and definitive. The surgical obturator is fabricated during the surgical phase, it lasts from the period of surgery until the prosthesis and surgical packing are removed after 5-10 days. The interim phase, during which an interim obturator is worn, typically lasts around 3 months until the patient is healed from surgery. The final obturator is prepared in the definitive phase. This phase continues throughout the life of the patient with the prosthesis being relined or refabricated as required.[3]

Following the literature search, the topic pertaining to awareness towards prosthetic rehabilitation in maxillectomy patient among interns and post graduate was sparse. The purpose of the study is to improve knowledge and attitude towards prosthetic rehabilitation in patient with maxillectomy defect. [4]

MATERIALS AND METHOD:

A cross-sectional, descriptive questionnaire study was undertaken in the Department of Prosthodontics. Ethical approval was acquired through the Institutional Review Board and permission to conduct the study was taken from the respective institutions from where

participants were selected. participants consisted of interns and post graduate students from Dental colleges. Participant Sample size of 496 was calculated by using standard sample size formula.

The formed questions for the survey were validated by the department of public health. This survey was conducted through a digital platform known as google forms. The prepared online form was circulated through a link among the different social media network. Informed consent was taken from each participant prior to participation.

The questionnaire was separated into three parts: demographic details, knowledge and attitude. In addition, the questions were divided into two sections. The first section consisting of 11 questions were to analyze the knowledge and next section of 9 questions were to evaluate the attitude towards prosthetic rehabilitation in the maxillectomy patient.

The inclusion criteria for the study were interns and Post-graduates of Dental Institutes in Belagavi and Dharwad City. The exclusion criteria for our study were the ones who did not give their consent to participate.

The response to the questions were measured on Likert scale. The data collected was compiled and analyzed using Independent- samples ‘t’ test and Mann-Whitney U test. A p-value of less than 0.05 was found to be statistically significant.

RESULTS:

A total of 496 people participated in this questionnaire study in which 21.1% were males and 78.8% were females. This study included 37.3% of interns and 62.6% of post-graduate students among the dental colleges in Belagavi and Dharwad city.

The association between different demographic profiles of students with degree of knowledge and attitude towards prosthetic rehabilitation amongst maxillectomy patients was analyzed using independent ‘t’ test and Mann-whitney U test.

When the Knowledge was assessed regarding most common cause for maxillectomy, need for prosthetic intervention after maxillectomy, treatment planning and importance of surgical and interim obturator, the results were found to be statistically significant.

When the comparison for knowledge was done among the interns and post-graduates, Dental post graduates had higher knowledge compared to interns (p value = 0.0001*). Dental post-graduates had high attitude towards prosthetic rehabilitation amongst maxillectomy patients compared to interns (p value = 0.0001*).

DISCUSSION:

In the past few decades, the survival rate of patients with maxillofacial cancer has improved.[7] Maxillectomy and midfacial defects result in functional and aesthetic anomalies. Prosthetic treatment is a non- surgical option for functional-aesthetic facial reconstruction. Such abnormalities lead to functional disabilities and an immense psychological burden, requiring rehabilitation for all ages. Maxillo-facial prostheses are of importance in rehabilitation, aesthetics and in re-socialization of patients. [4]

Thais Bianca Brandão et al proposed that global quality of life for patients with obturator prostheses is equivalent to or even better than that of other chronic disease populations.[8]

The present study illustrates a proper emphasis on the need to improve the knowledge and attitude towards the subject which is of uttermost importance amongst the interns and post-graduates. According to independent t test the post-graduates students showed higher knowledge towards rehabilitation of maxillary defects (p value = 0.0001*). According to Mann whitney u test the post- graduates perceived an optimistic attitude towards rehabilitation maxillectomy patients (p value = 0.0001*).

Obturators may be used either for provisional or permanent rehabilitation. The staged rehabilitation in maxillectomy defects ascend from the surgical obturator during the time of

surgery, to an interim during the healing phase and finally to the definitive or treatment obturator [10]

The comprehensive 3-dimensional anatomy of this multifunctional area poses the technical challenge of restoring the preoperative state. The interaction between the nasal and oral cavities is caused by ablative surgery, resulting in maxillary defects. These defects impair oral functions, including speech, swallowing, mastication, and facial aesthetics, all of which thus influence social activity and quality of life. [8]

The objectives for maxillary defect reconstruction should be: [9]

1. support for orbital content
2. Preserving a proprietary nasal airway and oronasal separation
3. Reviving an appropriate and symmetrical facial contour
4. Reviving functionality and aesthetics.

The most vital determinants of maxillo-facial prothesis are retention. The remaining teeth and periodontal health play a crucial role in stability and retention of maxillofacial prosthesis. [7]

When a suggestive open-ended question was asked regarding improving the knowledge, majority of the participant's believed that intellectual options like workshops, online courses, discussions, lectures and assisting cases would bring a tremendous change in their awareness towards the subject. This study annotates the importance of improving the awareness especially amongst interns.

CONCLUSION:

Hence, this study concludes that:

1. A correlation exists between the quality of education and the attitude of proficiency in surveyed population.
2. The post-graduates have a higher awareness regarding the subject, due to vast academics and exposure.
3. Majority of the interns were lacking awareness towards the subject.
4. There is a need for education regarding the prosthetic rehabilitation in maxillary defect amongst interns.

LIMITATIONS OF THE STUDY:

The disparity in the knowledge and attitude could also be because samples were not drawn uniformly from each profession.

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Table 1: Comparison of interns and PG s with mean knowledge and attitude scores by independent t test

Variable	Quantifications	n	Mean	SD	SE	t-value	P-value
Knowledge	Interns	184	6.98	2.01	0.21	-4.9518	0.0001*
	PGs	308	8.08	1.46	0.12		

Attitude	Interns	184	34.74	4.00	0.42		
	PGs	308	36.74	2.78	0.22	-4.6210	0.0001*

*p<0.05

Figure 1: Comparison of interns and PG s with mean knowledge and attitude scores