

**KNOWLEDGE, ATTITUDE & PRACTICE REGARDING ORAL BIOPSY AMONG
DENTAL SURGEONS IN NORTH CHENNAI, TAMIL NADU, INDIA**

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ABSTRACT

Objectives: To explore the attitude of the dental surgeons in North Chennai towards oral biopsy as a diagnostic method in relation to oral lesions.

Materials and Methods The first item block included questionnaire regarding age, sex, professional qualification (s), clinical experience of the dentist, and the type of work set-up. The second set of questionnaire explored the attitude towards diagnosis of oral lesions, the performance of oral biopsies, and their submission for histopathological examination. The questionnaire was distributed via google forms. Totally 251 responses were included for analysis that had four or more questions answered by the participants of the study

Results Dental surgeons with more of clinical experience performed biopsies and it was found that not all dental surgeons submit the excised oral lesions for histopathological examination. Results also varied with the field of specialization and work setup.

Conclusion Biopsy procedures and diagnostic histopathology are not always used by the dental surgeons of North Chennai because they find it convenient to refer the patient to the specialist or higher institution. Lack of practical skills is one of the major reasons and most of them expressed their willingness to update the knowledge regarding the same. Indian Dental Association or Tamil Dental Council can arrange for continuing dental education program pertaining to oral biopsy for the dental practitioners.

Key Words Biopsy, Specimen, Histopathology, Malignancies

INTRODUCTION

The term 'Biopsy' is the removal of tissue from living organisms for the purpose of microscopic examination and diagnosis [1]. Though the diagnosis of many oral lesions are done clinically, histopathological examination is the confirmatory diagnosis. Biopsy is regarded as the gold standard among the existing diagnostic procedures [2]. Biopsy is advised for oral lesions, if it is persisting for more than 2 weeks even after the removal of the environmental factor [1]. The type of biopsy required is based on the site, clinical nature of the lesion, and proximity to adjacent vital structures. Biopsy is not limited to the diagnosis of malignancies, but it is also of great importance for determining the all types of lesions [3]. Oral biopsy is indicated for leukoplakia, erythroplakia, pigmented lesions, nonhealing ulcers, vesiculobullous lesions, soft tissue masses, and periapical lesions. The dental

practitioners should recognize oral lesions and inform the patient so as to provide early diagnosis and treatment. They must also be able to convince the patient even if the patient is reluctant for biopsy for some reasons by informing the benefits of an early diagnosis. They must also be able to perform simple oral biopsies for the diagnosis of oral lesions [3]. It was found that majority of the dentist around the world do not perform oral biopsy in clinical practice [3-6]. Hence, this study was done to explore the knowledge, attitude and practice towards oral biopsy as a diagnostic method among the qualified dental surgeons in the North Chennai, Tamil Nadu.

MATERIALS AND METHODS

This study was designed to include the willing dental practitioners within North Chennai, comprising of private practitioners and dental surgeons working

in public and private institutions. The first item block included questionnaire regarding age, sex, professional qualification (s), clinical experience of the dentist, and the type of work set-up. The second set of questionnaire explored the attitude towards diagnosis of oral lesions, the performance of oral biopsies, and their submission for histopathological examination. The questionnaire was distributed via google forms. Totally 251 responses were included for analysis that had four or more questions answered by the participants of the study. The data were tabulated and analyzed for any correlation between the dental practitioners profiles (first item block) with their answers for the questions concerning the biopsy in their clinical practice.

RESULTS

The percentage response to each question is represented in **Table 1, Graph 1, Graph 2, Graph 3, Graph 4, Graph 5, Graph 6, Graph 7** respectively. The average clinical experience of the dental practitioners those who perform biopsy in their clinical practice were found to be more than those who do not do perform it in their clinical practice. As the reasons for not performing biopsy, 50% of the dental surgeons reported that they would call a specialist to perform the biopsy procedure and nearly 42.8% of the dental surgeons reported that

they refer the patient to higher center/institution. In response to the last question, it was found that almost all of the dental surgeons who participated are interested in attending seminar/workshop pertaining to oral biopsy.

DISCUSSION

In the survey conducted we noted that only 42% [**Graph 4**] of the dental surgeons performed biopsy in clinical practice. There are a lot of factors that may make biopsy problematic for the clinician and be the reason for not undertaking it in their general dental practice. Few of which include unfamiliarity with biopsy technique, fear of medicolegal implications, the contention that biopsy is a specialist procedure and the lack of faith in personal diagnostic skills [4]. Of the 58% in North Chennai who did not perform biopsy in their clinical practice, nearly 50% of the dental surgeons found it convenient to call a specialist like Oral Surgeons, and nearly 42.8% referred them to higher centre/institution [**Graph 5**]. 35% of the dental surgeons stated that they lack experience in performing the biopsy in Spain [3]. Though most dental practitioners of Australia recognized the importance of biopsy, nearly 58.1% did not feel competent in performing the procedure due inadequate experience and practical skills [6].

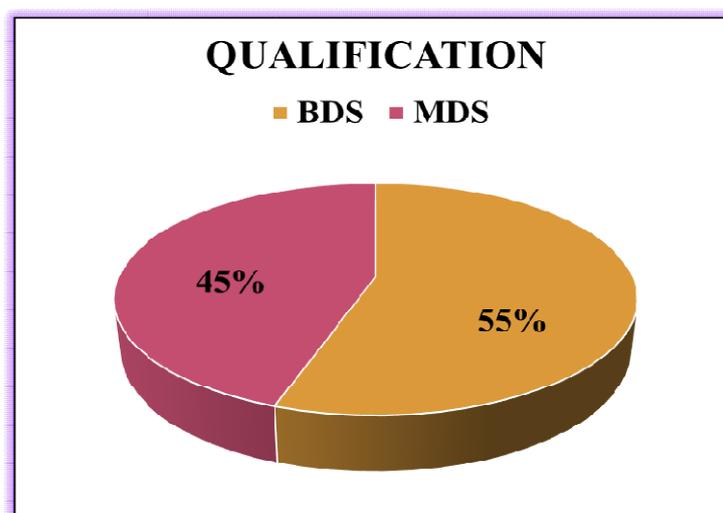
The treatment decisions and their outcomes must be done based on a definitive pathologic diagnosis that is obtained either by preoperative biopsy or post operative submission of surgical specimens [7]. However in our survey, it was found only 69% of dental practitioners submitted the excised oral specimens for histopathological examination. On contrary, nearly 79% of dental surgeons in Spain were found to do it [3]. This can explained there is less prevalence of lawsuit against dental professionals in India when compared to the other western countries. American Academy of Oral and Maxillofacial Pathology also reported that, any abnormal tissue that is removed from the oral and maxillofacial region for diagnosis should be submitted to an oral and maxillofacial pathologist [2]. The histopathological examination of the 967 biopsy specimen done revealed that, almost 43% of clinical diagnosis made by dental practitioners were incorrect [8]. Hence however confident the clinician may be with the diagnosis, it is mandatory that any

abnormal tissue that is removed from the oral cavity should be sent for histopathological examination [1].

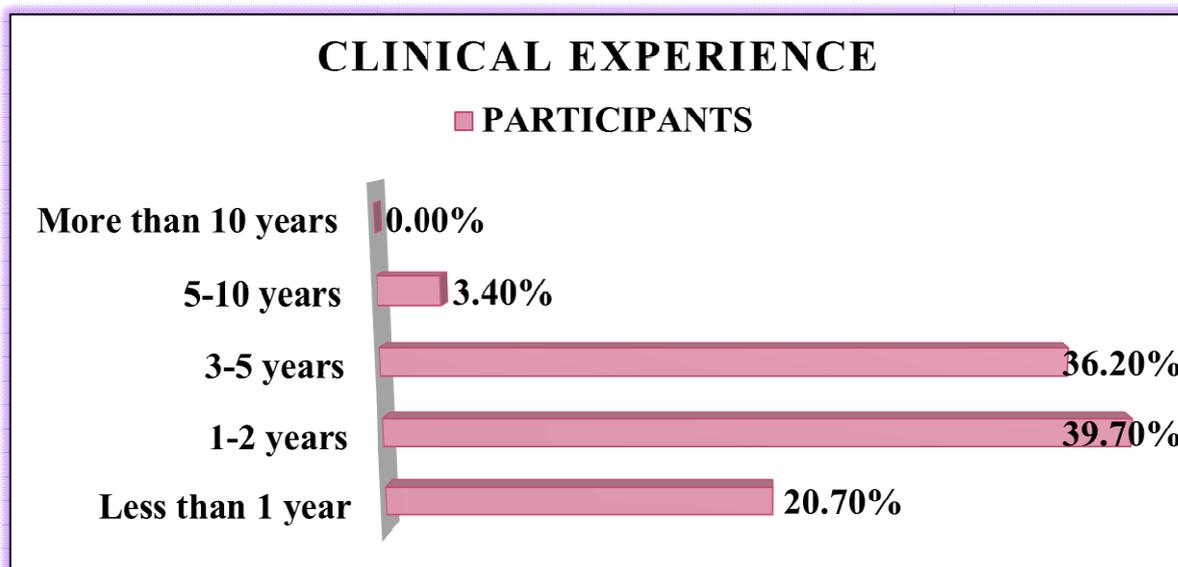
It is suggested that the regular use of biopsy in dental practice might reduce the number of successful lawsuits brought for delay/failure to diagnose the lesions [2]. The patient should be referred to a Specialist such as an Oral Pathologist or Oral Surgeon to diagnose and manage the oral lesions [9]. As most of the dental surgeons who participated in the survey are interested in attending seminar/workshop pertaining to oral biopsy, it indirectly implies that they not confident about performing the biopsy. Since our study was done on a convenient, small sample of 251 willing dentists of North Chennai, we have to be very careful in drawing conclusions from the findings obtained, and preclude extrapolation of the results to the overall Indian population of dental professionals. Hence the interpretation is applicable only to those dental surgeons who answered the questionnaire.

Table 1: Responses to the questions regarding gender, work setting, number of patients seen, oral lesion related, biopsy related and awareness of patients

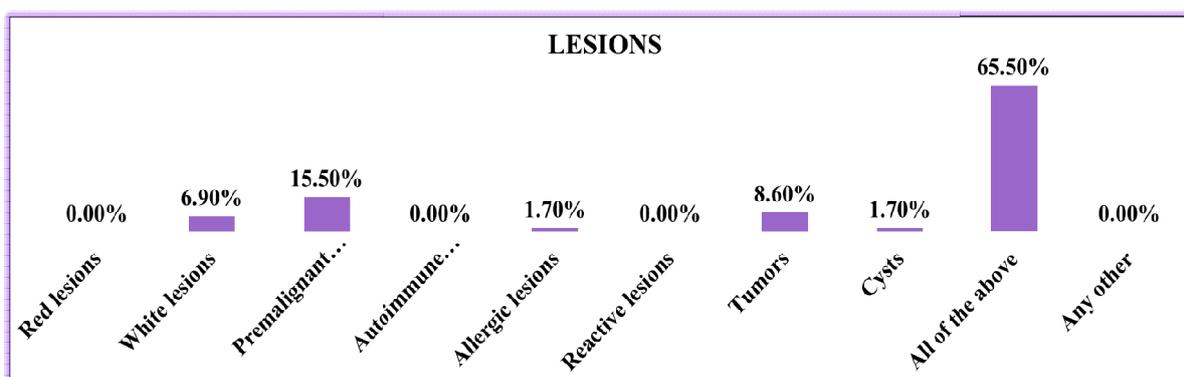
Questions	Response	
Gender	Male	43.10%
	Female	56.90%
Work setting	Private	25.90%
	Institution	63.80%
	Both	10.30%
Average number of patients with oral lesions	1-5	65.50%
	6-10	17.20%
	11-15	13.80%
	Do not examine	3.40%
Examination of oral lesions	Visual alone	25.90%
	Adjunctive aids	39.70%
	Refer to Specialist	34.50%
Lesions that require biopsy	Once in a month	34.50%
	Once in a year	39.70%
	Once in week	19%
Recommend biopsy because	Information desired by the patient	3.40%
	To improve your own academic knowledge	10.30%
	To form a legal record	3.40%
	Better understanding of the treatment options to	82.80%
Type of biopsy recommended	Incisional	10.30%
	Excisional	10.30%
	Punch	3.40%
	FNAC	5.20%
	All of the above	70.70%
Decision for the type of biopsy procedure	Size and shape	6.90%
	Nature of the lesion	24.10%
	Physician requirement	3.40%
	All of the above	65.50%
Preserve biopsied tissue	Formalin	75.90%
	Saline	19%
	Alcohol	3.40%
	Others	1.70%
Patients ask for a biopsy	Yes	45%
	No	55%
Patients ask for reports	Always	95%
	Never	5%
Knowledge update	Yes	91.40%
	No	8.60%



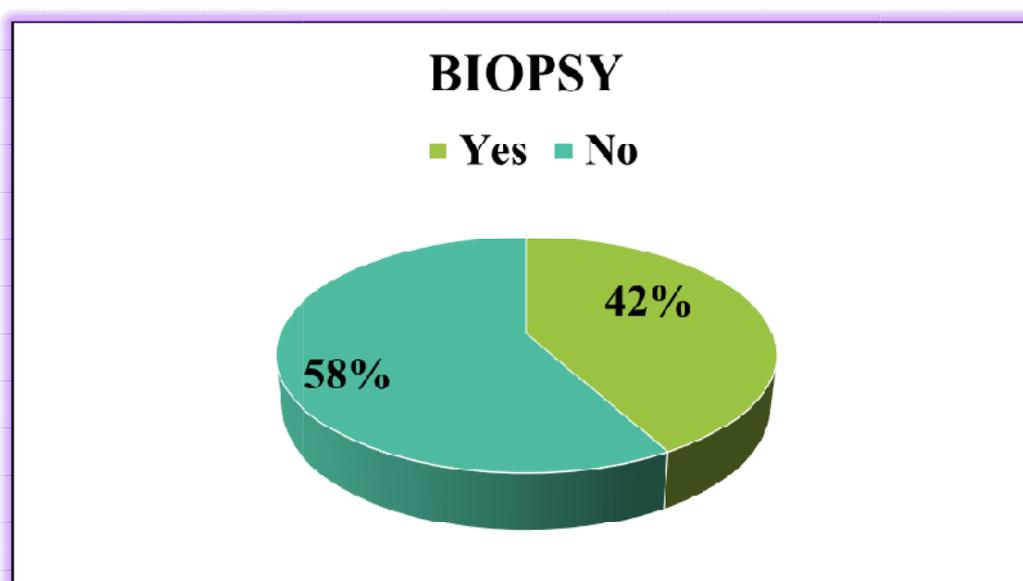
Graph 1: Qualification Of Participants



Graph 2: Clinical Experience



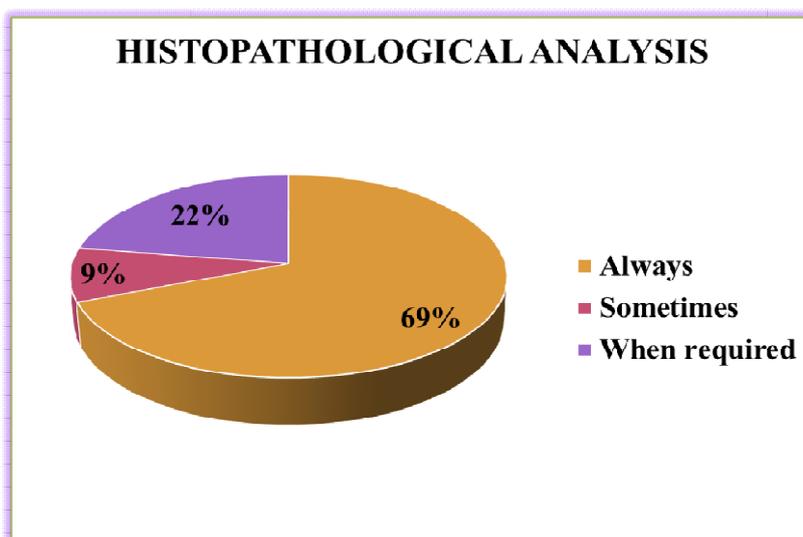
Graph 3: Lesions Which Require Biopsy



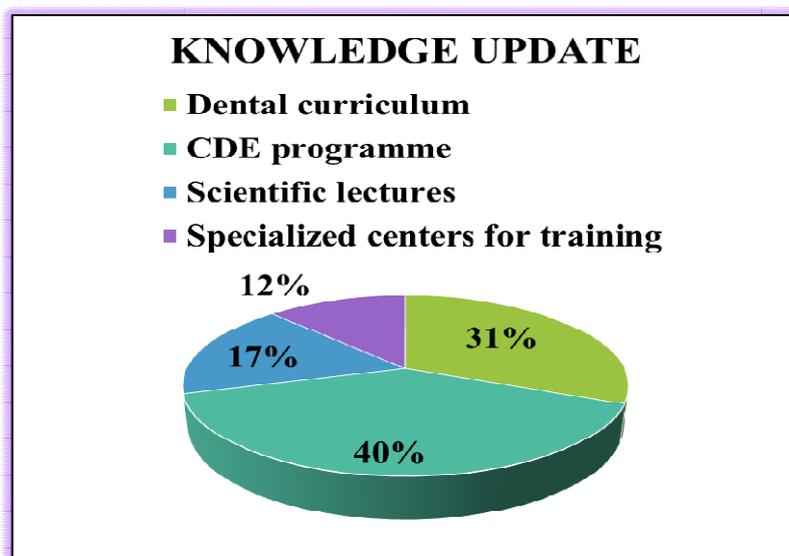
Graph 4: Do You Perform Biopsy



Graph 5: Reasons For Not Performing Biopsy



Graph 6: Specimen Sent For histopathological Examination



Graph 7: Type Of Knowledge Update Needed

CONCLUSION

Qualified dental practitioners are not confident about examining, diagnosing and treating oral mucosal lesions. Dental practitioners are not well-informed about the importance and need for biopsy procedures in diagnosis of oral lesions. This reflects lack of knowledge, training or interest in the Oral Pathology by such practitioners. Biopsy procedures and diagnostic histopathology are not always used by the dental surgeons of North Chennai because they find it convenient to refer the patient to the specialist or higher institution. Lack of practical skills is one of the major reasons and most of them expressed their willingness to update the knowledge regarding the same. Indian Dental Association or Tamil Dental Council can arrange for continuing dental education program pertaining to oral biopsy for the dental practitioners. Since small section of the population is aware about the need to have oral mucosal lesions examined, diagnosed and treated by a dentist, general dental practitioners should be more involved in updating themselves about the biopsy procedures.

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