

Knowledge, Attitude and Practices of General Dental Practitioners towards Oral Biopsy in Ghaziabad, Uttar Pradesh

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A B S T R A C T

Introduction: A general dental practitioner(GDP) should be able to detect and identify various oral lesions, hence provide accurate diagnosis and treatment plan to the patient for better prognosis. Some oral lesions which give similar clinical appearance must be confirmed by adjunctive procedures such as biopsy. The GDP should be knowledgeable about various techniques used for oral biopsy and should have ability to understand and formulate treatment plan based on biopsy report. **Objective:** The objective of the present study was to carry out a questionnaire based survey of qualified GDP in Ghaziabad, Uttar Pradesh to assess their awareness and attitude regarding biopsy procedures for oral lesions and also various techniques, method of preservation for biopsy specimen. **Material and methods:** This cross sectional questionnaire based study was done on randomly selected 100 GDPs in Ghaziabad region, consisting of 19 questions formulated to collect information on various aspects of oral biopsy. **Results:** The data thus collected was tabulated. The response rate was about 55%. Most of GDPs generally encounter various oral mucosal lesions in spite of which only 60% of them refer such patients for biopsy. There were conflicting results on preservation of biopsy tissue and type of biopsy used in different oral lesions. **Conclusion:** Most of GDPs feel that there is lack of knowledge and awareness about biopsy procedure. GDPs emphasized on need for special training programmes in undergraduate dental curriculum to enhance their practical skills for performing biopsy in daily dental practice for diagnosis.

Key words: Oral Biopsy, General Dental Practitioners, Survey, Attitude, Diagnosis.

INTRODUCTION

The word biopsy originated from combination of two Greek terms: bios meaning life and opsis meaning vision, hence biopsy refers to vision of life.¹ Biopsy is procedure which consists of the obtainment of tissue from a living organism with a purpose of examining it under the microscope in order to establish a diagnosis based on the sample.²

The biopsy helps the GDP to establish histopathological characteristics of the lesions and helps in arriving at proper diagnosis of oral lesions. Oral biopsy not only helps in diagnosis but also helps to determine nature of lesion such as benign and malignant.³ Oral biopsies are indicated in white lesions(leukoplakia, lichen planus, leukodema), red lesions (erythroplakia, atrophic lichen planus), vesiculobullous lesions (pemphigus, pemphigoid), soft tissue lesions (fibroma, mucocele), lesions on gingiva (pyogenic granuloma, gingival enlargement), periapical lesions (periapical granuloma, periapical cyst), pigmented

lesions, bone lesions, salivary gland pathologies and ulcerative lesions (known to be present for more than two weeks).⁴

Oral biopsy is generally contraindicated in seriously ill patients, in patients with secondary complications and in patients with systemic disorders which do not allow invasive procedures.⁵

Depending upon technique employed to obtain tissue, biopsy is classified into incisional and excisional biopsy. Depending upon size, shape and surface structure of lesion, dentist generally decides about which technique to follow for obtaining oral tissue. Generally if lesion is extensive and cannot be removed in toto, incisional biopsy should be performed in which different samples should be obtained from different aspects of lesion. If lesion is small, excisional biopsy is performed, whereby total removal of lesion is done with slight peripheral safety margin, thus providing diagnostic and therapeutic role.²

In medical field, obtainment of biopsies is widely used for

diagnosis, whereas the practice is not so regularly done by GDPs in their daily dental practice.⁶ Hence, GDPs must be able to perform simple oral biopsies and should be aware about preservation of tissue thereof and also manage the patient according to histopathological report. A through review of available English literature shows anecdotal studies evaluating the knowledge, attitude and practices of GDPs in India. Thus the present study was conducted to evaluate the attitude of GDP in Ghaziabad, Uttar Pradesh towards oral biopsy as diagnostic method for oral lesions in their general dental practice.

MATERIAL AND METHODS

This cross sectional questionnaire based study included 100 randomly selected GDPs with academic qualification of Bachelor of Dental Surgery working in Ghaziabad, Uttar Pradesh. The study excluded all professionals exclusively dedicated to some dental speciality (pediatric dentists, oral and maxillofacial surgeons, periodontists, endodontists, specialists in oral medicine or oral pathology and orthodontists). Thus the questionnaire was targeted to general dentists practicing in Ghaziabad region.

The questionnaire consisted of 19 questions both open ended and closed ended questions. It was designed to collect information about professional aspects (years of professional activity) as well as attitude of GDP towards importance of oral biopsy, methods used for obtaining biopsy, preservation of biopsy tissue, diagnosis of mucosal lesions, referral to specialised centre and awareness about diagnostic pathology. The study also evaluated attitude of GDP towards examining oral mucosal lesions and use of various diagnostic modalities including biopsy for diagnosis.

The questionnaire was previously evaluated by means of a cognitive pre-test procedure to ensure that the questions were appropriate, understandable among the dental practitioners. The pilot survey was targeted to five dental professionals selected due to their accessibility and proximity to the investigational team. The changes in the questionnaire were then made accordingly and the pilot study samples were deleted from the final study sample. Following which, the purpose of the study was explained to the GDPs and consent was obtained and the questionnaire was given. The data obtained was tabulated and analysed.

RESULTS

Out of the 100 GDP who were approached with questionnaire, only 55 GDPs answered the questionnaire while 45 GDP choose not to take the survey citing various reasons. Demographically, dental practitioners who answered the questionnaire (n=55) included only 60% of GDP with less than 5yr of experience in practice and only 21.81% of GDPs were in practice over 10yrs. Of these 64.8% of GDP had 50 patients per month in their general

clinical practice (Table 1).

At least 50.9% (28) of practitioners surveyed report that they saw over 5cases/month of oral mucosal lesions such as leukoplakia, lichen planus etc in patients who had reported to them with some other chief complaints. On other hand, 63% of GDPs said that 5pateints/month report to them with chief complaint relating to mucosal lesions.

Nearly half of GDPs (49.08%) surveyed declared that they do not want to examine patients with mucosal lesions as a matter of routine in their dental practice. Out of them 27, 12 (44.44%) of the GDP did not even refer such patients at all to specialist such as oral pathologist or to even higher speciality centre (Graph 1). Out of 28 GDPs who did report that they examine and/or treat oral lesions, 23 (82.14%) use visual examination alone to arrive at a provisional diagnosis without any adjunctive aids used for arriving at the final diagnosis (Graph 2).

When an oral mucosal abnormality is suspected only 60% (33) of practitioners surveyed routinely advised such patients for biopsy whereas 5.45% (3) dentists said that they do not advise biopsy for their patients (Table 2).

When asked whether they perform biopsies them self or refer to a specialist, only 17.2% (10) dentists reported that they perform biopsies them self whereas 82.8% (45) GDP did not perform biopsy because of multiple reasons such as lack of awareness about the technique (46.87%), complications of biopsy (22.2%), patient unwilling (11.1%) and fear of losing the patient (20%) (Graph 3).

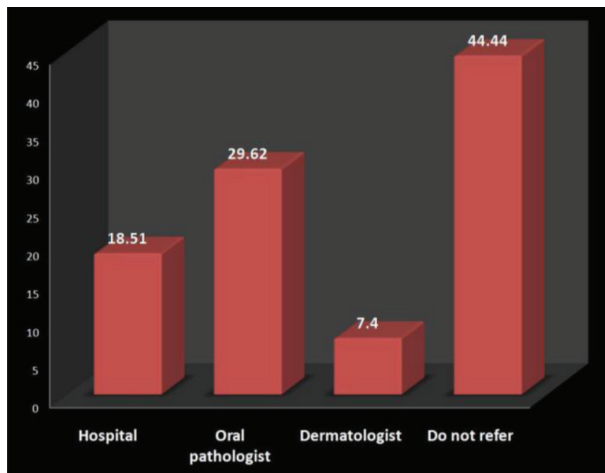
When asked what type of biopsy would they recommend to patients, 63.63% (33) GDPs recommended incisional or punch biopsy while 12.72% (7) GDPs recommended an excisional biopsy. Also 27.27% (15) GDPs did not even consider it necessary to obtain a written or verbal consent before carrying out a biopsy procedure. Table 3 shows future requirements of GDPs for learning biopsy

Question	Options	%
Average number of patients examine in a month	Less than 20 patients	5.4
	20-50 patients	64.8
	51-100 patients	28.4
	More than 100	1.4
Average number of patients examined with oral lesions in a month	1-5	50.9
	6-10	-
	11-15	-
	Do not examine	49.9
Method of examination of oral lesions	Visual alone	82.14
	Adjunctive aids	-
	Refer to specialist	17.86
Refer patients with oral lesions to	Hospital	18.51
	Oral pathologist	29.62
	Dermatologist	7.40
	Do not refer	44.44

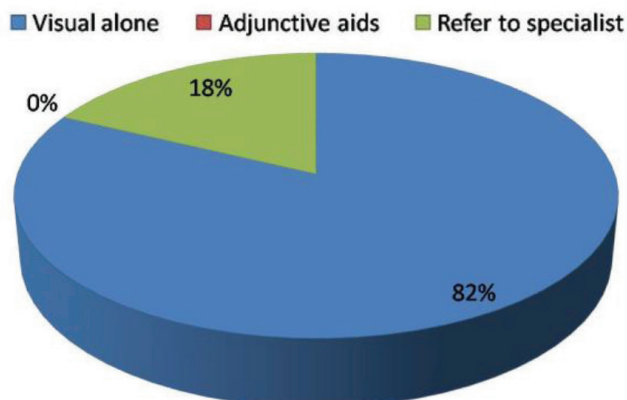
Table-1: General information regarding GDPs

techniques.

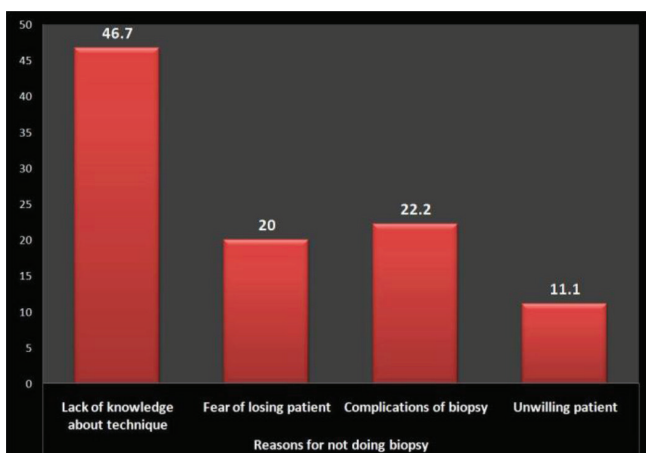
Even though at least 5.45% (3) dentist reported that they themselves never recommend biopsy, at least 29.09% (16) GDPs surveyed had multiple patients who themselves have come and requested that a biopsy be done on them for a suspicious lesion (Table 4).



Graph-1: Knowledge of GDPs regarding referral of patient for biopsy



Graph-2: Knowledge of GDPs regarding use of aids for diagnosis of Oral lesions



Graph-3: Knowledge of GDPs regarding not doing biopsy in their clinics

Question	Options	%
How often recommend biopsy	Always	60
	Sometimes	34.55
	Never	5.45
Do biopsy yourself	Yes	17.2
	No	82.8
Type of biopsy recommend	Incisional	63.63
	Excisional	23.75
	Punch	12.72
Preservation of biopsied tissue	Formalin	60
	Saline	14.54
	Alcohol	16.36
	Other.	9.09
Reasons for not doing biopsy	Lack of knowledge about technique	46.7
	Fear of losing patient	20
	Complications of biopsy	22.2
	Unwilling patient	11.1
How would you decide for a biopsy procedure	Size and shape	12
	Nature of lesion	7
	Physician requirement	5
	All of above	76
Why would you recommend / carry out a biopsy procedure	Information desired by the patient	5
	To improve your own academic knowledge	6
	To form a legal record	4.5
	Better understanding of the treatment options to use.	84.5

Table-2: Shows awareness on biopsy among GDPs

Question	Options	%
Measures required to increase knowledge of such lesions	Dental curriculum	52
	CDE programmes	14
	Scientific Lectures	11
	Specialised centres for training	23

Table-3: Shows future requirements of GDPs focusing on biopsy

Question	Options	%
Have patients ever asked by themselves for a biopsy	1-5	52
	6-10	2
	11-15	-
	None	46
Do patients ask for reports	Always	84
	Never	8
	Sometimes	8

Table-4: Shows patients awareness on oral biopsy

About 39.9% were not even aware about proper methods of preservation, storage and transportation of biopsied tissue. Also 14.54% (8) GDPs declared that they did not treat patients with mucosal lesions, even if diagnosis had confirmed earlier histopathologically. About 20% (11) GDPs reported that patients had complications after biopsy procedure.

DISCUSSION

Performing a biopsy procedure in oral cavity is well within the aptitude of training and ability of GDP. GDP who choose to perform biopsies in their clinics must be aware of various types of biopsy and their criteria for selection of patient. Several myths regarding biopsy may discourage GDPs from advocating the procedure in some patients and may reduce the possibility of patient acceptance.⁷

A review of the Indian literature has revealed anecdotal studies exploring knowledge, attitude and practice among GDPs towards oral biopsy as a diagnostic tool in daily clinical practice. Thus, the study reports the overall knowledge, attitudes, and the practice regarding biopsy procedures for oral lesions and also various techniques, method of preservation for biopsy specimen among the GDP of Ghaziabad region. The survey provides a comprehensive report of the current status of the knowledge and practice among GDP in NCR.

In the present study, survey was done by personally approaching the GDPs with the questionnaire rather than study methodology of emailed or mailed questionnaire as study methodology involving mailed questionnaire shows highly variable response rate such as Payne et al⁸ reported response rate of 71%, whereas Cowan et al⁹ (67%), Warnakulasuriya et al¹⁰ (16%). In the present study, response rate obtained was 55% which is lower to reported by Murgod et al¹¹ (90.54%).

Most of the GDPs surveyed were in dental practice since last 5yrs. Of the all the GDPs, 50.9% reported that they examine over 5cases per month of oral mucosal lesions. Although all the GDPs are aware that oral biopsy is essential tool for arriving at definitive diagnosis of oral mucosal lesions. In contrast it was startling to know that 82.14% of them use only visual examination alone for diagnosis without the use of other adjunctive aids or oral biopsy.

study found that GDPs (48.09%) generally do not examine mucosal lesions on routine basis ignoring the fact that early detection has better prognosis for patient. Furthermore, the incipient lesions are easily detected in the oral cavity because of accessibility of oral cavity for examination and detection. Both the patient and the professional are associated with causes underlying a delay in definitive diagnosis.¹² In many cases patients are unaware of presence of early asymptomatic lesion or resort to self medication. On the other hand, GDPs usually do not examine mucosal surfaces on routine basis or do not

perform biopsy technique properly as also observed in the study.

In view of the findings of the study, improving the level of the knowledge and the usage of biopsy by GDPs is a very important public health and preventive method, along with patient counselling. However, further studies on a larger scale are necessary to assess and implement any measures in regard to oral biopsy among GDPs.

The study also highlights the need for further improvement in the training programme at undergraduate level as biopsy is considered gold standard for diagnosis of many oral lesions hence usually needed in daily practice. An increased awareness on the role of the oral pathologists as consultants in the clinical practice, needs to be emphasised.

CONCLUSION

Qualified (BDS) dental practitioners are not universally confident about examining, diagnosing and treating oral mucosal lesions, even though they are in the best position to do so. Dental practitioners are not well-informed about the diagnostic importance and need for biopsy procedures. This may reflect a lack of knowledge, training or interest in the subject of Oral Pathology by such practitioners.

There may be a fear factor working in the minds of dentists about losing the patient who has presented with a chief complaint unrelated to his mucosal lesion, in case a biopsy procedure is advised or performed, or even if the patient is referred to a specialist for managing such a lesion.

At least a small section of the population is aware of the need to have oral mucosal lesions examined / diagnosed / treated by a dentist. Therefore general dental practitioners should be more proactive in updating themselves about such lesions as well as biopsy procedures.

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