Original Study Article

Attitude towards oral biopsy among the dental surgeons of Puducherry

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ABSTRACT

Objective: To explore the attitude of the dental surgeons towards oral biopsy as a diagnostic method in relation to oral lesions. **Materials and methods:** A questionnaire was used to collect the data personally from 105 dental surgeons in Puducherry, comprising of private practitioners and dental surgeons working in public and private institutions. The questionnaire included age, sex, professional qualification (s), clinical experience, and the type of work set-up as the first item block. The second block explored the attitude towards diagnosis of oral lesions, the performance of oral biopsies, and their submission for histopathological examination. **Results:** More experienced dental surgeons performed biopsies than the lesser ones and it was found that many dental surgeons do not submit excised oral lesions for histopathological examination. Result also differed with the field of specialization and work setup. **Conclusion:** Biopsy procedures and diagnostic histopathology are not always used by the dental surgeons of Puducherry. So there is a need for better education and exposure regarding oral biopsy to equip the future dental professionals with diagnostic skills.

Key words: Oral biopsy, oral diagnosis, oral lesions

INTRODUCTION

Biopsy is defined as the removal of tissue from the living organisms for the purpose of microscopic examination and diagnosis.[1] Although the dentist can make the diagnosis of many lesions clinically, it is usually confirmed by the histopathological examination. Among the diagnostic procedures, biopsy is considered to be the gold standard.[2] Biopsy is advised for all oral lesion in question, if persisting for more than 2 weeks even after the removal of the irritating factor if any.[1] Clinician have to decide the type of biopsy required based on the site, clinical nature of the lesion, and proximity to vital structures. An oral biopsy is not limited to the diagnosis of tumors, but it is also of great usefulness for determining the natures of all types of lesions.[3] The principal indications of oral biopsy include leukoplakia, erythroplakia, pigmented lesions, nonhealing ulcers, vesiculobullous lesions, soft tissue masses, and periapical lesions. The dental professionals should detect and recognize oral lesions and inform the patient accordingly so as to provide early diagnosis and treatment. Even if the patient is reluctant for biopsy for some reasons, it is worth convincing the patient by informing the benefits of an early diagnosis.

Clinically, dental surgeons must 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 practice biopsy in clinical practice.[3-6] Similar data was not found

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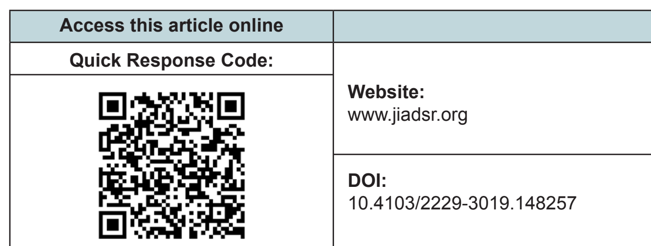	DOI: 10.4103/2229-3019.148257

reported about the Indian scenario. Hence, this study was carried out to explore the attitude towards oral biopsy as a diagnostic method among the qualified dental surgeons in the town of Puducherry.

MATERIALS AND METHODS

The present study was designed to include the willing dental professionals within Puducherry, comprising of private practitioners and dental surgeons working in public and private institutions. The questionnaire included age, sex, professional qualification (s), clinical experience of the dentist, and the type of work set-up as the first item block. The second item block explored the attitude towards diagnosis of oral lesions, the performance of oral biopsies, and their submission for histopathological examination. The questionnaire was distributed and retrieved personally to all the dental surgeons who participated in the study and anonymity in completing the questionnaire was sought in all cases. Since many of the questionnaires were found to be partially incomplete, totally 105 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 surgeon profiles (first item block) with their answers for the questions concerning the biopsy in their clinical practice.

RESULTS

The basic demographic details of the dental surgeons participated in this study is provided in Table 1. The overall mean age of the participants was 32.4 years, whereas, it was 33.4 and 31.1 years for the males and females, respectively. The mean clinical experience of the dental professionals participated in the study was found to be 7.42 years. Response opted by the dental surgeons for the first and second questions are presented in the Tables 2 and 3, respectively. The average clinical experience of the dental surgeons those who do biopsy in the clinical practice were found to be higher than those who do not do it. As the reasons for not performing biopsy, 65.5% of the dental surgeons reported that they refer the patient to other qualified professional/institution/department. Table 4 shows the response to the third question regarding the submission of excised oral lesion for histopathological evaluation. The fourth question was designed to evaluate the usage of cytology for diagnosis of oral lesions and the response is illustrated in Table 5. In response to the last question, it was found that 80% of the dental surgeons are interested in attending seminar/workshop pertaining to oral biopsy.

DISCUSSION

In our study it was found that only 41% of the dental surgeons performed biopsy in clinical practice. Findings of the similar studies regarding the biopsy in clinical practice are presented in the Table 6.[3-6] Many factors may make a

Table 1: Demographic details of dental surgeons (*n* = 105)

Gender (%)	Qualification (%)	Work setting (%)
Male 56.2	BDS 40	Private practice 24.8
Female 43.8	MDS 60	Institution 46.7
		Both 28.6

BDS – Bachelors of dental surgery, MDS – Masters of dental surgery

Table 2: Response to the question: "Do you perform biopsy personally in your clinical practice?"

Available options	Number	Percentage	Average clinical experience in years
Yes	43	41	9.47
No	62	59	5.83
All	105	100	7.42

Table 3: Response to the question eliciting the reasons for not performing biopsy

Reasons for not performing the biopsy	Number	Percentage
Refer	36	58.1
Lack of experience in performing biopsy	10	16.1
Both of the above	4	6.5
Lack of patient cooperation	5	8.1
Lack of confidence in interpreting histopathological report	0	0.0
Not answered	7	11.3
Total	62	100.0

Table 4: Response to the question: "Do you submit excised oral lesion for histopathological examination?"

Available options	Number	Percentage	Average clinical experience in years
Yes	70	66.7	8.42
No	27	25.7	6.61
Not answered	8	7.6	6.38
All	105	100.0	7.42

Table 5: Response to the question regarding the usage of cytology

Type of cytology used in diagnosis	Number	Percentage
Exfoliate cytology	24	22.9
Fine needle aspiration cytology	30	28.6
Both	9	8.6
Not answered	42	40.0
Total	105	100.0

Table 6: Findings of similar studies about biopsy in dental practice[3-6]

Author	Year	Place	Study group	% of dentist performing biopsy
Diamanti *et al.*[4]	2002	United Kingdom	335 dental surgeons	15
Jornet *et al.*[3]	2007	Spain	170 dental surgeons	47
Ergun *et al.*[5]	2009	Turkey	300 dental surgeons	7
Wan and Savage[6]	2010	Australia	200 dental surgeons	24

biopsy problematic for the clinician and be reason for not undertaking it in general dental practice. These include: Fear of medicolegal implications, unfamiliarity with biopsy technique, lack of faith in personal diagnostic skills, and the contention that biopsy is a specialist procedure.[4]

Biopsy procedures are not used often by the dental surgeons of Puducherry because majority (58%) of them found it convenient to refer the patient to the specialist like oral surgeons or to higher institution [Table 3]. Around 22% of the dental surgeons of our study agreed that they lack experience in performing the biopsy, whereas, 35% of the dental surgeons quoted the same reason in Spain.[3] Although most dental surgeons of Australia recognized the importance of biopsy, a large proportion (58.1%) did not feel competent in undertaking the procedure due to concerns of inadequate experience and practical skills.[6]

The American Association of Oral and Maxillofacial Surgeons stated that "Evidence-based medicine demonstrates that treatment decisions and their outcomes should be based on a definitive pathologic diagnosis obtained either by preoperative biopsy or posttreatment submission of surgical specimens."[7] But in our study, it was found only 67% of dental surgeons submit the excised oral lesions for histopathological examination. In Spain, 79% of dental surgeons were found to do it.[3] This may be explained by the assumption that there is less prevalence of lawsuit against dental professionals in India when compared to the western countries. The average clinical experiences of the dental surgeons those who submit for histopathological examination was found to be higher than those who do not do it [Table 4].

American Academy of Oral and Maxillofacial Pathology also states that, any abnormal tissue removed from the oral and maxillofacial region should be submitted preferably to an oral and maxillofacial pathologist.[2] Histopathological examination of the 967 biopsy specimen revealed that, 43% of clinical diagnosis made by dental surgeons were incorrect.[8] So, any abnormal tissue removed from the oral cavity should be sent for histopathological examination, however confident the clinician may be with the diagnosis.[1] It is suggested that the frequent use of biopsy in dental practice will likely reduce the number of successful lawsuits brought for delay or failure to diagnose.[2] Whenever there is doubt, the patient should be referred to a specialist with expertise in the diagnosis and management of oral lesions, such as an oral pathologist or oral surgeon.[9] Since 80% of the dental surgeons are interested in attending seminar/workshop pertaining to oral biopsy, it indirectly implies that majority of them are not confident about the biopsy.

Since our study was done on a convenient, small sample of 105 willing dentists of Puducherry, caution is necessary in drawing conclusions from the findings obtained, and precludes extrapolation of the results to all the Indian population of dental professionals. Interpretation is therefore applicable to those dental surgeons who answered the questionnaire.

CONCLUSION

Biopsy procedures and diagnostic histopathology are not always used by the dental surgeons of Puducherry because they find it convenient to refer the patient to the specialist or higher institution. Lack of practical skills is also a reason in some cases and most of them expressed their willingness to update the same. Regional Dental Institution or Indian Dental Association may arrange for continuing dental education program pertaining to oral biopsy for the dental surgeons. There is a need for better education and exposure regarding oral biopsy to equip the future dental professionals with good diagnostic skills.

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