Research article

The knowledge, perception and behavior among dental practitioners towards diagnosis of oral pathological lesions by biopsy- A cross-sectional survey

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ABSTRACT

The foundation of diagnosing the oral pre malignant and the malignant lesions is biopsy; and the Behavior of taking biopsy should be a familiar Behavior for all dental professionals hence; the main aim of current cross-sectional survey was to explore factors associated with the knowledge, perception and Behavior of Dental practitioners towards diagnosis of Oral Pathological lesion by Biopsy. Current study is a Descriptive Cross-sectional study conducted among 163 dental practitioners including both general dental (GP) practitioners and the specialists excluding Oral pathologists working in private dental set up. To explore knowledge, the perception and Behavior and factors associated with it among dental practitioners, a close ended questionnaire was framed consists of 30 questions divided into 3 parts. Most of study participants {59 (36.19%)} were within 36-45 years age group. Male respondents {109 (66.87%)} were more than female respondents. average OPD per month was 1-20 patients by 100 (61.34%) of dental practitioners. knowledge scores regarding Diagnosis of Oral Pathological lesion by Biopsy among all study participants {84 (51.53%)} was low. Perception scores were positive among 64 (39.27%) study participants. behavior scores among majority of Dental practitioners {97 (59.50%)} was poor. From above it was concluded that Dental practitioners had low knowledge, positive attitude and poor behavior regarding towards diagnosis of Oral Pathological lesion by Biopsy. Age in years, Gender, designation, Years of Practice, Average no. of patients with oral lesion seen in the months, Average No. of biopsy done or referred were some of the factors significantly associated with knowledge, the perception and Behavior of Dental practitioners for diagnosis of Oral Pathological lesion by Biopsy.

INTRODUCTION

Oral biopsy has a significant place in many Oral pathological procedures and assumes a noteworthy role in diagnosis of Oral lesions and in numerous circumstances it becomes the main route towards reaching a diagnosis [1]. Biopsy word was taken from Greek, bios (life) and opsis (vision): vision of life. Biopsy is defined as "the removal and excision of tissue or other material from the living body for rationale of diagnosis"[2]. In nation like India where predominance of lesions within Oral mucosa have been accounted for in 41.2% of population,[3]the early diagnosis of these lesions will prove significant in treatment planning and prognosis of the oral diseases. Inability to analyze oral lesions may have

significant ramifications for both the patient and the dentist [4]. In different studies it has been accounted that for treatment choices dependent on are liable pathologic diagnosis, biopsy is the most reliable method that can build up the precise diagnosis of a clinical lesion [5-9].

Other than Oral Pathologists, each Dental Practitioners ought to know about significance and system of Biopsy as Dental professionals generally experience dangerous and pre-malignant lesions in their everyday Behavior [10]. In an investigation directed by Kondori I et al, [11] to investigate the general accuracy of clinical finding made by general dental professionals, and to contrast their

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analytic capacity with other dental specialists; in this examination the biopsy reports of 976 examples was looked into and analyzed the possible clinical analysis made by the specialist with the last histopathological diagnosis on every example. It was observed that 57% of the clinical findings made by dental specialists were incorrect. Overall 45.9% of General dental specialists misdiagnosed oral lesions, oral and maxillofacial specialists 42.8%, overall 42.2% Endodontists, and 41.2% of Periodontitis of the times.

In another examination, the similarity among the scientific finding and perfect histopathological examination done by the GDPs and by the many specialists within New Zealand from the year 2002-2006 was evaluated,[12] they discovered that by far most 62.9% of the referrals identified with biopsies were done in nonattached mucosa . Till now no studies had been done to unearth different variables related with knowledge, the perception and behavior of dental specialists towards diagnosis of Oral Pathological Lesion by Biopsy. Subsequently, the fundamental point of the present cross-sectional examination was to explore and to investigate factors related with the knowledge, the perception and behavior of Dental professionals towards diagnosis of oral pathological lesions by Biopsy.

MATERIALS AND METHODS

The current study is a Descriptive study of Cross-sectional in design conducted among 163 dental practitioners including both general dental (GP) practitioners and the specialists excluding Oral pathologists working in private clinics of Deharadun City. The study period was from November- December 2019.

The current study was implemented by 4 local investigators who know the city very well. 10 main areas within the city were selected randomly where more than 20 dental clinics were located. From each area 12 dental clinics were selected. Ethical clearance to proceed with the survey was sought from the ethical committee institution on 15/10/2019. Written consent was sought from owner of the clinic and those who gave informed consent were integrated in study.

Pilot survey was done before the start of study on 10% of study participants to determine feasibility of study and reliability, validity of questionnaire. The questions with lesser validity and reliability were not a part of the final questionnaire. The value kappa was 0.93 by using test-retest. By applying Cronbach's Alpha (α), the values of alpha was 0.89.

To explore knowledge, the perception and Behavior and factors associated with it among dental practitioners, a questionnaire close ended in type was framed consists of 30 questions divided into 3 parts. 1st parts consists demographic details consists of age, gender, designation, Specialty, years of practice, location of dental setup. 2nd part consists of OPD details of survey participants which include

questions such as Average No. of patients seen in a month, Average no. of patients with oral lesion seen in the months, oral lesion of most common type encountered, no. of biopsy done or referred. 3rd part consists of questions related to knowledge, the perception and behavior of dental practitioners for biopsy which includes what are the indication and contraindication for Biopsy and questions related to techniques of biopsy. For questions related to knowledge 1 point for correct answer and 0 for wrong answer. While perception and Behavior was measured on likert scale (1= strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree) with more the score, better the attitude and practice.

Statistical analysis

Demographic details of the study, OPD (Out Patient Department) details of study participants, knowledge, the perception and Behaviors scores of study participants was explored by means of descriptive analysis. Association between demographic details, OPD details of study participants and, knowledge, perception Behavior scores of study participants was explored by means of Chi-square test.

RESULTS

Table 1 shows that most of study participants {59 (36.19%)} were in the age group of 36-45 years. Male respondents {109(66.87%)} were more than female respondents. General Dental Practitioners {84(51.53%)} were more than specialists. Among all specialists, majority of them were Endodontists {22(27.84%)}. Year of Behavior for most of study participants {89 (54.60%)} was 1-10 years. Location of dental setup of most of study participants {92(56.44%)} was Urban.

Table 1: Demographic details of study participants (n=163)

Demographic Variables		Number (n)	Percentage (%)
Age in years	25-35 Years	44	26.99
	36-45 Years	59	36.19
	46-55 Years	43	26.38
	56-65 Years	17	10.44
	Total	163	100%
Gender	Male	109	66.87
	Female	54	33.13
	Total	163	100%
Designation	General Dental Practitioners	84	51.53
	Specialists	79	48.47
	Total	163	100%
Specialty	Endodontics	22	27.84
	Prosthodontics	17	21.51
	Oral medicine	09	11.39
	Oral surgeon	16	20.25
	Periodontists	08	10.12
	Public Health dentists	07	8.89
	Total	79	100%
Year of Behavior	1-10 years	89	54.60
	11-20 years	54	33.12
	21-30 years	20	12.28
	Total	163	100%
Location of dental setup	Urban	92	56.44
	Peri-urban	42	25.76
	Rural	29	17.80
	Total	163	100%

Table 2: It can be seen that average OPD per month was 1-20 patients by 100 (61.34%) of dental practitioners. Average number of patients {119 (73%)} with oral lesion seen in the months was 0-10. Oral Submucous Fibrosis (OSMF) was the commonest oral lesion encountered by 93 (57.05%) of respondents. Average Number of Biopsy done or referred by majority of most of Dental Practitioners {148(90.79%)} was 0-3.

Table 2: Out Patient Department (OPD) details of study participants (n=163)

OPD details		Number (n)	Percentage (%)
Average OPD per month	1-20	100	61.34
	21-40	49	30.06
	More than 40	14	08.60
	Total	163	100%
Average no. of patients with oral lesion seen in the months	0-10	119	73.00
	11-20	41	25.15
	More than 20	03	01.85
	Total	163	100%
Most common type of oral lesion encountered	OSMF	93	57.05
	Leukoplakia	44	26.99
	Erythroplakia	08	04.90
	Oral cancer	18	11.06
	Total	163	100%
Average No. of biopsy done or referred	0-3	148	90.79
	4-7	15	09.21
	More than 7	00	0.00
	Total	163	100%

Table 3 shows that knowledge scores regarding Diagnosis of Oral Pathological lesion by Biopsy among all study participants {84 (51.53%)} was low. Perception scores were positive among 64 (39.27%) study participants. Behavior scores among majority of Dental practitioners {97 (59.50%)} was poor.

On applying x^2 test, it was determined that knowledge regarding Diagnosis of Oral Pathological lesion by Biopsy was associated significantly with the Age (p=0.05*) and Average no. of patients with oral lesion seen in the months (p=0.00**). Association of perception with gender was significant (p=0.05*), Years of Behavior (p=0.00***) and Average No. of biopsy done or referred (p=0.05*). Behavior towards Diagnosis of Oral Pathological lesion by Biopsy and designation was associated significantly (p=0.05*) and Average no. of patients with oral lesion seen in the months (p=0.05*).

Table 3: Knowledge, perception and Behavior scores of study participants towards Diagnosis of Oral Pathological lesion by Biopsy

		Number of subjects	Percentage of subject's n (%)
Knowledge	0-2 (Low)		84 (51.53)
	4-6 (moderate)		56 (34.35)
	7-8 (high)		23 (14.12)
	Total		163 (100%)
Perception	6-14(Negative)		43 (26.38)
	15-22 (Neutral)		56 (34.35)
	23-30(Positive)		64 (39.27)
	Total		163 (100%)
Practice	6-14(poor)		97 (59.50)
	15-22 (fair)		46 (28.22)
	23-30(good)		20 (12.28)
	Total		163 (100%)

DISCUSSION

The present survey was conducted for determining factors associated with the knowledge, the perception and behavior of the Dental practitioners for diagnosis of Oral Pathological lesion by Biopsy. It is very important to explore various factors associated with knowledge, the perception and behavior of Dental practitioners as this will help in determining the various favorable factors to improve the knowledge, perception and Behavior towards Biopsy while various factors which act as barriers.

Current study was conducted amongst both specialist excluding Oral Pathologists and General dental practitioners with mean age of 44.6 years and in current study males were more than females. Majority of the studies [12-13] conducted on this topic was mainly among General Dental Practitioners. In the study by Anandani C et al [13] majority of survey subjects in 31-40 years of age group. Similar results were shown in study by Anandani C et al[13], Bataineh AB et al[14], Diamanti N et al[15] in which males were more than females. In a study by Murgod V et al [16] mean age of study participants was 32.5 years.

In current survey majority of Dental practitioners had years of Behavior between 1-10 years. While in study conducted by Tyagi KK et al [12] and Bataineh AB et al[14] majority of survey subjects had years of Behavior of 1-5 years.

In the present study average OPD of majority of dental practitioners was 1-20 per month while average oral lesions encountered per month was 0-10. OSMF was commonest lesion encountered. While in study Anandani C et al[14] majority of dentists encountered oral lesions once per month and most common lesion encountered was Cystic lesion. While in study by Tyagi KK et al [12] most of study participants encountered 5 cases/month of Oral mucosal lesions.

Majority of survey participants in the current study had low knowledge, positive attitude and poor Behavior regarding towards diagnosis of Oral Pathological lesion by Biopsy. In a study by Tyagi KK et al [12] the majority of GDPs believe there is a lack of understanding and awareness of the procedure used for taking biopsy. Contrasting results was seen in study by Anandani C et al [13] in which although the majority of GDPs were aware of oral screening and biopsy procedures, their behavior was low. In studies by Bataineh AB et al [14], Budhraja NJ [17] there was significant difference between acquired knowledge and its application among GDPs. As shown by Chhabra KG et al.[18,19] in 2016 and 2011 that if dental informatics and non-fluoride preventive measures can be included in the training of the dental professionals, then it can yield added advantage on prevention and therapeutic aspects in terms of patient care.

No study in the past had explored various factors associated with knowledge, the perception and behavior of Dental practitioners towards diagnosis of Oral Pathological lesion by Biopsy.

The correct diagnosis of the oral pre malignant or malignant lesions has an impact on the prognosis on the oral lesions. The correct diagnosis helps in planning the appropriate treatment and prevents the oral disease to become more dreaded. Biopsy can be really of great help to all the dental professionals to diagnose the oral lesions and give appropriate treatment to the patients and thereby improving the oral health related quality of life.

CONCLUSION

From above it was concluded that Dental practitioners had low knowledge, positive attitude and poor Behavior regarding towards diagnosis of Oral Pathological lesion by Biopsy. Age in years, Gender, designation, Years of Practice, Average no. of patients with oral lesion seen in the months, Average No. of biopsy done or referred were some of the factors significantly associated with knowledge, the perception and Behavior of Dental practitioners for diagnosis of Oral Pathological lesion by Biopsy.

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