



## RESEARCH ARTICLE

### INQUISITIVITY REGARDING SECOND OPINION AMONGST PATHOLOGISTS-NECESSITY AND RELEVANCE

Phulari Rashmi, G. S., Rathore Rajendrasinh, S., Shah Arpan, K. and \*Jain Shivani

Department of Oral Pathology and Microbiology, Manubhai Patel Dental College, Vadodara, India

#### ARTICLE INFO

##### Article History:

Received 13<sup>th</sup> December, 2015  
Received in revised form  
15<sup>th</sup> January, 2016  
Accepted 12<sup>th</sup> February, 2016  
Published online 31<sup>st</sup> March, 2016

##### Key words:

Second opinion,  
Second referral,  
Oral pathology.

#### ABSTRACT

**Background:** Diagnostic difficulties in pathology lead to seeking of second opinion, which drastically reduce errors and provides therapeutic and prognostic benefit to the patient.

**Aims and objectives:** The present survey aims to assess the general perspective of pathologists on second opinion in oral and maxillofacial lesions with an attempt to find solutions to diagnostic challenges.

**Materials and Methods:** A questionnaire based survey was conducted amongst 51 oral and 51 general pathologists. The following parameters were included: frequency of second opinions taken, reasons for seeking second opinions, productivity of second opinions sought, modes of obtaining second opinions, and choice of professional (oral or general pathologist) for seeking second opinion.

**Statistical analysis used:** The data collected was subjected to fisher's exact p-value using pearson's chi square test. The statistical package employed was R-2.15.2 (India).

**Results and conclusion:** 85% of pathologists were in favor of seeking a second opinion in cases of perplexities. Reasons cited for seeking second referrals were inadequate information or understanding of the information supplied-60%; lack of expertise-13%; lack of regular exposure to oral lesions-29%; and other related reasons-17%. Sending slide personally to a colleague emerged as the most preferred mode of seeking a second referral. Second referrals reflect an acknowledged need for assistance and do not imply inadequacy of the primary pathologist.

Copyright © 2016, Phulari Rashmi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Citation:** Phulari Rashmi, G. S., Rathore Rajendrasinh, S., Shah Arpan, K. and Jain Shivani, 2016. "Inquisitivity regarding second opinion amongst pathologists- necessity and relevance", *International Journal of Current Research*, 8, (03), 28550-28553.

## INTRODUCTION

Patient management and prognosis is dependent on an accurate pathological diagnosis, which is best given after review of cases by a second observer, if necessary. The state of perplexity in pathology leads to seeking of second opinion, which is a very significant way for drastically reducing errors in pathology and hence providing therapeutic and prognostic modification to the patient. Double reporting generally refers to showing a case to one or more colleagues working in the same histopathology unit before issuing a diagnosis of malignancy (Woolgar et al., 2014). The purpose of this study was to ascertain the following parameters with respect to second opinions concerning oral and maxillofacial lesions: frequency of second opinions taken, reasons for seeking second opinion, productivity of second opinions sought, and modes of obtaining second opinions, choice of professional (oral or general pathologist) for seeking second opinion.

\*Corresponding author: Jain Shivani,

Department of Oral Pathology and Microbiology, Manubhai Patel Dental College, Vadodara, India

## MATERIALS AND METHODS

The study was approved by the institutional ethical committee. It was a cross sectional study which required a duration of 3 months. Inclusion criteria for the selection of samples was to include only the certified practicing specialists; while the exclusion criteria was to exclude those pathologists who were unwilling to participate in the study. A questionnaire based approach was employed for the survey. A test questionnaire was given to 15 known pathologists. Changes were made in the questionnaire according to their responses and a final questionnaire was prepared. The sample size was determined using the proportion of pathologists. A total of 102 pathologists (51 oral and general pathologists each) were selected by simple random sampling technique from different states of India (Gujarat, Maharashtra, West Bengal, Madhya Pradesh, Rajasthan, Karnataka, New Delhi, and Punjab) to receive the questionnaire, which comprised of 20 questions. Here, the selection bias was avoided by randomization. The pathologists who participated in the test (pilot) survey were excluded from the study. The questionnaire was e-mailed as a link to the pathologists which saved time and was convenient to the

professionals. The responses were kept anonymous. Personal information regarding qualification and the years of experience in the specialty of individual participants was noted. Statistical analysis: The data collected was subjected to statistical analysis with fisher's exact p-value using Pearson's chi square test. The statistical package employed was R-2.15.2 (India).

## RESULTS

100% participation was gained by the pathologists involved in the survey. Based on the level of experience, there were 10 oral and 6 general pathologists each with more than 10 years of experience, 19 oral and 15 general pathologists each with 5-10 year experience and 22 oral and 30 general pathologists each with less than 5 year experience (p-value: 0.291; chi-square value: 2.701) who participated in the survey.

Pearson's chi square test was used for statistical analysis.  $P \leq 0.05$  was considered to be statistically significant. Out of the total pathologists, 17 were attached to a private laboratory, 64 to a medical/dental institution, while 19 were associated with a hospital. Reasons for seeking second opinions were attributed to inadequate information (60%); lack of expertise (13%); lack of regular exposure to oral lesions (29%) and others (17%) which included lack of infrastructure required. A comparison between responses of oral pathologists and general pathologists is given in Table 1. On facing problems in diagnosing the lesions, 87.5% pathologists seek a second opinion while 12.5% pathologists diagnose them with the available resources (books, atlas, and on-line journals). A comparison between responses of oral pathologists and general pathologists is given in Table 2. When the choice of professional (general pathologist/ oral pathologist) for a second referral concerning oral and maxillofacial lesions was evaluated, 45% opted for an oral pathologist while 55% opted for a general pathologist.

**Table 1. Comparison between responses of oral pathologists and general pathologists on reasons for seeking second opinions**

Reasons for second referrals	General pathologist	Oral pathologist
Inadequate information/ inadequate understanding of information supplied	39.2%	43.1%
Lack of expertise in the relevant field	7.8%	17.6%
Lack of regular exposure to oral lesions	37.3%	21.6%
Any other	15.7%	17.6%
p-value: 0.248		
chi-square value: 4.211		

**Table 2. Comparison between responses of oral pathologists and general pathologists on the method used in cases of doubt**

Method used for diagnosing lesions in cases of doubt	General pathologist	Oral pathologist
Seek a second opinion	92%	83.3%
Diagnose it with available resources (books, atlas, internet)	8%	16.7%
p-value: 0.229		
chi-square value: 1.712		

**Table 3. Comparison between responses of oral pathologists and general pathologists on the choice of professional for a second referral concerning oral and maxillofacial lesions**

Preferred professional for a second referral of oral and maxillofacial lesions	General pathologist	Oral pathologist
General pathologist with experience and exposure to such lesions	68.6%	21.6%
Oral pathologist with experience and exposure to such lesions	31.4%	78.4%
p-value: <0.001		
chi-square value: 22.808		

**Table 4. Comparison between responses of oral pathologists and general pathologists on the mode of seeking second referrals employed**

Mode of seeking second referrals employed	General pathologist	Oral pathologist
In house referrals	52%	46%
Sending the slide personally to a colleague in another place	44%	50%
Telepathology	4%	4%
p-value: 0.879		
chi-square value: 0.375		

**Table 5. Comparison between responses of oral pathologists and general pathologists on their opinion on second referrals**

Mode of seeking second referrals employed	General pathologist	Oral pathologist
Useful and recommended	88.2%	82.4%
Not very useful but still recommended in controversial cases	11.8%	15.7%
Cumbersome, irritating and confusing but may be needed	0%	2.0%
p-value: 0.577		
chi-square value: 1.389		

A comparison between responses of oral pathologists and general pathologists is given in Table 3. A significant number of pathologists (56.56%) were extremely satisfied with the response received following a second referral. When assessing the mode of second referrals employed, 48.9% pathologists preferred 'in house referrals'. Interestingly, 46.9% respondents preferred sending the slide personally to a colleague in another place and only 4.08% respondents preferred the use of Telepathology (blogs, diagnostic groups, special portals created for the purpose). A comparison of responses between oral pathologists and general pathologists is given in Table 4. When asked about the opinion on second referrals, a majority of the respondents (85%) considered it to be useful and recommended the same.

Only 14% did not find it useful, but still recommended in controversial cases; and 1% respondents considered second referral to be cumbersome and confusing. A comparison of responses between oral pathologists and general pathologists is given in Table 5.

## DISCUSSION

A second opinion refers to the process of seeking evaluation by another doctor for the same medical condition to confirm the diagnosis and treatment plan (Mamdani, 1997). Various studies have been reported, addressing the role of second opinions in surgical pathology with discrepancy rates ranging from 1.3% to 9.1% (Arbiser *et al.*, 2001). Site-specific studies have implicated the head and neck as a high-risk area that is prone to diagnostic error (Kronz and Westra, 2005). In a retrospective study done at Johns Hopkins Hospital, out of the 814 cases reviewed, the second opinion surgical pathology diagnosis resulted in 54 (7%) changed diagnoses (Westra *et al.*, 2002). Another study done at the same institute including a review of 6171 cases, second opinion surgical pathology resulted in 86 changed diagnosis (Kronz *et al.*, 1999). Yet another study with a retrospective review of 142 cases, showed 46 cases (34.1%) with differences in diagnostic opinion, which led to significant differences in patient evaluation and management (Jones and Jordan 2010). These surprisingly high rates of discrepancy in diagnosis reflects the difficult nature of many head and neck pathology diagnosis. While the basic aim of the practice of surgical pathology is to provide accurate diagnosis, it is equally essential to prevent an erroneous diagnosis, which can result in serious errors in the treatment and prognosis of the patient (Ahmed *et al.*, 2004). A mainstay of measuring accuracy is the review of material by a second observer. Indeed, many pathologists and pathology organizations recommend review of outside material before undertaking procedures within their own institutions (Renshaw and Edwin, 2006). To the best of our knowledge, such survey is the second of its kind amongst Indian pathologists on second opinions involving the lesions of oral and maxillofacial region. A survey done by Shilpa Maria *et al* revealed that 81% of the respondents were in favor of seeking a second opinion when faced with diagnostic challenges (Maria *et al.*, 2013).

In our study, a majority of respondents were in favor of seeking a second opinion when faced with diagnostic challenges. However, this does not suggest inadequacy of the primary

pathologist. Rather, it reflects the priority of therapeutic and prognostic importance in the field of pathology. Discussion amongst the pathologists regarding tricky cases is always advised. Our study showed inadequate information supplied in relation to clinical history, radiographs, inadequate biopsy specimen to be the major cause for diagnostic quandary leading to second referrals. Often, lack of correlation to clinical and radiographic findings leads to misdiagnosis. Therefore, a proper communication with the clinician, surgeon, and radiologist is advised to reduce the diagnostic dilemmas. With this survey, the common modes of seeking second opinion were also evaluated. 'In-house referrals' and sending slide personally to a colleague were the major ways of seeking a second opinion. But, these methods are time consuming and may keep the patient waiting. So, we suggest the use of telepathology. This process is simpler, cost effective and less time consuming. It reduces the cost of diagnosis by reducing the manpower and resources required depending upon the nature of referred material. It also brings a more number of pathologists into picture. We stress on seeking a second opinion even if it is time consuming because a little delay in reporting is better than getting a misdiagnosis and therefore mismanagement of a particular case. Patients can also be explained about the same. We need to create an environment where there is open 'doctor to doctor' and 'patient to doctor' communication (Sato, *et al.*, 1999). In a scenario where patients themselves seek a second opinion, which increases the time and expenditure of treatment; the pathologists themselves may seek a second opinion. The final pathology report might include a statement that the 'case has been reviewed by (name of reviewers), who concur with the diagnosis' <sup>1</sup>. This practice increases the quality of the profession and gives an assurance to the patient.

## Conclusion

A second review of histopathologic diagnosis is a quality assurance practice (Westra *et al.*, 2002). This survey supports the positive impact of second opinion for pathologies of the oral and maxillofacial region. We suggest the use of second opinion diagnosis in all cases of head and neck pathologies and to make second opinion a routine diagnostic practice.

## REFERENCES

- Ahmed, Z., N. Yaqoob, S. Muzaffar, N. Kayani, S. Pervez, S. H. Hasan, 2004. Diagnostic surgical pathology: the importance of second opinion in a developing country. *Journal of Pakistan Medical Association*, 54(6), 306-311.
- Arbiser, Z. K., A.L. Folpe, S.W. Weiss, 2001. Consultative (expert) second opinions in soft tissue pathology. *Am J Clin Pathol.*, 116,473-476.
- Jones, K., R. C. K. Jordan, 2010. Patterns of second opinion diagnosis in oral and maxillofacial pathology. *Oral surgery, Oral medicine, Oral pathology, Oral Radiology and Endodontics*, 109(6), 865-869.
- Kronz, J. D., Westra, W. H. 2005. The role of second opinion pathology in the management of lesions of the head and neck. *Curr Opin Otolaryngol Head Neck Surg.*, 13,81-84.
- Kronz, J. D., Westra, W. H., Epstein, J. I. 1999. Mandatory second opinion surgical pathology at a large referral hospital. *Cancer*, 86(11),2426-35.

- Mamdani, M. 1997. Second opinion: Is it desirable. *Issues in medical ethics* 5(3), 75-77.
- Maria, S., V. V. Kamath, K. P. Satelur, 2013. Second referrals in oral pathology: how common and how useful are these. *IJOMFP*, 4(2),12-17.
- Renshaw, A. A. and Edwin, W. Gould 2006. Measuring the Value of Review of Pathology Material by a Second Pathologist. *Am J Clin Pathol.*, 125,737-739.
- Sato, T., M. Takeichi, T. Hara, S. Koizumi, 1999. Second opinion behaviour among Japanese primary care patients. *British Journal of General Practice*, 49,546-550.
- Westra, W. H., Kronz, J. D., Eisele, D. W. 2002. The impact of second opinion surgical pathology on the practice of head and neck surgery: a decade experience at a large referral hospital. *Head Neck*, 24(7), 684-93.
- Woolgar, J.A., A. Triantafyllou, L.D.R. Thompson, *et al* 2014. Double reporting and second opinion in head and neck pathology. *Eur Arch Otorhinolaryngol.*, 271,847–854.

\*\*\*\*\*