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## Consistency Rates of Clinical and Histopathologic Diagnoses of Oral Soft and hard Tissue

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### Abstract

**Background and aims:** Histopathologic diagnosis of lesions is occasionally influenced by clinical and radiographic diagnosis and even the surgeon's observation during biopsy. The aim of this study was to evaluate the cases with failure in clinical diagnosis. **Materials and methods:** Biopsy records of patients who were referred between the years of 1389-1394 were retrieved from the archives of Department of Oral Pathology, Light and Narges Lab, Hospital pathology records. Then the consistency rates for clinical diagnosis were defined by histopathologic diagnosis. **Results:** In the present study 787 subjects with oral soft and hard tissue lesions were orally examined and biopsies were taken. subjects (60.3%) were females and (39.7%) were males. A total of 86% of clinical diagnoses were consistent with histopathologic reports. In 14% of the cases clinical diagnoses were not confirmed by histopathologic reports. **Conclusion:** In order to reach a diagnostic agreement, conformity of clinical and histopathologic diagnoses is necessary.

**Keywords:** Clinical diagnosis, histopathologic diagnosis.

### Introduction

The oral cavity and jaws can be the location of many diseases including Vesiculobullous & Verrucal-papillary, white, Ulcerative, red and red-blue-pigmented lesions, bone cysts (Radiolucent, mix, radiopaque), and salivary gland diseases. For correct diagnosis obtaining medical history, dental history and physical examination of the oral cavity (inspection, palpation, percussion and auscultation) are necessary. (1) Although the histopathologic diagnosis is the basis of treatment for most lesions, comprehensive radiographic and clinical evaluation is required to reach a definite diagnosis. (2,3) However, occasionally, a surgeon does not obtain the specimen from a proper level; therefore, the nature of the lesion cannot be identified. In such cases, biopsy should be taken from the deeper parts of the lesion. (2) Similarities in clinical, radiographic and microscopic characteristics of some oral lesions give rise to some difficulties in the proper diagnosis of lesions. For detection of oral lesions and correct diagnosis obtaining, the most common classification it is also important.

### Materials and Methods

The study was pursued in School of Dentistry in Ahwaz, Iran. Biopsy records of patients who were referred between the years of 1389-1394 were retrieved from the archives of Department of Oral Pathology, Light and Narges Lab, Hospital pathology records. The biopsies were received by the endodontists, periodontologists and oral surgeons, and were subjected to histological evaluation by an oral pathologist. The biopsy specimens were prepared according to the standard laboratory procedures. The patient population comprised 787 people (420 females, 367 males), ageing from 2 to 94 years. The exact locations of all lesions were ascertained from the general patient records which contained schematic presentation of the anterior and posterior jaw, including lips, gingiva, floor of mouth, hard palate, soft palate, tongue, facial skin, Vestibule. Then, Data were divided in 9 groups, including Vesiculobullous & Verrucal-papillary, white, Ulcerative, red and red-blue-pigmented lesions, bone cysts (Radiolucent, mix, radiopaque), and salivary gland diseases.

Then the consistency rates for clinical diagnosis were defined by histopathologic diagnosis.

**Results**

In the present study 73 subjects with oral soft tissue (peripheral) exophytic lesions were evaluated; 44 subjects were females (60.3%) and 29 were males

(39.7%). The subjects were orally examined and biopsies were taken. Female subjects were 8-82 years old (with a mean age of 41.04) and male subjects were 2-94 years old (with a mean age of 44.71). A total of 86 % of clinical diagnoses were consistent with histopathologic reports. In 14 % the clinical diagnosis was not confirmed histopathologically .

**Distribution of the type of lesion**

%	Number	lesion
27.32	215	Radiolucent
26.05	205	Vesiculobullous&Verrucal-papillary
19.44	153	Ulcerative
14.10	111	White
4.32	34	Salivary gland
3.68	29	red
2.92	23	pigmented
1.40	11	mix
0.76	6	Radiopaque
100	787	all

**Distribution of soft tissue lesions**

%	Number	lesion
36.9	205	Vesiculobullous&Verrucal-papillary
27.6	153	Ulcerative
20	111	White
6.1	34	Salivary gland
5.3	29	red
4.1	23	pigmented
100	555	all

**Distribution of hard tissue lesions**

%	Number	lesion
92.7	215	Radiolucent
4.7	11	mix
2.6	6	Radiopaque
100	232	all

**Discussion**

The aim of this study was to identify the cases with failure in clinical and histopathologic diagnoses. In the present study histopathologic diagnoses confirmed initial clinical diagnoses in (86%) but did not do so in (14%) subjects. Oral medicine focuses on diagnosis and treatment of oral soft tissue lesions and represents the clinical arm of oral pathology while oral

pathology deals with microscopic diagnosis of oral maxillofacial lesions.(4) However, Sardella compared the accuracy rates of oral medicine prior to referring the patients with histopathologic diagnoses to an Oral Medicine Department. It was a retrospective investigation on the patients' referral forms from 2005 to 2007, conducted by family physicians with no dental degree, other categories of physicians, and general dental practitioners. Of 678 subjects, 305 (45%) had

clinical diagnoses and no radiographic diagnoses of lesions had been given. Finally, it was purported that Italian physicians and dentists had limited information in oral medicine field.(5) Deihimi worked on old files in a retrospective study in which only the title was somehow similar to this study. Thirty-four of them did not have definite clinical or histopathologic diagnosis. In fact, only the accuracy rates of clinical diagnoses with histopathologic diagnoses were consistent, although the authors did not mention the types of misdiagnosis and the reasons for that. Sometimes there are controversies over definite pathologic reports among oral pathologists, which lead to difficulties in treatment planning.(1) Abbey evaluated 6 dentists on the Oral Pathology Board in order to determine the histologic diagnoses of 120 oral specimens. Their diagnoses varied from simple hyperkeratosis to severe dysplasia. The agreement, when final diagnosis was mild to moderate dysplasia, was only 50.5% while these pathologists gave only a 50.8% approval in their reinvestigations. Approximately in 20% of the subjects, pathologists could not confirm their previous opinions regarding presence of dysplasia. (6) Powsner showed surgeons had an improper concept from pathology reports in 30% of the cases. (7)

## Conclusion

The clinical, radiographic, and histopathologic similarities between various oral and jaw lesions sometimes make the diagnostic agreement impossible. Moreover, expert specialists can arrive at the best treatment plan when considering the

importance of lesion characteristics. According to some failures reported in clinical diagnosis, attention to details in clinical examination and taking history is recommended to reach a correct diagnosis.

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