

## The Diagnostic Process in Oral Pathology. Bibliographical Review

**Manuel Amed Paz Betanco\***

*Assistant Professor, Department of Oral Medicine, School of Dentistry, Universidad Nacional Autónoma de Nicaragua, León (UNAN-León), León, Nicaragua*

**\*Corresponding Author:** Manuel Amed Paz Betanco, Assistant Professor, Department of Oral Medicine, School of Dentistry, Universidad Nacional Autónoma de Nicaragua, León (UNAN-León), León, Nicaragua.

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### Abstract

The Nicaraguan Dentist directs more his practice towards Restorative and Healing Dentistry and with a lot of difficulty he will make a diagnosis of a mucous lesion of the oral cavity, that is why through a methodical guide the process will be done more easily to reach the diagnosis.

Taking into account the information obtained in the clinical history, following a methodical and orderly process, we will be able to contribute to the prevention of malignant entities by identifying and managing premalignant entities, systemic infectious processes, identifying them locally.

An evaluative and systematic bibliographical review was made, consulting the databases in Pubmed, Medline, Lilacs; without finding appropriate results for this subject of study; so the information was ordered, taking as a reference the teaching experience supported by primary sources.

A diagram was elaborated based on the basic steps of the process of diagnosis in Oral Pathology and tables with summarized information where the student or professional of Dentistry manage to make a filter of it guided by a critical judgment and professional experience and a table where information obtained in the post-operative of the disease as an input to know the prognosis of these pathologies in Nicaragua.

**Keywords:** *Diagnosis Process; Oral Pathology; Critical Judgment; Professional Experience*

### Abbreviations

UNAN-León: National Autonomous University of Nicaragua, León; HIV/AIDS: Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome; DD: Differential Diagnosis

### Introduction

A process is defined as a set of successive phases of a phenomenon or complex fact, in which a discernment and ordered thought are made that allow to emit a judgment or opinion [1].

In dentistry, it is not easy diagnosis in oral pathology, it is for this reason that, to reach a presumptive diagnosis, it is necessary to go through a methodical and structured process in which it is possible to process a set of information from the clinical history [2].

According to Cuevas [3], diagnosis is defined as the knowledge of the anatomical and physiological alterations that the morbid agent has caused to the organism and is based on functional symptoms and clinical signs.

According to Ceccoti [4] in Oral Medicine, there are several types of diagnosis: clinical, biochemical, microbiological, imaging and histopathological and other complementary with more advanced techniques. Padrón [5] proposes that one type of diagnosis is the differential.

The dentist in Nicaragua with a professional practice oriented more towards restorative and curative dentistry and not very interested in the prevention of oral medicine, it is very difficult to identify injuries of the oral and maxillofacial complex that by their nature can be etiologically the product of infections bacterial, viral, mycotic, parasitic or hereditary, of some traumatism or secondary to a neoplasm in a distant organ, something important in this arduous task, is that to know its characteristics and clinical behavior is essential to have basic notions of Oral Pathology, but it will also be done more easily through a methodical guide that guides the process to reach the diagnosis.

Taking into account the information obtained in the clinical history of each patient, a more efficient and faster process will be achieved, for example when identifying a pseudomembranous candidiasis on the lingual dorsum in a healthy patient, although he claims not to suffer from systemic pathologies we will realize through our professional judgment that there is a deficit of the immune system [6] because candidiasis is classified as an opportunistic disease or that lingual candidiasis is a predictor of HIV/AIDS. Fernández J [7] this is where the importance of the diagnosis in Oral Pathology lies, therefore, in this way we will contribute to the prevention of malignant entities identifying and managing premalignant entities, systemic infectious processes identifying them locally.

According to Marimón [8], the phases of the diagnostic process consist of 3 moments based on the patient’s experiences; from the study of subjective and objective discomfort, to the analysis of the data coming from complementary explorations to arrive at a definitive diagnosis.

**Materials and Methods**

An evaluative and systematic bibliographical review was carried out, where the databases were consulted in Pubmed, Medline, Lilacs; using descriptors in health sciences: process, diagnosis, oral pathology; without finding appropriate results for this subject of study, since the databases showed topics concerning specific diseases and pathological processes and the objective of this review is not merely about those aspects.

So we resorted to the conventional method of searching for bibliographic references in physical and digital books through Google books, finding that, in the books, the authors approach roughly, a little about the process of diagnosis as a tool for the Clinical but do not show how to carry out or make mention of the types of diagnostics in the Stomatological Semiology, contributing in this regard to the familiarization of students with each of these sections.

**Results**

Based on the previous review and not find how to filter the information, we proceeded to draw up a diagram based on the teaching experience in the Unit of Diagnosis of Oral Pathology of the Faculty of Dentistry of the UNAN-León, in which both Dentistry students as practicing dentists will understand and analyze all the information gathered in the patient’s medical record:

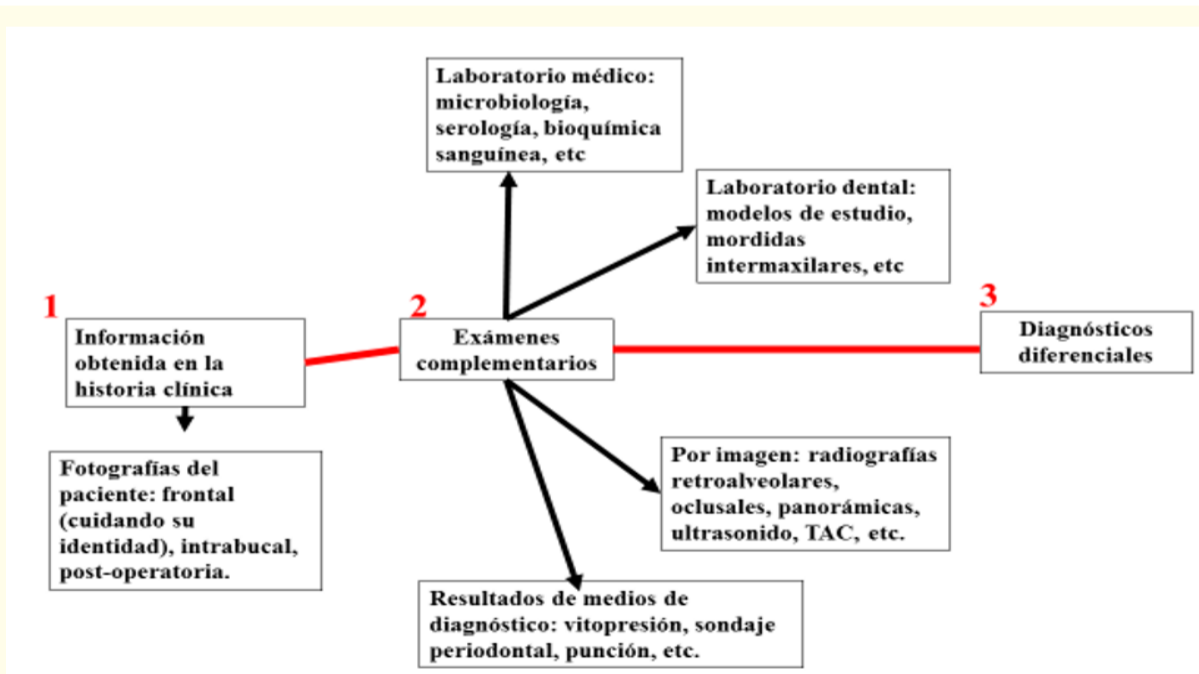


Figure 1: Basic steps for the process of diagnosis in oral pathology.

To filter the information collected in the patient’s clinical history, the following methodological proposal is made by contrasting it with the information gathered from a comprehensive literature review on differential diagnoses. It is of the utmost importance that those responsible for the investigation of the clinical case make an orderly and sequential review: first in the basic texts of Pathology and Oral Medicine, then in national epidemiological data and current hospitalizations and then in the data of each pathology in journals specialized in Dentistry.

Place each of the Characteristics of the patient’s buccal disease:	To capture here every one of Differential diagnoses According to the characteristics observed in the clinical case:				
	DD1	DD2	DD3	DD4	DD5
Epidemiological data					
Clinical features					
Imaging features					
Total (+)					

**Table 1:** Filtering process of the information obtained in the clinical history and in the literature Odonto-stomatological updated.

About filling this table:

- The abbreviation DD1 .... Corresponds to differential diagnosis, in this part you must put the name of the disease or its abbreviation, specifying it below the box.
- Along with each clinical, epidemiological and radiographic characteristic (if the lesion is bone), mark with a + sign (Positive) or - (Negative) in the differential diagnosis.
- If you have not found a characteristic of the patient in any of your differential diagnoses (according to the literature), leave that space blank.
- Your diagnostic decision will be aimed at differential diagnosis with a greater number of positive signs.
- Presumptive diagnosis: \_\_\_\_\_.

It is very important that the clinician have a presumptive diagnosis when sending the biopsy, if it is the case, to the Histopathology laboratory.

In Nicaragua, there are communities that do not have this service in their Health Units and therefore the first line of care for patients requires doctors to guide their patients about the possible diagnosis of oral disease, this is where comes into play the constant preparation of the professionals of Dentistry in terms of managing a process not easy, methodical, practical and aimed at solving the oral health problems of the population.

The biopsy is not ruled out, but it looks for that the Dentist with a lot of security makes a diagnosis of a pathological lesion of the oral cavity and in this way to conjugate the presumptive diagnostic decision with a histopathological result, that of the hand we approach a definitive diagnosis, and proceed to therapeutically manage the patient, either at a primary level or guide hospital management by a Maxillofacial Surgeon.

Within the substance that the dentist must report in a specimen/biopsy for histopathological study should include [9]:

- Injury data: number, location, size, color, consistency, shape, base, mobility, evolution time.
- Important data: Describe the associated symptomatology and if there is systemic linkage or any additional information of interest.
- If it is a bone lesion: Attach imaging tests.

Treatment available in the country	Risks/adverse reactions	Benefits/Effectiveness	Cost in Cordoba

**Table 2:** Proposal of therapeutic options of treatment to the patient or his representative.

Treatment chosen by the patient: \_\_\_\_\_ (in the course of the procedure)..... \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and so on.....

The purpose of showing updated and clear information to the patient or his/her representative is based on the bioethical principles, in which he/she is duly informed and in use of his/her mental capacities, decides what treatment he/she wishes to have done in his/her oral cavity [10].

Likewise, it is proposed that, in order to keep epidemiological information regarding the post-operative of the disease, that it contributes to manage new data that can be included in table number 2, as well as in epidemiological data of table number 1, it is suggested to use the following table 3.

Characteristics of tissue normality	Changes observed in post-op, considering any major alteration:			
	1 month	3 months	6 months	1 year

**Table 3:** Post-operative disease monitoring.

It is important to inform the Oral Diagnosis Unit of the Faculty of Dentistry of UNAN-León about any anomaly observed, new information obtained in the healing process of the oral mucosa or in hard tissues, regression of the disease, etc. Because in this way, the area of epidemiology of the Oral Pathology component will update its database concerning the prognosis of each disease.

**Discussion**

Through the years in university teaching in the basic curricular components for diagnosis in oral medicine; as Oral Pathology, Clinical Propaedeutics and Dental Radiology, it has been possible to see the deficiency in the undergraduate students about the performance of a logical analysis and interpretation based on the patient’s clinical history, it is observed that with great difficulty the student interprets the findings in the complementary examinations and in the end they lack security to give with certainty a presumptive diagnosis.

With the model proposed in table 1 on the realization of a filter of information obtained in the clinical history comparing the findings with the information compiled in the updated literature, it is intended that both the student and the dentist develop a critical judgment based on the self-learning of oral diseases and the experience obtained in the care of patients as in the medical management of the clinical file and in the professional judgment based on the results of the complementary examinations.

The scientific literature makes mention of many treatment alternatives depending on the diagnosed disease, from phytotherapeutic to surgical methods; but in our country there is not all the necessary tools for the ambulatory or hospital management of this disease, or

in other cases, the professionals do not have the experience of clinical management of the case, for this reason, that in the table 2. It is proposed that the treating dentist inform the patient or his legal representative about the available treatments, as well as inform about the benefits, risks and costs that exist, so that the patient can choose the one of their convenience. At this point it is essential that the doctor does not influence the decision of the patient. If it is not found in the clinician's capabilities, it is important to refer the patient to a professional with the relevant skills.

In the end, it is not enough to have made a clinical management of a disease or the stomatologic manifestations of it, without observing the positive or negative evolution of it, that is why the idea to propose in table 3 a post-operative follow-up of said treated disease, and in this way, to be aware of a new manifestation of the disease or of its total remission, with the aim of working in unity to be up-to-date as regards the prognosis of diseases in our country.

### Conclusions

The process of diagnosis in oral pathology is methodical, exhaustive, complicated and awakens the interest of the student or the professional in seeking a practical solution to the patient's underlying problem. When practiced in an orderly manner and using critical judgment and experience, a presumptive diagnosis is achieved that is not distant from the histopathological diagnosis.

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