

## A Vision for Oral and Maxillofacial Pathology in Jamaica

Arvind Babu RS

### ABSTRACT

*Oral and maxillofacial pathology is an important bridging specialty between dentistry and medicine. This branch of dentistry is gaining special interest as a result of increasing number of oral cancer and microbial diseases. The advancements of medicine and basic medical sciences may help in directing the research in dentistry and oral and maxillofacial pathology. This paper highlights the new area and scope for oral and maxillofacial pathology in Jamaica.*

**Keywords:** Dentistry, Jamaica, oral and maxillofacial pathology, oral pathology, postgraduate dental education

## Una Visión de la Patología Oral y Maxilofacial en Jamaica

Arvind Babu RS

### RESUMEN

*La patología oral y maxilofacial es una especialidad importante que constituye un puente de enlace entre la medicina y la odontología. Esta rama de la odontología está ganando interés especial como resultado del aumento de número de casos cáncer bucal y enfermedades microbianas. Los avances de la medicina y las ciencias médicas básicas pueden ayudar a dirigir la investigación en odontología y patología oral y maxilofacial. Este trabajo pone de relieve la nueva área y el alcance de la patología oral y maxilofacial en Jamaica.*

**Palabras claves:** Odontología, Jamaica, patología oral y maxilofacial, patología bucal, postgrado de educación dental

West Indian Med J 2013; 62 (8): 764

### INTRODUCTION

Oral and maxillofacial pathology is that branch of dentistry that deals with microscopic investigations that assist with the formation of the diagnosis. Oral mucosal manifestations may be the initial and most florid clinical feature of a disease, or the only sign of such disease, and occasionally, oral lesions occur as part of a systemic manifestation of the disease. Hence, it is important to learn about oral diseases in a broader spectrum rather than just limit the discussion to the oral cavity alone.

---

From: Dentistry Programme, Faculty of Medical Sciences, The University of the West Indies, Kingston 7, Jamaica.

Correspondence: Dr Arvind Babu RS, Dentistry Programme, Faculty of Medical Sciences, The University of the West Indies, Kingston 7, Jamaica. E-mail: arvindbabu.rajendrasantosh@uwimona.edu.jm

The most important step in treatment planning is the diagnosis; this step also acts as a prognostic indicator. The microscopic investigations that are undertaken range from the gold standard – the haematoxylin and eosin staining method, to the immunohistochemical, molecular, genetic and biochemical techniques. The search for the actual lesion area and identifying its histological appearance is the critical aspect of microscopic diagnosis. The tremendous growth in molecular based techniques will facilitate a greater understanding of the particular disease in terms of the mechanism of disease and therapeutic targeted research activities. These new procedures have greatly increased the diagnostic accuracy in determining the causative agents in a variety of microbial diseases and especially in cancer conditions. Novel research in oral and maxillofacial pathology continues to identify, characterize and classify disorders of the oral cavity,

and head and neck pathology which were previously either unrecognized or poorly understood (1). Further, this molecular research supports clinical trials and health intervention at different levels of disease.

Globally, the number of dental schools and the level of dental care are increasing, indicating that the need for dental care is on the rise. Modern dentistry has improved many of the original clinical dental procedures, due to the increased use of the results of evidence based dental research into clinical practice methods. Didactic dental courses have incorporated more clinical aspects of dentistry, but the rate of advancement is more evident in the clinical branches. However, the nonclinical dental courses such as oral and maxillofacial pathology have room for greater incorporation and expansion.

The attainment of successful treatment lies in understanding the pathogenesis or mechanism of diseases. Once we understand the disease at every level, the treatment accuracy will be greatly enhanced.

The scope of oral and maxillofacial pathology seems to have broadened gradually, more or less as a result of the cancerous conditions and microbial diseases. Further, extension of oral surgery into maxillofacial and even head and neck surgery has increased the scope of oral and maxillofacial pathology to surgical oral and maxillofacial pathology. Since surgical procedures are aimed at the total excision of tumour with some amount of normal appearing tissue, tissue adjacent to the tumour may appear normal but may possess cellular level alterations with neoplastic changes which may not be detected by the naked eye. This is where the surgical oral and maxillofacial pathologist can come in. The surgical oral and maxillofacial pathologist often examines frozen section specimens during surgery to determine how the operation should be modified or completed. From a surgical pathologist's point of view, this development is challenging, however, it is essential to overcome these challenges in this growing world of information so that the diagnosis can be more accurate.

Research continues to show that molecular technology is an emerging field in clinical diagnosis. One example of this is the analysis of salivary protein and genetic markers in cancer cases where they have been proven to be supportive of the final diagnosis of oral cancer. Refinement, specification and validation of the techniques in these salivary and genetic analyses are the challenges for the oral and maxillofacial pathologist in the next decade. Further standardization of salivary analysis going forward could assist in obtaining samples for testing. These samples could be collected non-invasively and thus would avoid psychogenic trauma to the patient. More research in this area could lead to further advances in the diagnostic field that will enhance the effective treatment of oral diseases.

The current research areas of oral and maxillofacial pathology include clinical and basic research in the areas of cell and molecular biology, immunology and genetic studies

for various kinds of oral diseases such as developmental, inflammatory, neoplastic and metabolic disorders. Further development in surgical margin analysis techniques will broaden the scope of the oral and maxillofacial pathologist and extends knowledge and expertise in the developing area of surgical oral and maxillofacial pathology.

The novel area for research in oral and maxillofacial pathology would be molecular targeted therapy in oral cancer (2). Oropharyngeal cancer is the eleventh most common cancer worldwide. Incidence and mortality rates are higher in men than women. The differences across countries particularly relate to distinct risk profiles and availability and accessibility of health services. Presently, the World Health Organization is focussing on the early detection and treatment of oral cancer (3), and hence, the main focus has been on oral cancer with the specialists tackling the advances in the field of oncology research (4).

Dental schools will need to reinforce research at the undergraduate student level. This would assist the students in their understanding of the value of research in the dental field from the oral and maxillofacial pathology point of view. Van der Waal, in his international training guidelines, stated that "a strong evaluation has to be made for candidates seeking to do oral and maxillofacial pathology postgraduate studies" (4). It was further mentioned that such an evaluation should include the interpretation of microscopic sections of pathological material, an evaluation of the candidate's knowledge of oral and maxillofacial pathology, the basic sciences related to oral and maxillofacial pathology and the clinical and radiological features of diseases of the oral regions (4).

Monteith in his book "Dentistry in Jamaica 1905–2009" has shown that there has been an increase in the number of dental surgeons in Jamaica (5). There has been a gradual increase in the number of dental practitioners across the island and some have achieved a high level of recognition from providing dental services. It is clearly understood that there is now a higher level of awareness of oral diseases and dental needs, and this is an opportune time to guide dental students toward postgraduate careers in oral and maxillofacial pathology.

The view is that students will be expected to develop their research focus from their undergraduate training with a view to optimizing this research focus in their postgraduate training. The goal would be to have two postgraduate students per year. This would eventually result in having a sufficient number of local oral and maxillofacial pathologists in Jamaica.

The advances in molecular medicine and basic medical sciences at The University of the West Indies have widened the field of oral and maxillofacial pathology in Jamaica. The excellent academic and research environment of the university will certainly act as a guide and template for growth in the noble field of dentistry. Perhaps the growth in the diagnostic and therapeutic research may further redefine the dental and oral surgery practice. Furthermore, an increase in the

number of oral and maxillofacial pathology biopsy centres equipped with regular histotechnique and immunohistochemical methods in Jamaica would facilitate the oral and maxillofacial surgeons obtaining more timely and accurate diagnoses of their cases, which would result in a speedier development of their definitive treatment strategies.

This vision for oral and maxillofacial pathology, if planned properly, will lead to a bright future for training oral and maxillofacial pathologists in Jamaica.

#### **ACKNOWLEDGEMENTS**

The author is thankful for the support from Professor Archibald McDonald, Principal, The University of the West Indies, Mona campus (UWI Mona), Professor Horace Fletcher, Dean, Faculty of Medical Sciences, UWI Mona, Professor Russell Pierre, Programme Director for MBBS,

UWI Mona, Dr Thaon Jones, Director for Dentistry Programme, Faculty of Medical Sciences, UWI Mona and Professor Naresh Lingaraju, Head, Department of Oral Medicine and Radiology, Farooquia Dental College and Hospital, Mysore 21, Karnataka, India.

#### **REFERENCES**

1. Gould AR. The future of oral pathology practice. *Alpha Omegan* 2007; **100**: 190–3.
2. Murrah VA. Oral and maxillofacial pathology: quality diagnostics for the present and the future. *J Am Coll Dent* 2009; **76**: 14–7.
3. World Health Organization. Global data on incidence of oral cancer. WHO/NMH/CHP/HPR/ORH Oral cancer 2005. Geneva: World Health Organization; 2005.
4. Van der Waal I. The future of oral pathology and the need for international training guidelines. *J Oral Pathol* 1988; **17**: 427–8.
5. Monteith J. Dentistry in Jamaica 1905–2009. A history. Kingston, Jamaica: Pear Tree Press; 2011: 12–23.