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Profiling of oral squamous cell carcinoma in patients presenting to the Department of Oral Medicine and Periodontology Wits Oral Health

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Profiling of oral squamous cell carcinoma in patients presenting to the Department of Oral Medicine and Periodontology Wits Oral Health

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Dentistry (Oral Medicine and Periodontology), 2014.



Declaration

I, Rhoodie Martins Garrana, declare that this research report is my own work. It is being submitted for the Degree of Master of Science in Dentistry to the University of the Witwatersrand, Johannesburg, South Africa. It has not been submitted before for any degree or examination at this or any other University.

.....

..... Day of ....., 2015.

Dedication

In Dedication to:

My darling wife Jolene Garrana and grandfather Jose Duarte Isidro Garrana, both of whom supported me through my MSc with unfailing support and encouragement. I dedicate this to you.

Acknowledgements

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List of Abbreviations

1. OSCC – Oral Squamous Cell Carcinoma
2. TSNA – Tobacco Specific Nitrosamines
3. GST – Glutathione-S-Transferase
4. TSG – Tumour Suppressor Genes
5. DNA – Deoxyribonucleic Acid
6. CDKNZA – Cyclin Dependant Kinase NZA
7. HPV - Human Papilloma Virus
8. IL – Interleukin
9. MMPs – Matrix Metalloproteinases
10. CDT – Cytolethal Distending Toxin
11. SPT – Secondary Primary Tumour
12. SFT – Secondary Field Tumour
13. OPS – Orthogonal Polarization Spectral
14. OCT – Optical Coherence Topography
15. NBI – Narrow Band Imaging

Abstract

Background: Oral squamous cell carcinoma (OSCC) of the oral cavity presents as a major health problem. In 2012 as many as 690 000 new cases of OSCC were documented worldwide, of these nearly half proved fatal. It is the 5th-8th most common malignancy known to man. Two thirds of these cases occur in developing countries that often have requirements and problems that don't exist in many first world settings. As health care providers in South Africa we are obliged to diagnose cancer timeously in order to improve the patients' quality of life.

Methods: This retrospective study focused on the OSCC patients who presented to the Wits Oral Health Sciences School of Oral Medicine and Periodontology over a twenty one year period. Demographic, clinical and histological data were retrieved from archived files. The data included variables such as age, gender, race, location of lesion, lesional size, histological differentiation, lymph node involvement, habits such as smoking or alcohol consumption and predisposing medical conditions. Seven hundred and thirteen files over a twenty one year period were accessed and put through two rounds of selection criteria. The initial selection identified all files with a diagnosis of OSCC totalling one hundred and seven files. The second round of selection criteria eliminated all files without histological confirmation. This left a total of eighty one computable files.

Results: Males in the 5th -6th decades of life showed the most typical presentation. The most common site was found to be the floor of the mouth. Most patients were smokers and the submandibular gland involvement was most commonly involved group of lymph nodes.

Conclusion: The study revealed that the most typical patient was a black male of 56,3 years of age with a lesion on the floor of the mouth. In spite of increased awareness and anti-smoking legislation the average lesion size between $100mm^2$ and $1000mm^2$ has increased over the last twenty one years of the study. The presentation of a larger lesion in the more recent years of the study highlights our failed efforts for early detection and intervention.