# "EFFICACY OF ORAL BRUSH BIOPSY IN THE EVALUATION OF THE ORAL PREMALIGNANT AND MALIGNANT LESIONS"

By

## DR. MEDHA BABSHET

Dissertation Submitted to the

**Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore**

In partial fulfillment of the requirements for the degree of

**MASTER OF DENTAL SURGERY**

In

**ORAL MEDICINE AND RADIOLOLGY**

**Under the guidance of**

**DR. KIRTY NANDIMATH**

**PROFESSOR**

**DEPARTMENT OF ORAL MEDICINE AND RADIOLOGY**

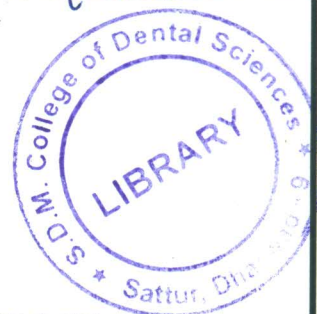## SDM COLLEGE OF DENTAL SCIENCES & HOSPITAL

## DHARWAD

## 2011

i

**ABSTRACT:**

**Objective:** In the present study oral brush biopsy of premalignant and malignant lesions was performed with tooth brush. The cytopathological diagnosis obtained from the brush biopsy sample was compared with that of conventional incisional biopsy. The reliability of oral brush biopsy without computer aided analysis was assessed in terms of sensitivity and specificity.

**Methods:** Sixty seven patients, thirty two being premalignant lesions and other thirty five being frank oral carcinomas were included in the study. All patients underwent oral brush biopsy using a tooth brush followed by punch biopsy. The specimens were interpreted in a double blind fashion. Sensitivity, specificity, positive and negative predictive values were calculated. Comparison of the cytopathological scores with histopathological scores of premalignant and malignant lesions was done using Mann – Whitney U test. Inter - examiner and intra – examiner reliability was calculated using Rank correlation coefficient.

**Results:** Two samples in premalignant group and five out of malignant group were marked insufficient. The sensitivity of 77%, specificity of 100%, positive predictive value of 100% and negative predictive value of 38% were obtained. Statistical analysis showed $P > 0.05$ suggesting there is no significant difference between histopathology and brush biopsy in assessing both premalignant and malignant lesions. Inter – examiner reliability was 99.22 % and intra – examiner reliability was 99.77%

**Conclusion:** Brush biopsy using a tooth brush is an advantageous diagnostic procedure which is reliable and can be easily performed with less cost and discomfort to the patient. It is useful in those situations when a patient refuses to have a biopsy performed or when