

EVALUATION OF ORAL POTENTIALLY MALIGNANT DISORDERS(OPMDs) WITH AUTOFLORESCENCE, REFLECTANCE SPECTROSCOPY AND VITAL STAINING AND THEIR CORRELATION WITH HISTOPATHOLOGY – A HOSPITAL-BASED PILOT STUDY

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BACKGROUND & OBJECTIVES

- Oral carcinoma frequently is preceded by clinically identifiable OPMDs that correspond with an increased risk of cancerous change.
- Hence, it is important to screen patients for OPMDs as they aid physicians in prevention, early detection, and intervention of oral cancer.

Objectives:

- To evaluate OPMDs with autofluorescence imaging, reflectance spectroscopy (Identafi®), and vital staining technique (toluidine blue)
- Early evaluation of dysplastic changes with histopathology.

MATERIALS & METHODS

- 10 (13 lesions) patients with OPMDs visiting the Department of OMR, BPKIHS, were included.
- After oral examination, screening was done by Identafi® (white light, violet light, and green light) followed by toluidine blue staining, and then screened again by Identafi®.
- Then incisional biopsy under local anesthesia was performed from the site showing positive change and sent for histopathology. Loss of autofluorescence (LOA) and diffuse vascularity were considered positive.

CONCLUSION

The sensitivity of white, violet, and green light are 100%, 85.7%, and 100% and specificity 100%, 50%, and 76.9%, respectively. The sensitivity and specificity of toluidine blue obtained was 66.66% and 100%. Since this is pilot study, there is a need for further samples before making any concrete inference.

RESULTS



Yellow incandescent light



White light (Identafi)



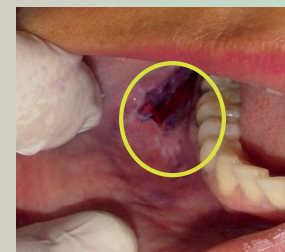
Violet light(Identafi)
LOA



Green amber light (Identafi)



Toluidine blue application



Toluidine blue positive

	Sensitivity	Specificity
White light	100%	100%
Violet light	85.7%	50%
Green light	100%	76.9%
Toluidine blue	66.66%	100%

KEY WORDS: Oral potentially malignant disorders, autofluorescence, reflectance spectroscopy, toluidine blue