

Poster presentation

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Optical coherence tomography in the diagnosis of oral dysplasia

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To date histopathological examination has been considered the gold standard for diagnosing early dysplastic to late cancerous lesions. The prime concern for early detection of the cancer and its precursors in patients is to ensure the appropriate treatment in response to disease progression and also to improve the survival and prognosis. The time taken for conventional invasive histopathological analysis is about 1–2 weeks, whereas the spread of the disease may require diagnosis in real time. Recently new optical non invasive methods has had been introduced to acquire biopsies through different modalities through which diseased tissues can be distinguished from healthy tissues in real time. Optical diagnosis techniques have proved to be a reliable method that can be used to obtain instant diagnosis of soft and recently hard tissue pathologies. During the past few decades most of the experimental spectroscopy work has been performed in head and neck malignancy using Fluorescence spectroscopy, Raman spectroscopy, Elastic scattering spectroscopy, Microendoscopy and Optical coherence tomography. All these modalities have shown a marked increase in the sensitivity and specificity when compared to both clinical and histopathological analysis with promising results. Optical coherence tomography is a non invasive, interferometric, topographic imaging modality which allows the millimetre penetration with millimetre-scale axial and lateral resolution. Optical coherence tomography findings when compared with the histopathological results of suspected oral lesions confirm the feasibility of optical coherence tomography to detect the architectural changes in pathological tissues.