

Microalgae Hydrothermal Liquefaction Process Optimization and Comprehension to Produce High Quality Biofuel

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Abstract : Introduction: This case discusses the management of two floor of mouth (FOM) Squamous Cell Carcinomas (SCC) not identified upon initial biopsy. Case Report: A 51 year-old male presented with right FOM erythroleukoplakia. Relevant medical history included alcoholic dependence syndrome and alcoholic liver disease. Relevant drug therapy encompassed acamprosate, folic acid, hydroxocobalamin and thiamine. The patient had a 55.5 pack-year smoking history and alcohol dependence from age 14, drinking 16 units/day. FOM incisional biopsy and histopathological analysis diagnosed Carcinoma in situ. Treatment involved wide local excision. Specimen analysis revealed two separate foci of pT1 moderately differentiated SCCs. Carcinoma staging scans revealed no pathological lymphadenopathy, no local invasion or metastasis. SCCs had been excised in completion with narrow margins. MDT discussion concluded that in view of the field changes it would be difficult to identify specific areas needing further excision, although techniques such as Lugol's Iodine were considered. Further surgical resection, surgical neck management and sentinel lymph node biopsy was offered. The patient declined intervention, primary management involved close monitoring alongside alcohol and smoking cessation referral. Discussion: Narrow excisional margins can increase carcinoma recurrence risk. Biopsy failed to identify SCCs, despite sampling an area of clinical concern. For gross field change multiple incisional biopsies should be considered to increase chance of accurate diagnosis and appropriate treatment. Coupling of tobacco and alcohol has a synergistic effect, exponentially increasing the relative risk of oral carcinoma development. Tobacco and alcoholic control is fundamental in reducing treatment-related side effects, recurrence risk, and second primary cancer development.

Keywords : microalgae, biofuels, hydrothermal liquefaction, biomass

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