

Detection of p53 mutations on oral squamous cell carcinoma

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Abstrak

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Oral squamous cell carcinoma (OSCC) is the most common malignant tumor of the oral cavity, and its account for 80-90% of all malignancies in oral cavity. The aim of this study was to determine the presence of p53 mutations and to associate these mutations with the histopathological type of OSCC such as well differentiated and poorly differentiated. Analytical observational comparative study by cross sectional design was used. Forty untreated well and poorly differentiated OSCC biopsy sample and normal tissue biopsy material taken from 16 normal patients were analyzed for the presence of mutation in the conserved region of the p53 gene especially in exon 5 by polymerase chain reaction-single strand conformation polymorphism (PCR-SSCP). The results of this study showed that p53 gene mutations were detected in exon 5; 11/40 (27,5%) with heterozygous mutation 9/11 (81,8%). The incidence in exon 5 of p53 gene mutation was significantly associated with well differentiated 2/20 (10%) and poorly differentiated 9/20 (45%) OSCC(P=0,013). This study concludes that 1) mutation in exon 5 of p53 gene occurred frequently in OSCC; 2) exon 5 of the p53 gene could be one of the specific targets for histopathological grade of OSCC; 3) mutation in exon 5 of p53 gene could be important prognostic factor in OSCC.