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Oral cancer in Sudan and the crucial role of the PTEN gene mutation

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ABSTRACT

Objective: This study aimed to screen for mutations in the PTEN gene among Sudanese patients with oral cancer using molecular and immunohistochemical techniques, as well as to identify the frequency of oral cancer patients with PTEN gene alterations. **Methods:** One hundred formalin-fixed, paraffin-processed tissue blocks from patients previously diagnosed with oral cancer, along with their associated data, were obtained from various histopathology laboratories in Khartoum City. **Results:** Among the 100 patients diagnosed with Oral Squamous Cell Carcinomas (OSCCs), 30 patients (30%) exhibited a loss of PTEN expression as determined by immunohistochemical analysis. Among the 30 negative patients, 23 were male and 7 were female. Recombination of exon 9 of the PTEN gene was achieved in all samples from 100 patients. **Conclusion:** The results of this study indicate the involvement of PTEN gene mutation in the etiology of oral cancers in Sudan. Additional studies involving a greater number of exons for the PTEN gene are necessary.

Keywords: Oral cancer, PTEN, Mutation, Sudan