

## ▼ POST GRADUATES ABSTRACTS

### PG - 69 : ESTIMATION OF HEMODYNAMIC PARAMETERS OF ORAL SQUAMOUS CELL CARCINOMA AND CORRELATION WITH TUMOR THICKNESS AND OCCURRENCE OF LOCAL METASTASIS USING COLOR DOPPLER ULTRASONOGRAM – A CASE CONTROL STUDY

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**Introduction:** Oral squamous cell carcinoma (OSCC) is the most common histological type of cancer of the oral cavity, and has an important and well-established pattern of dissemination to cervical lymph nodes. Tumor thickness (TT) has been shown to be one of the most important features in predicting lymph node metastases in oral cancer. Malignant tissues, as a consequence of abnormal morphogenesis, have structurally abnormal blood supplies. Color Doppler Ultrasonography (CDUS) has been widely used to detect blood flow signals. Low-impedance tumor vessel flow is helpful differentiating malignant from benign tumors. Hence, this study is designed to assess the usefulness of CDUS in quantifying (OSCC) vascularization and correlating it with occurrence of local metastasis. **Aim:** To assess the hemodynamic parameters of OSCC and correlating it with the TT and the occurrence of local lymph node metastasis.

**Methods:** A case control study was conducted in which; 90 subjects were enrolled. Group A constituted 45 cases diagnosed with OSCC and Group B constituted 45 healthy controls. Intraoral US was performed using

a high-frequency CDUS probe (14 MHz), to determine the Resistive Index (RI), Pulsatile Index (PI), Peak Systolic Velocity (PSV), End diastolic velocity(EDV) and TT.

**Results:** The mean values for RI was  $0.46 \pm 0.10$ , PI was  $0.94 \pm 0.29$ , PSV was  $24.18 \pm 4.52$ , EDV was  $12.88 \pm 3.60$  in Cases (Group-A) and in controls (Group – B) the RI was  $0.84 \pm 0.08$ , PI was  $2.11 \pm 0.62$ , PSV was  $39.03 \pm 7.96$ , EDV was  $5.76 \pm 3.44$ . A very high significance ( $p = 0.000$ ) difference was noted on comparing the intra-lesional vascular indices in cases and controls. Using Pearson Correlation, it was also observed that TT is inversely related ( $- 0.68$ ) to RI, which was statistically significant ( $p = 0.000$ ).

**Conclusion:** Although Color Doppler evaluation cannot replace the histopathological procedure, it plays a definite role as an adjunct to the clinical evaluation of OSCC and proves its value as an important investigation. CDUSG should be used as the first modality for investigation in OSCC prior to biopsy as a routine protocol