

**BACKGROUND:**

Oral Cancer is a result of disordered cellular behavior initiated by various stimuli which is characterized by the alteration of serum glycoproteins consisting of different monosaccharides. One of the monosaccharides is L-Fucose, a methyl pentose. It is the terminal sugar in most of the plasma glycoproteins. Elevated levels of protein-bound Fucose have been reported in various malignancies as well as in a few chronic systemic diseases.

**AIM:**

To estimate the serum level of L-Fucose among various TNM stages on Oral Cancer patients.

**MATERIALS AND METHODS:**

The study was carried out on 90 subjects, including 30 healthy individuals and 60 Oral Squamous Cell Carcinoma cases. The serum Fucose level estimation was done based on the method as adopted by Winzler. Statistical analysis included Independent Sample's t test, one way ANOVA Test, Karl Pearson correlation test, Tukey HSD Post Hoc test to evaluate the significance and variability of values between groups.

**RESULTS:**

There was a significant increase in mean serum Fucose level in Oral Squamous Cell Carcinoma patients compared to healthy controls. And there was a

progressive rise in L-Fucose levels as the stage of severity increases. Serum Fucose levels were independent of age, sex and Histopathological Grading. The results correlated well with other studies.

**CONCLUSION:**

Serum L-Fucose levels were increased in Oral Cancer patients compared to healthy individuals and a positive correlation was observed between serum L-Fucose levels and the stages of Oral Cancer. Therefore it was concluded that serum L-Fucose can be used as an effective diagnostic biomarker in Oral Squamous Cell Carcinoma patients.

**KEY WORDS:**

Oral Cancer, Squamous Cell Carcinoma, Tumor Marker, L-Fucose