Author-Krishna Kumar Dhankhoti, Dr. SUJA VENUGOPAL, S M Karuna

ABSTRACT

TITLE: IMPACT OF SYN-PROPANETHIAL-S-OXIDE (C_3H_6OS) IN BASAL TEAR SECRETION

Background: Syn propanethial-S-oxide is a component in onion. Its an extrinsic component which stimulates the production of tear while cutting onion. Our study aims to find out, if it has an impact on basal tear secretion, in quality or / and quantity.

Aim: Impact of syn propanethial-S-oxide on basal tear secretion.

Objective: To find out the impact of syn propanethial-S-oxide in basal tear secretion, in quantity or quality of tear

Methods & Methodology: A prospective study was carried out among 50 Sankara College of Optometry students in Bangalore. Data were analyzed using SPSS Version 20. Paired "t" test was carried out for statiscal analysis.

Results: The mean age of respondents was 20.62 ± 3.386 year. There were females (50%) and males (50%).The mean value of TBUT before cutting onion for OD and OS was 9.30±5.40 and 8.96±4.00, respectively. The mean value of TBUT after cutting onion for OD and OS was 10.44±4.79 and 9.70±4.33, respectively. The mean value of TBUT after using anesthesia drops and cutting onion, for OD and OS was 8.56±3.67 and 8.46±3.87, respectively. The mean value of SCHIRMER before cutting onion for OD and OS was 31.94±6.69 and 31.40±7.73, respectively. The mean value of SCHIRMER2 before cutting onion for OD and OS was 26.06±9.29 and 26.46±9.21, respectively. The mean value of SCHIRMER after cutting onion for OD and OS was 33.54±4.01 and 32.78±5.09, respectively. The mean value of SCHIRMER after using anesthesia drops and cutting onion for OD and OS was 24.06±10.45 and 24.22±9.44, respectively. SCHIRMER after cutting onion showed a significance of $p \leq 0.05$ where as other groups were insignificant.

Discussion: In this gender based study, the TBUT values with respect to OD and OS, for some reason both males and females showed less changes in the left eye with the severity of dryness. On the other hand OD, showed difference in TBUT values in males and females. The diagnostic tools TBUT and SCHIRMER'S can help to identify dryness and categorize the extent of dryness, too. According to the prevalence study, TBUT showed 100% reproducibility and SCHIRMER'S showed more than 98%reproducibility.The present study showed that cutting of onion can improve basal and reflex tear secretions.

Conclusion: Syn propanethial S oxide does help in tear secretion as an extrinsic component, though not qualitatively but quantitavely and had no significant impact on basal tear secretion.