A survey was carried out in 20 sample sites of rural, urban and tea garden labourers population in 3 districts of Assam to study the prevalence of anterior segment ocular pathology due to vitamin A deficiency in children, 0 - 12 years of age. A random study was also done in the eye and paediatric out patient departments of Gauhati Medical College Hospital, to study the same in children attending these departments.

A total of 5039 children were examined in the entire sample sites.

The prevalence of anterior segment ocular lesion due to vitamin A deficiency in children was found to be 11.27%. The prevalence was found to be more in tea gardens (19.2%) than the rural (9.5%) and urban (8.27%) areas. The prevalence of the same in children attending the eye and paediatric out patient departments was found to be 34.24% and 7.03% respectively.

Male children were found to have suffered more than female children in all these localities, the ratio being, 2 : 1. In the eye and paediatric out patient departments the ratio of male : female was 1.3 : 1.

Xerophthalmia was found to be more prevalent in the 3 - 12 years age group in all these sample sites as well as paediatric out patient department. But, it was
observed that children attending the eye out patient department, suffered more in the age group of 3 - 5 years due to xerophthalmia. The children of tea garden areas suffered more in below 5 years age group also (12.6%) than those of rural (7.4%) and urban (3.4%) areas.

In searching for the different grades of xerophthalmia in all the sample sites, it has been observed that more than 90.0% of the cases belonged to X0 and X1 grades. There were 2 (0.04%) cases of corneal xerosis (X2), 3 (0.06%) cases of corneal xerosis with ulceration (X3A) and 8 (0.15%) cases with healed corneal scars (X4). There was not a single case of active keratomalacia (X3B) detected in the entire sample survey.

But in the eye out patient departments 43.7% of the cases had severe degrees of xerophthalmia, keratomalacia and healed keratomalacia scars (X3A, X3B and X4). The prevalence of xerophthalmia in various grades was almost similar as those of the entire sample sites.

It has been observed in our survey that children coming from poor families were affected more due to xerophthalmia.

Regarding the seasonal variation, it has been observed that xerophthalmia was more prevalent in the months of May to October (Summer and Autumn seasons) than the months
of November to April (Winter and Spring seasons) in rural and tea garden areas. But in urban areas two peaks in the incidence of xerophthalmia have been observed—one in the months of May to July (Summer) and the other in the months of February to April (Spring).

CONCLUSIONS

The present survey shows that the prevalence of anterior segment ocular pathology due to vitamin A deficiency in children is quite high in Assam, as to draw public health importance. This clinical prevalence survey has been found to be useful in determining the magnitude and age, sex, seasonal and geographical distributions of the ocular lesions due to vitamin A deficiency in Assam.