**OP 14: High serum total IgE in children in geohelminthic endemic setting**

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Background: Elevated levels of total IgE (tlgE) in serum are characteristic of atopic diseases. However,

the usefulness of tlgE in diagnosing atopic diseases in children living in areas endemic for helminth

infections is not well established.

Objective: To assess the effect of geohelminth infections on serum tlgE levels in children with atopic

diseases.

Design, setting and methods: A total of 640 children in grade 5 were recruited from 17 schools in the

Western Province. Data regarding atopic diseases were collected by a standard questionnaire. Screening for

helminth infections was done by examining their stool samples by modified Kato-Katz technique. Serum

tlgE was measured by fluoroenzymeimmunoassay.

Results: The mean age in the study population was 10 years (SD±0.3). The prevalence of geohelminth

infection was 15.5%. *Trichuris trichiura* (14.3%) was the most common, followed by *Ascaris lumbricoides*

(4.2%) and hookworm (0.2%). Mixed infection was detected in 20.3% of infected children. The cumulative

prevalence of atopic diseases was 33.7%. Prevalence of asthma, rhinitis and eczema was 17%, 21.4% and

5% respectively. Geometric mean (GM) for tlgE for the geohelminth infected group (1039.9kU/L) was

significantly higher than that of the non-infected group (575.4kU/L) (p=0.004). It was also higher in the

allergic group (933.3kU/L) than in the non-allergic group (639.7kU/L) but the difference was not

statistically significant (p=0.068).

Conclusion: In the presence of geohelminth infections, raised IgE may be due to geohelminth infection or

atopic diseases or both. Therefore, serum tlgE may not be a useful marker for allergic diseases in children

living in areas endemic for geohelminth infections.