Pediatric Rheumatology

Poster presentation

Serum and urine nitric oxide levels in children with Henoch-Schonlein Purpura during activity and remission – a study from North India

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Objective

To compare serum and urine reactive nitrogen intermediates (RNI) and citrulline levels in children with Henoch-Schonlein Purpura (HSP) during activity and remission.

Methods

The study group consisted of 14 children with biopsy proven HSP. We measured serum and urine RNI and citrulline levels by spectrophotometry in the active phase and after remission.

Results

Serum RNI levels were 303.95 ± 221.44 nmol/ml in children with active HSP and 72.57 ± 26.56 nmol/ml during remission, the differences being statistically significant (p = 0.002). Mean urine RNI levels in children with active HSP were significantly higher than that seen during remission (3.25 ± 1.80 vs. 1.68 ± 0.65 nmol/ml; p = 0.003). Similarly, serum citrulline levels during disease activity were 790.65 ± 707.87 nmol/ml as compared to 281.49 ± 307.29 nmol/ml at the time of remission, the differences being statistically significant (p = 0.002). Mean urine citrulline levels in children with active disease was 1969.94 ± 1655.42 nmol/ml as compared to 1099.34 ± 955.82 nmol/ml in children with remission, (p = 0.007).

Conclusion

Serum and urine RNI and citrulline levels were significantly higher during the active phase of HSP. These findings suggest that nitric oxide may perhaps have a role in the pathogenesis of HSP. Further, these laboratory parameters could be of value in monitoring disease activity.