

## A study of correlation of high sensitivity C reactive protein levels with asthma control in children.

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### Abstract:

**Background:** Childhood asthma appears to be increasing in prevalence despite advancements in the care of asthma. In asthma, local as well as systemic inflammation contributes to the pathogenesis. Thus successful management depends on controlling this inflammation by appropriate doses of inhaled corticosteroids. High sensitivity C reactive protein (hsCRP) is an easily measurable marker of inflammation and its level can be used as a diagnostic tool in assessing control of asthma. The objective of this study was study the correlation of serum hsCRP levels with asthma control in children. **Methods:** It is an observational study conducted in the Pediatric asthma clinic of B. J. Medical College and Civil hospital Ahmedabad. The study population consists of 95 asthmatic children aged 3-12 years. Children with persistent asthma were classified into three groups based on GINA guidelines. Serum hsCRP levels were measured in all the three groups. **Results:** Among the 95 children 35(36.84%) belonged to controlled group, 30(31.57%) to uncontrolled group and 30(31.57%) to partially controlled group. There was a significant difference in hsCRP levels between controlled and uncontrolled groups. The mean value of hsCRP in controlled group was  $0.93 \pm 1.3$  mg/L while as in the uncontrolled group it was  $2.73 \pm 2.46$  mg/l. Higher levels of hsCRP were found in the uncontrolled asthma group. **Conclusion:** There is a universal correlation between hsCRP levels and asthma control in children. The objective of study is that high hsCRP levels have a potential to be used as a surrogate marker for poor control of asthma and can thus be used as a guide for adjustment of dosage of inhaled corticosteroids.

**Key Words:** Asthma control, Correlation, GINA guidelines, hsCRP.

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