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**Celiac Disease in Children with Moderate-to-Severe Iron-deficiency Anemia**

[Manish Narang](https://pubmed.ncbi.nlm.nih.gov/?term=Narang+M&cauthor_id=29396932)[1](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-1), [Ravikumar Natarajan](https://pubmed.ncbi.nlm.nih.gov/?term=Natarajan+R&cauthor_id=29396932)[2](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-2), [Dheeraj Shah](https://pubmed.ncbi.nlm.nih.gov/?term=Shah+D&cauthor_id=29396932)[2](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-2), [Amarender Singh Puri](https://pubmed.ncbi.nlm.nih.gov/?term=Puri+AS&cauthor_id=29396932)[3](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-3), [Vikas Manchanda](https://pubmed.ncbi.nlm.nih.gov/?term=Manchanda+V&cauthor_id=29396932)[4](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-4), [Mrinalini Kotru](https://pubmed.ncbi.nlm.nih.gov/?term=Kotru+M&cauthor_id=29396932)[5](https://pubmed.ncbi.nlm.nih.gov/29396932/#full-view-affiliation-5)

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* PMID: 29396932

**Abstract**

**Objective:**To evaluate the proportion of children with moderate to severe iron-deficiency anemia who have associated celiac disease.

**Methods:**This cross-sectional analytical study was conducted among children aged 1 to 12 years of age with moderate-to-severe iron deficiency anemia and control children without anemia. Serum IgA-tissue trans-glutaminase levels were assessed in both cases and controls. All children with positive celiac serology underwent upper gastrointestinal endoscopy and duodenal biopsy; biopsy finding of Marsh grade 3 was considered positive for celiac disease.

**Results:**There were 152 anemic children and 152 controls with mean (SD) hemoglobinof 7.7 (1.8) and 12.2 (0.74) g/dL, respectively. 16 (10.5%) cases and 3 (2%) control patients had positive serology for celiac disease [OR (95% CI) 5.33 (1.52-18.67), P=0.007]. Six (3.9%) children with iron-deficiency anemia and none of the controls had biopsy features diagnostic of celiac disease.

**Conclusion:**In the Northern Indian tertiary-care hospital outpatient setting, Celiac disease was associated with 4% of children presenting with moderate-to-severe anemia.

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