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## Celiac disease with tooth enamel defects

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**Objective:** The purpose of this study is to highlight the common tooth enamel of celiac disease and to provide practicing physicians and dentists with clinical knowledge for managing patients suspected of having this disorder.

**Introduction:** Celiac disease is the most common genetically related food intolerance, worldwide. Celiac disease is a multifactorial, autoimmune disorder that occurs in genetically susceptible individuals. It is triggered by a well identified environmental factor (gluten in wheat, rye and barley). The disease primarily affects the small intestine, where it progressively leads to flattening of the small intestinal mucosa. Because of the destruction of the villi, nutrients are unable to be successfully digested and a person can suffer from malnutrition and dental defects in permanent teeth. Dental enamel defects that develop in celiac disease and the number of teeth affected is strongly associated with the time of onset of the symptoms and the age at which a gluten free diet is initiated. They tend to occur symmetrically and chronologically in all four sections of dentition with more defects seen in the maxillary and mandibular incisors and molars. Both hypoplasia and hypomineralization of the enamel can occur. A band of hypoplastic enamel is common, often with intact cusps. Specific enamel defects can include pitting and grooving and sometimes there is complete loss of enamel.

**Inclusion Criteria:** Pediatric patients of age 5 to 10 years regardless of gender presenting to pediatric clinic and dental clinic of tertiary care hospitals of Karachi with principal complain of decreased appetite, poor growth with delayed tooth eruption and teeth discoloration were included.

**Exclusion Criteria:** Children on medications such as aspirin and antihistamines were excluded from the study.

**Methodology:** This analytical study was conducted from June 2014-June 2016. Pediatric patients of 5 to 10 years of age were recruited in this study. A history and examination form designed from an application "Forms", particularly for the study. Children were tested for tissue transglutaminase (tTG) to confirm the disease and also a complete dental check-up was performed to assess the relation between two conditions. For data analysis SPSS 16.0 software was used.

**Results:** The overall prevalence of systemic dental enamel defects in celiac disease patients with mixed or permanent dentition ranges from 8.5% to 96.9% (mean 54.7%); in patients with deciduous teeth, prevalence is 4.8% to 12.9% (mean 7.9%). The common observed defects were: Defects in color of enamel: (single or multiple) cream, yellow or brown opacities; Slight structural defects: Rough enamel surface, horizontal grooves, shallow pits; Evident structural defects: Deep horizontal grooves, large vertical pits and Severe structural defects: Shape of the tooth is altered.

**Conclusion:** The mouth is considered to be the doorway to the gut. Physicians may examine the oral cavity of patients as part of the physical examination, but they seldom assess the teeth. Also, they may not be trained to recognize dental abnormalities. Therefore, family dentists' coordination with physicians can play an important role in identifying patients who should be screened for celiac disease.

## Biography

Sonia Shahid is currently a MBBS student of Karachi Medical and Dental College, Pakistan. She has attended several national and international seminars and conferences. She has good knowledge of clinical practices and protocols in variety of settings. She is an inquisitive student with a passion for education as a power for change and improvement in the healthcare field of her country.

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