

## **ORAL LESIONS OF GASTROINTESTINAL DISEASES IN PAEDIATRIC POPULATION**

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### **ABSTRACT**

*Gastrointestinal disorders of inflammatory / infectious / genetic multifactorial might lead to oral manifestations of hard and soft tissues*

**KEYWORDS:** *Gastrointestinal Diseases*

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### **Article History**

**Received: 22 Jun 2024 | Revised: 24 Jun 2024 | Accepted: 30 Jun 2024**

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### **INTRODUCTION**

Gastrointestinal diseases reflect in oral cavity. Delayed eruption of teeth occurs due to gastrointestinal disorders. Dental erosion occurs in 22% of paediatric population within age limit of 4 years whereas it is of 44% in age group of 12 years<sup>1</sup>.

### **GASTROINTESTINAL DISEASES**

#### **Crohns Disease**

It is a bowel disease of inflammatory origin affecting the oral cavity to the anus region. Autoimmunity and or allergens might form the etiology. Males are more affected than females. Non caseating granulomas are seen in the bowel wall. Angular stomatitis, gingivitis, ulceration and angular cheilitis form the oral counterpart. Non steroidal anti-inflammatory analgesics, prednisone, imiximab are used in the management category<sup>2,3</sup>.

#### **Ulcerative Colitis**

Rectum and upper part of colon are affected in this inflammatory bowel disease. Pyostomatitis vegetans is the pathognomonic feature. Snail track ulcers, pustules are seen. Glossitis, stomatitis, ulceration, lichen planus and gingivitis form the oral counterpart. Mesalazine, steroids, dapsone and oral antiseptic mouth rinses of chlorhexidene and ileostomy are therapeutic options<sup>4,5</sup>.

#### **Gastro Esophageal Reflux Disease**

Defective relaxation of lower oesophageal sphincter is the main faulty mechanism leading to backflow of acids in esophagus and pharynx finally this result in cough, heartburn, regurgitation, asthma and laryngitis. Xerostomia, burning mouth syndrome, ulcers, halitosis and erosion forms the oral counterpart. The oral manifestations are erosion, sour taste, burning mouth, ulcers, mucositis, halitosis and xerostomia. Proton pump inhibitors and life style changes are important in the treatment aspect<sup>6,7</sup>.

### **Gardner Syndrome**

Defective chromosome 5 is the main etiology. Intestinal polyposis is the characteristic feature followed by epidermoid cysts, jaw enostosis, supernumerary teeth, unerupted teeth, odontomas and osteomas. Esthetic and functional correction need to be done along with surgical removal<sup>8,9</sup>

### **Peutz Jeghers Syndrome**

Main etiology is of LKB 1 gene. Hamartomatous polyps of small intestine are the pathognomonic features. Pigmentation and freckles are seen in relation to buccal mucosa, labial mucosa and tongue. Laser therapy form the main management part<sup>10</sup>.

### **Jaundice**

Accumulation of excess bilirubin leads to yellow discoloration of skin and oral mucosa. In case of biliary atresia patients, yellow to green pigmentation is seen in teeth in paediatric population with hyperbilirubinemia<sup>11</sup>.

### **Mal Absorption Conditions**

Disease includes iron deficiency anemia and vitamin B12 deficiency in pernicious anemia. Oral features include glossitis, involving fungi form and filiform papillae along with glossopyrosis, angular cheilitis and ulceration. Iron and vitamin B12 supplements are used in the therapeutic segment<sup>12</sup>.

### **Metastases**

Haematogenous route plays an important role in spreading of malignant neoplasm of liver and gastrointestinal tract to posterior region of mandible. Oral manifestations include pain in relation to teeth, jaw, mobility of teeth and paraesthesia<sup>13</sup>.

### **Coeliac Disorder**

Occurs due to immune reaction to alpha gliaden component of gluten leading to loss of surface area and mucous villous atrophy in the small bowel region involving HLA-DQ2 and HLA-DQ8 genes. This relates to the prevalence of HLA -DQ2 and 14 HLA-DQ8 genes in the populations affected. Oral manifestations include dental caries, enamel hypoplasia, herpetic ulcerations, glossitis, apthous ulceration and glossodynia. Management component includes avoidance of gluten in diet<sup>14</sup>.

### **Cystic Fibrosis**

Pancreatic disorder affecting digestion and absorption mechanism due to deficiency in CFTR protein which is responsible for regulation of sodium-chloride movement across cell membranes leading to highly viscous mucous secretions. Oral manifestation include dental caries, gingivitis and oral ulcerations. Therapeutic part includes oral pancreatic enzyme supplements<sup>15</sup>.

## **CONCLUSIONS**

Combined knowledge of gastrointestinal diseases and dental disorders are important in treating patients with gastrointestinal disorders with a focus on oral complications.

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