

## **Duodenal Ulcer in Children**

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**Abstract:** This article explores the clinical course, diagnostic approaches, and treatment of duodenal ulcer in children. The findings indicate that although the disease is rare in pediatric populations, it presents significant diagnostic and therapeutic challenges. Factors such as gastric acid secretion, body weight, and age play a crucial role in the development and severity of the disease.

**Keywords:** Pediatric gastroenterology, duodenal ulcer, gastric acid secretion, diagnosis, radiological imaging, surgery, clinical symptoms, dyspepsia, psychosomatic factors, early detection, treatment challenges, disease recurrences.

### **Introduction**

Duodenal ulcer in children is a rare but serious disease. In medical practice, a cautious and slow approach is observed towards this condition, as it can overlap with many other gastroenterological problems. In making a diagnosis, not only general practitioners but also specialists in the field sometimes experience difficulties.

Medical literature notes that this disease is very rarely encountered. For example, some researchers have identified only a few cases among thousands of patients. Nevertheless, in recent years, there has been a tendency of increased detection of this disease in children.

Recent studies have reported dozens of children with this disease in various regions. It has been particularly noted that during the neonatal and infant periods, the disease progresses severely, often manifests with internal bleeding, and is associated with a high risk of mortality. However, these age groups were not included in the current research scope, as the causes and clinical course of the disease in this period are fundamentally different.

The main analysis group — children and adolescents — experiences a clinical course of duodenal ulcer similar to that of adults. The symptoms of the disease, its clinical progression, and even the complications that arise may be nearly identical.

The main goal of the study is to determine the factors under the influence of which this disease develops in children. In particular, psychosomatic factors — that is, the effects of psychological-emotional states on physical health — may also play an important role in children. In this regard, previous studies have paid special attention to these factors.

It can be said that the increasing cases of duodenal ulcer in children require physicians to pay more serious attention to this issue. Early diagnosis of the disease, correct understanding of its causes, and taking effective treatment measures are of great importance for children's health.

When duodenal ulcer is observed in children, the following situations occur: patients undergo thorough examinations, and for most of them, the diagnosis is made using radiological methods.

In diagnosis, clear deformation of the intestinal wall or the presence of an ulcer crater serves as the main criterion. A diagnosis is not made based on indirect signs alone. Also, in some cases, this disease may be discovered incidentally during necropsy or surgery.

Usually, patients diagnosed with this disease are under the age of 13, and most of them are examined by the same radiology specialist. This ensures accuracy and consistency in diagnosis. In general, a cautious and systematic approach based on precise criteria is of great importance in diagnosing this disease.

Although duodenal ulcer in children is rare, its diagnosis and treatment require a deep approach. When symptoms of the disease are identified, it is important to use modern methods for early diagnosis. This increases the possibility of preventing complications of the disease and restoring the patient's health.

The results of the study showed that the level of gastric acid secretion, the patient's age, and body weight are associated with the development and severity of the disease. As age increases, the maximum acid secretion also increases, and this indicates a statistically significant positive correlation. In addition, dyspeptic symptoms and clear radiological signs play an important role in the early and accurate diagnosis of the disease.

Therefore, a systematic, multi-stage, and deep clinical approach is necessary for the diagnosis and treatment of duodenal ulcer in children. This not only ensures the early detection of the disease but also helps prevent its ineffective treatment.

In children with duodenal ulcer, the level of gastric acid secretion has been reported differently in previous studies. In some studies, hypersecretion was rare, but because they did not use the maximal histamine stimulation test, the results are difficult to evaluate completely. Later studies using enhanced histamine testing found that the maximum acid secretion in ulcer patients was higher than in healthy children, and this indicator was shown to be associated with ulcer activity.

In study, although the level of acid secretion in children with ulcers was slightly higher, the difference was not statistically significant. It is not easy to directly link ulcer activity and maximum acid secretion, since the number of patients without symptoms for a long time was limited.

One of the interesting cases is that the maximum acid secretion values reported in other sources were lower than those of the patients in the present study, and this difference is explained by differences in body weight. At the same time, an increase in gastric acid secretion with age is observed, which shows consistency with previously published scientific observations.

The clinical manifestations do not differ from those in adults and mainly appear as periodic pain in the epigastric area and dyspeptic symptoms. The pain usually occurs before meals or at night, and is relieved by food or alkaline substances. The symptoms depend on the child's ability to express themselves and the observations of the parents, and in some cases, it is difficult to obtain clear symptomatic descriptions.

In a patient who underwent surgery, no negative changes were observed in growth and development, which contradicts previous assumptions about growth retardation resulting from childhood gastric surgery.

As for the long-term course of the disease, in many patients, the persistence or recurrence of symptoms has been identified, showing that there are difficulties in treating duodenal ulcer in childhood.

## **Conclusion**

Duodenal ulcer in children is a rare but serious condition that requires careful and systematic diagnosis and treatment. Although uncommon, recent studies show an increasing incidence, especially in children and adolescents, with clinical presentations similar to adults. Psychological and emotional factors may influence the disease's development in children. Early detection using

modern methods is crucial to prevent complications and ensure effective treatment. Research highlights a correlation between gastric acid secretion, age, and disease severity. Clinical symptoms primarily include periodic epigastric pain and dyspepsia, often relieved by food or alkaline substances. Treatment challenges remain due to symptom persistence or recurrence in many pediatric cases.

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