CLINICAL FEATURES AND COURSE OF HIRSCHSPRUNG'S DISEASE IN YOUNG CHILDREN

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Abstract

Hirschsprung's disease is a congenital disorder of the intestine that can cause serious digestive problems in children from the first days of life. The disease occurs when nerve cells are absent from a part of the bowel, preventing normal movement of intestinal contents. Early recognition of the disease is important because delayed diagnosis may lead to intestinal obstruction, inflammation, and other complications. This article discusses the clinical features and course of Hirschsprung's disease in newborns, infants, and young children. Particular attention is given to the most common symptoms, including delayed passage of meconium, persistent constipation, abdominal distension, vomiting, and feeding difficulties. The clinical presentation may vary depending on the child's age, the length of the affected bowel segment, and the severity of intestinal dysfunction. In some children, symptoms appear immediately after birth, while in others, the disease becomes more noticeable during infancy or early childhood. The article also highlights the importance of timely diagnosis, careful clinical assessment, and appropriate treatment. Understanding the clinical course of Hirschsprung's disease can help healthcare professionals recognize the condition earlier, reduce the risk of complications, and improve the quality of life of affected children.

Keywords: *Hirschsprung's disease, young children, newborns, congenital megacolon, intestinal obstruction, chronic constipation, clinical symptoms, early diagnosis, pediatric surgery.*

Relevance of the Study

Hirschsprung's disease remains an important problem in pediatric surgery because it affects normal bowel function from the earliest stages of life. Although the disease is relatively rare, occurring in approximately one out of every 5,000 live births, it may cause serious health problems if it is not recognized and treated in time. Children with this condition often develop difficulties with bowel movements, abdominal distension, and other digestive symptoms. The severity of these problems may differ from one child to another, which sometimes makes early diagnosis difficult. Understanding how the disease develops and presents in young children is therefore important for choosing the right diagnostic and treatment approach [1, 2].

The first clinical signs of Hirschsprung's disease usually appear during the neonatal period. One of the most common warning signs is the delayed passage of meconium during the first 24-48 hours after birth. Other symptoms may include abdominal swelling, vomiting, poor feeding, and difficulty passing stool. However, not every child develops the same symptoms at the same time. Some newborns show clear signs of intestinal obstruction, while others have less noticeable problems that gradually become more severe. This difference in clinical presentation may delay diagnosis, especially when constipation is initially considered a common digestive problem of infancy [4, 12].

Clinical observations have shown that the course of Hirschsprung's disease depends on several factors, including the child's age, the extent of the affected bowel, and the severity of intestinal dysfunction. In some infants, symptoms become evident immediately after birth and require urgent medical attention. In others, constipation and abdominal distension may continue for several months before the underlying cause is identified. Such children may experience feeding difficulties, poor weight gain, and repeated episodes of bowel dysfunction. These differences highlight the importance of careful evaluation of persistent digestive symptoms in young children rather than relying on a single clinical sign [5, 6].

One of the most serious problems associated with Hirschsprung's disease is Hirschsprung-associated enterocolitis. This complication may develop before or after surgical treatment and can rapidly worsen the child's condition. Its clinical signs include abdominal distension, diarrhea, fever, vomiting, and general weakness. In severe cases, enterocolitis may lead to dehydration, sepsis, and other life-threatening complications. Because the early symptoms may resemble other intestinal disorders, timely recognition and appropriate treatment are essential. Previous studies have emphasized that parents and healthcare professionals should be aware of the warning signs, particularly during infancy [7, 8, 9].

Despite improvements in diagnostic methods, delayed recognition of Hirschsprung's disease continues to be a concern in clinical practice. Children with mild or gradually developing symptoms may undergo repeated treatment for constipation before the correct diagnosis is established. This can prolong intestinal dysfunction and affect the child's nutritional status and general well-being. A careful review of the child's medical history, the time of the first bowel movement after birth, and the progression of symptoms can help identify children who require further investigation. Modern clinical recommendations also emphasize the importance of a clear diagnostic pathway and timely referral to specialized pediatric centers [3, 6].

Surgical treatment is the main approach used to restore bowel function in children with Hirschsprung's disease. However, successful surgery does not always mean that all digestive problems disappear. Some children continue to experience constipation, abdominal discomfort, or problems with stool control after treatment. These difficulties may affect daily activities and quality of life as the child grows older. Long-term follow-up studies have shown that regular clinical assessment and individually planned bowel management remain important parts of patient care. Early recognition of functional problems may help reduce complications and improve treatment outcomes [10, 11].

For these reasons, studying the clinical course of Hirschsprung's disease in young children remains relevant in modern pediatric practice. Particular attention should be given to the age at which symptoms first appear, the nature and severity of digestive complaints, the reasons for delayed diagnosis, and the development of early complications. A better understanding of these features may help pediatricians and pediatric surgeons recognize the disease sooner, choose appropriate diagnostic methods, and provide timely care. Such an approach is especially important during the first years of life, when persistent intestinal dysfunction can negatively affect a child's growth, nutrition, and overall development [1, 3, 4].

Aim of the study

The aim of this study is to investigate the clinical features and course of Hirschsprung's disease in young children, with particular attention to the age of symptom onset, the nature and severity of clinical manifestations, diagnostic difficulties, and associated complications, in order to improve early recognition of the disease and timely medical care.

Materials and methods

The study included 25 children diagnosed with Hirschsprung's disease who were treated at the Department of Pediatric Surgery of the Children's Hospital of Andijan State Medical Institute, Uzbekistan. The main focus of the study was to examine the clinical features of the disease, its course in young children, and the difficulties associated with early diagnosis.

The study was based on the review of patients' medical histories, clinical symptoms, physical examination findings, and available diagnostic records. Particular attention was given to the age at which the first symptoms appeared, the duration of the disease before diagnosis, and the general condition of the children at the time of hospital admission.

The main clinical symptoms evaluated included delayed passage of meconium, persistent constipation, abdominal distension, vomiting, feeding

difficulties, and poor weight gain. The presence of intestinal obstruction, Hirschsprung-associated enterocolitis, and other complications was also considered.

To better understand the clinical course of the disease at different ages, the children were divided into three groups: newborns aged 0-28 days, infants aged 29 days to 12 months, and children aged 13-36 months. The clinical manifestations and progression of the disease were examined separately in each age group.

Diagnosis was evaluated on the basis of clinical examination, medical history, and available diagnostic findings, including abdominal radiography, contrast enema, and rectal biopsy results. Particular attention was paid to the relationship between the first clinical symptoms, the time of diagnosis, and the development of complications.

The study focused on identifying the most characteristic clinical manifestations of Hirschsprung's disease in young children and understanding the factors that may contribute to delayed diagnosis and a more complicated course of the disease.

Results

The study included 25 children diagnosed with Hirschsprung's disease who were treated at the Department of Pediatric Surgery of the Children's Hospital of Andijan State Medical Institute, Uzbekistan. The clinical evaluation focused on the age of the patients, the first signs of the disease, the main complaints at admission, diagnostic findings, and complications associated with impaired intestinal function.

The patients included 14 girls (56.0%) and 11 boys (44.0%). For the assessment of age-related clinical features, three age groups were considered: newborns aged 0-28 days, infants aged 29 days to 12 months, and children aged 13-36 months. This division was used to examine the clinical presentation of Hirschsprung's disease during different stages of early childhood.

Table 1.

Age and sex distribution of children with Hirschsprung's disease (n=25)

Characteristics	Number	Percentage (%)
Age groups*		
0-28 days	8	32%
29 days-12 months	11	44%
13-36 months	6	24%
Total	**25**	**100%**
Sex		
Girls	14	56%
Boys	11	44%
Total	**25**	**100.0**

The next stage of the study focused on the first clinical manifestations of Hirschsprung's disease. Particular attention was given to delayed passage of meconium, constipation, abdominal distension, vomiting, feeding difficulties, and poor weight gain. These symptoms were considered important because they may indicate impaired intestinal movement and delayed passage of bowel contents.

The medical histories were reviewed to establish when the first symptoms appeared and how the child's condition changed before admission. The relationship between the onset of symptoms and the age at diagnosis was also examined. This approach was important for identifying children in whom the disease may initially have been mistaken for functional constipation or another digestive disorder.

Table 2.

Clinical manifestations evaluated in children with Hirschsprung's disease

Clinical manifestations	Number of patients	Percentage (%)
Delayed passage of meconium	19	76%
Persistent constipation	23	92%
Abdominal distension	21	84%
Vomiting	13	52%

Feeding difficulties	12	48%
Poor weight gain	9	36%
Abdominal discomfort	11	44%

An important aspect of the clinical evaluation was the variation in symptoms between different age groups. In newborns, the assessment focused mainly on delayed passage of meconium, abdominal distension, vomiting, and signs of intestinal obstruction. The presence of these symptoms during the first days of life was considered an important reason for further examination.

In infants aged 29 days to 12 months, attention was paid to persistent constipation, recurrent abdominal distension, difficulties during feeding, and changes in body weight. The duration of symptoms was also reviewed to establish whether intestinal problems had been present since birth or had become more noticeable later.

In children aged 13-36 months, the assessment focused on chronic constipation, recurrent abdominal distension, abdominal discomfort, and the need for repeated treatment of bowel problems. The medical histories were examined for previous episodes of constipation and delays in establishing the diagnosis.

These age-related clinical characteristics were evaluated to understand how the disease presented during early childhood and whether the nature of complaints changed as the children grew older.

Table 3.

Age-related assessment of clinical symptoms

Clinical manifestations	0-28 days (n=8)*	29 days-12 months (n=11)*	13-36 months (n=6)*	Total (n=25)
Delayed meconium passage	7	8	4	19
Constipation	7	10	6	23

Abdominal distension	7	9	5	21
Vomiting	6	5	2	13
Feeding difficulties	5	5	2	12
Poor weight gain	1	5	3	9

The diagnostic evaluation was another important part of the study. Clinical findings were considered together with the results of available diagnostic examinations. Particular attention was given to abdominal radiography, contrast enema, and rectal biopsy findings.

Abdominal radiography was reviewed for evidence of bowel distension and possible intestinal obstruction. Contrast enema findings were assessed for changes in bowel diameter and the possible presence of a transition zone. Rectal biopsy findings were considered particularly important because the diagnosis of Hirschsprung's disease requires histological confirmation of the absence of ganglion cells.

The diagnostic history was also reviewed to determine whether the children had undergone previous examinations or received treatment for persistent constipation before Hirschsprung's disease was recognized.

Table 4.

Diagnostic findings assessed in the study

Diagnostic characteristics	Number of patients
Clinical suspicion of Hirschsprung's disease at admission	20
Bowel distension on abdominal radiography	21
Suspected transition zone on contrast enema	19
Histologically confirmed aganglionosis	25
Previous treatment for constipation before diagnosis	15
Evidence of intestinal obstruction	12

The course of Hirschsprung's disease was also assessed in relation to the development of complications. Particular attention was paid to intestinal obstruction and Hirschsprung-associated enterocolitis, which are among the most important complications in children with this condition.

The clinical records were reviewed for episodes of increasing abdominal distension, vomiting, reduced stool passage, diarrhea, fever, and deterioration in the child's general condition. These findings were considered when evaluating possible intestinal obstruction or enterocolitis.

The timing of complications was also examined. Complications present at the time of admission were considered separately from those developing during treatment. This distinction was important for evaluating the clinical condition of the children before treatment and the course of the disease during hospitalization.

Table 5.

Complications evaluated in children with Hirschsprung's disease

Complications	Number of patients
Intestinal obstruction	12
Hirschsprung-associated enterocolitis	6
Severe abdominal distension	10
Dehydration	5
Feeding intolerance	8
Other documented complications	3

The duration of symptoms before diagnosis was evaluated as a separate aspect of the clinical course. The medical histories were reviewed to identify children whose symptoms began during the neonatal period but whose diagnosis was established later. Particular attention was paid to repeated constipation, temporary improvement after symptomatic treatment, and recurrence of digestive complaints.

The study also considered the possible relationship between delayed diagnosis and the severity of symptoms at hospital admission. Children with prolonged bowel

dysfunction were assessed for abdominal distension, feeding difficulties, poor weight gain, and signs of intestinal obstruction.

In addition to the clinical features, the available treatment records were reviewed to describe the general management of the patients. The assessment focused on the condition of the children at admission, the need for bowel decompression, preparation for definitive treatment, and the presence of complications requiring additional care.

The study was primarily directed toward understanding the clinical course of Hirschsprung's disease in young children rather than comparing surgical techniques. Therefore, the main attention was given to the early manifestations of the disease, differences between age groups, and the clinical circumstances that may influence timely diagnosis. Overall, the evaluation of the 25 children was structured around several important clinical questions: when the first symptoms appeared, which complaints were most common at presentation, how the disease manifested in different age groups, and which complications occurred before or during treatment. The completed analysis of these characteristics will provide a clearer description of the clinical course of Hirschsprung's disease in young children treated at the study hospital. It may also help identify practical warning signs that deserve particular attention during the early assessment of children with persistent constipation and other symptoms of intestinal dysfunction.

Conclusion

Hirschsprung's disease remains an important clinical problem in young children because its symptoms may appear during the first days of life or develop gradually over the following months. The study included 25 children treated at the Department of Pediatric Surgery of the Children's Hospital of Andijan State Medical Institute, including 14 girls (56.0%) and 11 boys (44.0%).

The clinical assessment focused on persistent constipation, abdominal distension, delayed passage of meconium, vomiting, feeding difficulties, and poor weight gain. These symptoms are important warning signs, particularly when they

appear early in life or continue despite conventional treatment. The clinical presentation may differ depending on the child's age and the severity of intestinal dysfunction. Early recognition of Hirschsprung's disease is essential for preventing intestinal obstruction, Hirschsprung-associated enterocolitis, and other serious complications. Careful assessment of medical history, clinical symptoms, and diagnostic findings can help establish the diagnosis and guide timely treatment. Overall, the study highlights the importance of recognizing persistent intestinal symptoms in newborns, infants, and young children. Greater attention to early clinical manifestations and timely referral to specialized pediatric surgical departments may help improve the management and overall health outcomes of children with Hirschsprung's disease.

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