TIMING IN INTUSSUSCEPTION

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ÖZET

1978-1994 yılları arasında invajinasyon teşhisi ile servisimizde takip edilen 125 hastanın dosyaları gözden geçirildi. Hastalığın kliniği, tedavi metodları ve sonuçları tarif edildi. Her hasta için şikayetlerin başlangıcı ile cerrahiye başvurma arasında geçen süre not edildi. Ortalama başvurma süresi tüm hastalar için 61 saat idi. Baryumlu lavman ya da elle redüksiyon uygulanan 86 hastalık grupta bu süre 51,3 saat iken; rezeksiyon anastomoz uygulanan hastalarda 62,8 saat olarak bulundu. Rezeksiyon ve enterostomi uygulanan 3 hastadaki ortalama başvurma süresi 168 saat idi. Bu vaka servisinde 8 hasta kaybedilmiştir. Bunların başvurma süresi ise 107,5 saat olarak saptanmıştır.

Bu çalışmada başvuruda gecikmenin morbidite ve mortalite riskini büyük oranda arttırdığı vurgulanmaktadır. Bu hastaların büyük bir çoğunluğundaki tıbbi yaklaşımdaki gecikmenin halen önemli bir problem olduğu gözlenmektedir.

Anahtar kelimeler: İnvajinasyon.

SUMMARY

125 consecutive records of patients with intussusception presented in our department between the years of 1978-1994 have been reviewed. The clinical features of the disease, the methods and the result of treatment were described. The time of admission after the beginning of the symptoms was noted for each patient. The average time from the beginning of the complaints to admission for all patients was 61 hours. While the average time of admission for the 86 patients that had reduction with barium enema or manual operative reduction was 51.3 hours, it was 62.8 hours for the patients who had resection and anastomosis, In three patients with resection and enterostomy, the average time of admission was 168 hours. In this series there are 8 deaths and their average time of admission was 107.5 hours.

We conclude that the delay in admission causes great risk in morbidity and mortality. Delay in seeking medical advice is still one of the major problems in the management in most of the patients.

Index word: *Intussusception.*

INTRODUCTION

Intussusception, the invagination of one portion of the intestine into an adjacent segment, is one of the most common abdominal emergency in pediatric surgery (1). It is a form of intestinal obstruction that requires immediate recognition and treatment for keeping the mortality and morbidity rates at minimum. This report emphasizes the importance of the time of admission in the survival of intussusception.

PATIENTS AND METHODS

The clinical records of 125 patients with intussusception who were treated at our clinic from 1978 to 1994 were reviewed. All patients whom the clinical diagnosises were supported radiologically or confirmed at laparatomy are also included in this report. The time of admission after the beginning of the symptoms was netod for each patient in order to evaluate the differences in the treatment, morbidity and mortality. Clinical features, management, the complications of the disease were described in this intussusception group.

RESULTS

Of the 125 patients, 101 patients were under the age of 1 year (80,8%). There was one patient who presented the symptoms in the first month of life and the oldest patient was 14 year-old.

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The symptoms and the signs of the 125 patient at admission are shown in Table 1. The cardinal symptom was vomiting that occured in 104 cases (83,2%). Bloody stool was the second frequent symptom occurring in 80 cases (64%). Various forms of bloody stool were observed but it was mostly in the form of pink mucus or red current jelly. Typical repeated screaming attacks and drawing up of the legs were accepted as the sign of abdominal pain which was observed in 28% of the patients. Eventhough diarrhea is accepted as the atypical presentation, this was found in the 26.4% of our patients.

Table 1: Sings and symptoms of the patients at admission.

SIGNS & SYMPTOMS	INCIDENCE (%)
Vomiting	83.2
Bloody stool	64
Abdominal distetion	39.2
Abdominal pain	28
Diarrhea	26.4
Palpable abdominal mass	24.8
Pyrexia	20
Palpable rectal mass	12.8

Clinical features and the plain abdominal x-ray findings were suggestive for the diagnosis of intussusception in 102 patients. In 14 patients the diagnosis was established with barium enema and barium enema reduction was successful in 7 of them (50%). We diagnosed intussuscuption preoperatively in 116 patients (92,8%). In remaining 9 patients the emergent operation has been carried out with the acute abdomen findings.

Ileal intussusception into colon was found at 95 laparatomies (76%). 19 jejuno-ileal or ileo-ileal, 7 jejuno-jejunal, 3 jejuna-ileo-colic and 1 colo-colic types of intussusception were identified.

At operation 12 cases (9,6%) had pathological leappoints. These were Meckel's diverticulum (5), Peutz-Jaghers polyps (2), congenital bands (2), caecal duplicaitons (2) and tuberculous lympadenitis (1).

Operative treatment was the main procedure in these patients and simple operative manual reduction was carried out in 79 cases (63,2%). Resection and anostomosis was carried out in 36 cases (28,8%). Resection and enterostomy was carried out in 3 cases. The average time of admission after the beginning of the complaints was 61 hours in our series. There was apparent relationship between the time of admission and the management (Table 2). While the average admission time for the 86 patients who had barium enema reduction or operative manual reduction was 49.6 hours, it was 62.8 hours for the patients who had resection and anastomosis. In three patients with resection and enterostomy, the average time of admission was 168 hours.

Table 2: The effect of the admission time on the treatment

TREATMENT	AVERAGE TIME OF ADMISSION
Barium enema reduction or Simple operative manual reduction	29,62 hours
Resection and Anastomosis	62,76 hours
Resection and enterostomy	168 hours

The early operative complications were anastomotic leakage, pneumothorax, wound dehiscence, intraabdominal abscess and a wound infection. Eight of the 125 patient died. In these 8 cases death were attributed to septic shock. The average time of admission from beginning of the complaints for these patients was 107,5 hours. A recurrence occurred in a patient after 5 months from the operation.

Tablo 3: The duration of symptom of intussusception

DURATION OF SYMPTOM	NUMBER OF CASES
2 days	65 (52%)
2-4 days	44 (35,2%)
4 days*	16 (12,8%)

** 6 of the 8 deaths were in this group*

DISCUSSION

Intussusception is one of the most important surgical emergencies in infancy and early childhood. Gross made the statement that "Intussusception is truly an acute surgical emergency, and a heavy diagnostic responsibility is placed upon the general practitioner or pediatrician who first sees these patients" in 1948 (2).

The age of children with intussuscepiton range from birth to 16 years, although 75% of the patients are less than 2 years of age and 50% are less than 1 year of age (3). In our series, 80.8% of the patients were under the age of 1 year and only 1 patient was under the age of 1 month (0.3%). The male predominance and definitive seasonal prevalence is well recognized for the intussuscepiton.

The classical symptomatology of intususcepiton includes severe episodic abdominal pain, vomiting and the boody stool (3). The child clinically looks pale and a mass may be palpable in the abdomen. The vomiting and bloody stools were the most common clinical feactures in our cases.

In practice, there can be considerable difficulty in establishing the correct clinical diagnosis and this may lead to a delay in treatment. Diagnostic difficulty is likely to occur at the age extremes, in the absence of pain or where the symptoms are different from those expected in terms of their onset, severity or progression (4). In the present series, 12% of patients were diagnosed 96 hours after the onset of the symptoms. Six of the eight deaths were in this group. This delay may be due in part to the cariability of the signs and symptoms but in the same instances it is due to the lack of awareness of the attending physician.

Ong and Beasley pointed out that delay in diagnosis would be expected to have a little influence on the length of bowel that had intussuscepted, although vascular changes that affect the ease of reduction, overall morbidity and the treatment required, may supervene (5). Intussusception becomes more difficult to be reduced with time because it becomes tighter when the edema and vascular congestion develop (6,7). In our series, it was apparent that the average time of admission is definitively correlated with the type of treatment.

Three complications of intussusception including hypovolemic shock, peritonitis or perforation are the main contraindications for the radiological reduction (3). The overall incidence of the radiological reduction is increasing significantly in recent years particularly with the use of gas rather than barium and with the alterations in the techniquies of enema reduction (8). As we mentioned, the use of radiological reduction was succesfull in only half of the 14 patient. As we had longer admission times than usual and did not have a skilled radiological service at night, we mainly preferred the operative management.

Unfortunately, there is still a delay in diagnosis of intussusception. Eventhough this can be attributed to the unusual outcomes of the disease, in the most of the patients delay in seeking medical advice is still one of the major problem. That delay in admission causes greater risk in mortality and morbidity. In our patients, the mortality was directly related to the time of late admission. Each of deaths had undergone to laparotomy and the average time of admission was 96 hours or longer in 6 of 8 patient. The longest admission time was also in this group (240 hours). Only 2 patients in this group showed up earlier than 96 hours of admission time. Our figures confirmed that the mortality and morbidity rates increases with the delay in diagnosis.

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