

Case Report / Olgu Sunumu

Richter's umbilical hernia: a case report

Richter umbilikal hernisi: olgu sunumu

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ABSTRACT

Umbilical hernias are common in infants but usually close with time. Strangulated umbilical hernias are rarely seen and they are unusual complications of umbilical hernias. A delayed diagnosis always increases morbidity. Occurrence of Richter's umbilical hernia is very rare and preoperative diagnosis is difficult. A strangulated Richter's type of umbilical hernia in an 8 month old child is presented. The patient presented with an acute abdomen. A small segment of ileum was impacted in a firm umbilical hernia ring which was gangrenous and was excised.

Keywords: Umbilical hernia, Strangulated, Infants

ÖZET

Umbilikal herniler küçük çocuklarda sık görülür ancak zaman içinde kapanırlar. Strangüle umbilikal herniler nadir görülür ve umbilikal hernilerin pek de alışılmadık bir komplikasyonudur. Zamanında müdahale edilemeyen vakalar her zaman ölüm oranını artırır. Richter umbilikal herni oluşumu çok nadir görülür ve operasyon öncesi teşhisi zordur. Burada strangüle Richter tipi umbilikal hernisi olan 8 aylık bir bebeği sunduk. Hasta akut karın ile müracaat etti. İleumun umbilikal fitik kesesi içine sıkışmış ve kangrenleşmiş olan küçük bir kısmı cerrahi operasyon ile çıkarıldı.

Anahtar Kelimeler: Umbilikal herni, Strangüle, Küçük çocuk

INTRODUCTION

Umbilical hernia is commonly seen in children. Failure of closure of the umbilical ring allows abdominal contents to protrude through it. There is an increased predisposition of black children for persistence of umbilical hernia¹. Most of the pediatric umbilical hernias run an symptomatic course. There are many systemic associations with this type of hernia. A rare, but notorious complication of umbilical hernia is strangulation². Rarely there can be occurrence of Richter's hernia. Richter's hernia is defined as an abdominal hernia in which only part of the circumference of the bowel is entrapped and strangulated in the hernial orifice. Prophylactic umbilical hernia repair is recommended for all girls over two years of age and for all children over four years of age³. In uncomplicated cases, umbilical hernias are treated by simple observation. In patients with infantile umbilical hernias,

strangulation may occur as the fascial defect decreases in size⁴. An incarcerated hernia demands exploration.

CASE REPORT

An 8 month old child presented with persistent crying and often placing a hand on the umbilical area suggestive of abdominal pain of two days duration. There was no increase in the size of the bulge present when crying. No history of loose motion or constipation was present. The family history revealed a similar swelling in his twin brother. On general physical examination a pulse of 124/min and fever of 100 degree Celsius was recorded. Systemic examination was normal. A firm, tender, irreducible globular swelling measuring 3x2.6x2.1 centimeters with no expansion on crying or cough was present in the umbilicus (Fig.1).

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Auscultation of the swelling did not reveal any bowel sounds. Per rectal examination did not reveal anything significant. X-ray of the abdomen showed localized ileus at the umbilical area. Abdominal sonography revealed a dilated gut loop in the umbilicus. A diagnosis of strangulated umbilical hernia was made and was explored surgically. Operative findings showed a Richter's hernia occurring in a 1 centimeter fibrous ring of an umbilical hernial defect, in which a small part of the ileum was impacted and this had gangrene (Figs.2, 3). The gangrenous segment was resected. The post operative period was uneventful during regularly attendance of our follow up clinics.



Fig 1 : A firm, tender, irreducible globular swelling measuring 3x2.6x2.1 cm

DISCUSSION

Umbilical hernia is a common condition among infants and children⁵. Infantile umbilical hernias are considered to be of two types: a direct, congenital type and an oblique indirect, acquired type. Congenital hernia disappears by the age of three years regardless of size whereas the acquired indirect type progresses in size and becomes larger and strangulation is more commonly seen in the later type⁶. A number of clinical disorders associated with umbilical hernias include trisomy 21, congenital hypothyroidism and mucopolysaccharidosis. The presence of an umbilical hernia may be associated with larger anterior fontanelle dimensions⁷.

Children with a sarcoma in the Ewing's family of tumours are more likely to have had an umbilical hernia since both have common embryological pathways of neuroectodermal origin, and environmental factors⁹. Children with a strangulated umbilical hernia present with an acute abdomen. Umbilical hernia may give rise intermittent umbilical or abdominal pain. There can be complications of incarceration, spontaneous rupture or perforation. An incarcerated and A strangulated umbilical hernia is seldom seen. Spontaneous rupture, Richter type obstruction and the presence of gangrenous omentum or Meckel's diverticulum in a hernia sac are rarely seen⁹⁻¹¹. The segment of the engaged bowel in Richter's hernia can be any part of the intestinal tract, from the stomach to the colon, including even the appendix, but the lower portion of the ileum is nearly always present, and these may become incarcerated. Our case had the ileum impacted in the umbilical defect and impacted ileum segment had gangrene in part of its circumference. A large size of the hernia and a firm consistency of the hernial orifice are prerequisites for the formation of Richter's hernia. Solid faeces are considered to be the precipitating factor for obstruction. A strangulated umbilical hernia can be mistaken as cellulitis or may be confused with gangrenous retrocolic appendicitis and rarely may be confused with a mesenteric cyst^{12,13}.

A history from the parents and a physical examination are sufficient for the diagnosis of a umbilical hernia¹⁴. Although complications of umbilical hernias appear to be rare, there is a need for more active observation of umbilical hernias to identify complications early and treat them promptly to avoid morbidity^{5,15,16}. Hernias with a diameter >2 cm are less likely to close. Spontaneous closure occurs in a majority of cases before the age of 3- 4 years. Therefore, an expectant policy of nonoperative management until at least 5 years of age has been considered acceptable¹⁷. Simple surgical repair is a treatment option for umbilical hernias in uncomplicated cases. A minimally invasive closure procedure with injection of dextranomer hyaluronic acid copolymer can safely be used to close umbilical hernias¹⁸.



Fig 2 - Fig 3 : Operative findings showed a Richter's hernia in a 1 cm fibrous ring of an umbilical hernial defect in which a small part of the ileum was impacted and this had gangrene.

The study of epidemiological changes in the incidence of abdominal wall defects in children has shown an increasing trend of incarceration of umbilical hernias¹⁷. Prompt surgery is indicated if the umbilical hernia is symptomatic, presenting with localized abdominal pain, an irreducible umbilical mass or persistence or enlargement of a fascial defect during the period of observation^{5,18,19}. Treatment of an incarcerated abdominal hernia is a serious surgical problem, marked by high mortality due to the late diagnosis of the incarceration and postoperative complications^{20,21}. Complications of operative repair of umbilical hernias include those related to anesthesia and to local wound infections.

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