Spontaneous Groin Enterocutaneous Fistula following Neglected Inguinal Hernia in 3-month Infant spontaneous enterocutaneous fistula following neglected inguinal Hernia Leading to Groin Enterocutaneous Fistula in 3-Month Infant

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Abstract

Hernia is defined as a protrusion of part or whole of a viscera through an abnormal opening in the wall of the cavity containing the viscera. Hernias are more common in men than in women. Males are eight times more likely to develop a hernia during their lifetime than females.[2] There are two basic types of inguinal hernia, direct and indirect, which are defined by their relationship to the inferior epigastric vessels. While the direct inguinal hernias occur medial to the inferior epigastric vessels, the indirect inguinal hernias occur lateral to the inferior epigastric vessels. The indirect hernia which is more common in children occurs due to the failure of embryonic closure of the processes vaginalis.[2,3] The treatment of inguinal hernias is mainly surgical, to avoid complications, which involves herniotomy in children and herniorrhaphy in adult. The operation if done early, the outcome is good. However, if a neglected obstruction, strangulation or even rare complication of enterocutaneous fistula may occur.[4,5] We present a rare complication of enterocutaneous fistula following a neglected inguinal hernia.

INTRODUCTION

Hernia is defined as a protrusion of part or whole of a viscera through an abnormal opening in the wall of the cavity containing the viscera. Inguinal hernia is a common problem in both children and adults. The two common complications of inguinal hernia are obstruction and strangulation.[1] Hernias are more common in men than in women. Males are eight times more likely to develop a hernia during their lifetime than females.[2] There are two basic types of inguinal hernia, direct and indirect, which are defined by their relationship to the inferior epigastric vessels. While the direct inguinal hernias occur medial to the inferior epigastric vessels, the indirect inguinal hernias occur lateral to the inferior epigastric vessels. The indirect hernia which is more common in children occurs due to the failure of embryonic closure of the processes vaginalis.[2,3] The treatment of inguinal hernias is mainly surgical, to avoid complications, which involves herniotomy in children and herniorrhaphy in adult. The operation if done early, the outcome is good. However, if a neglected obstruction, strangulation or even rare complication of enterocutaneous fistula may occur.[4,5] We present a rare complication of enterocutaneous fistula following a neglected inguinal hernia.

CASE REPORT

MS is a 3-month-old boy who presented with a history of the right inguinal swelling noticed in the first 1 week of life which initially reduces spontaneously on lying down but appears whereas crying or coughing, the swelling progressively increases in size and became persistent 8 days after birth. On presentation, the patient had a right inguinal swelling with the bowel loops visible in the inguinal canal. The patient was taken to the operating theater for an exploratory laparotomy and was found to have a perforated intestine in an inguinal hernia which was managed by the resection and anastomosis of the small intestine. The outcome of a neglected inguinal hernia is still poor in our environment.
before presentation. Three days before the presentation, the swelling spontaneously ruptured discharging faecal matter with associated low-grade fever and abdominal distension; he had three episodes of vomiting before the presentation. Had history of cough and catarrh but no history of difficulty in breathing. No cry on micturition, urethral discharge or haematuria. No history of trauma before the presentation and no surgical intervention before the presentation. No history of traditional incision or any intervention.

On examination, he was found to be febrile with a temperature of 37.8°C, not pale, not jaundiced but wasted. The patient has nasal discharge with mild congestion, but chest auscultation revealed a clear lungs field.

The pulse rate as 112 beats/minutes and the Abdomen was slightly distended, moving with respiration and bowel sounds were present. The perineum was soiled with faecal matter with eviscerated intestine through the groin discharging faecal matter from an opening in the wall of the intestine [Figures 1 and 2].

An assessment of a neglected inguinal hernia with enterocutaneous fistula was made, and the patient was resuscitated with intravenous (IV) fluid, IV antibiotic, urgent full blood count showed a packed cell volume of 32%, serum urea and electrolytes were essentially normal, serum protein to assess the nutritional status could not be done because of the emergency presentation. He was prepared and had exploration with resection and anastomosis of the intestinal segment containing the fistula [Figure 3]. The surgical procedure which was done under a regional anaesthesia (spinal) with sedation was uneventful [Figure 4]. The patient initially did well in the first 3 days post-operatively but developed surgical site infection with fever on the 4th day after the operation. The patient died 4 days post-operative from suspected overwhelming sepsicaemia.

**DISCUSSION**

Hernia is defined as a protrusion of part or whole of a viscera through an abnormal opening in the wall of the cavity containing the viscera. Inguinal hernia is a common problem in both children and adults, the two common complications of inguinal hernia are obstruction and strangulation.[6-8] It is a
The most common complications of inguinal hernia are intestinal obstruction and strangulation. Strangulation is said to be more common in primary hernia than recurrent and more in smaller hernia than large or giant hernia. The prevalence of strangulation is said to be as high as 2.9% in adult and some studies reported higher prevalence in children where a prevalence of as high as 50% was documented in the neonatal period. Indirect inguinal hernia which is more common in children is found to have more prevalence of strangulation than direct hernias. The right side is most commonly affected 2:1 than the left side. Considerable morbidity and mortality are associated with untreated, neglected inguinal hernias.

Few cases of intestinal fistula following strangulated inguinal hernia were reported in the literature.

We present a case of spontaneous enterocutaneous fistula following a neglected inguinal hernia in a 3-month-old infant; the patient was resuscitated with IV fluids, antibiotic and had resection and anastomosis a day after the presentation. Some surgeons attempted laparotomy for intestinal fistula following neglected inguinal hernia; however, it was found to be associated with high peritoneal contamination by the faecal matter and exteriorised bowel segment with increased risk of peritoneal abscess and septicaemia. Our patient had resection and anastomosis through the inguinal approach which is thought to have lower risk of peritoneal contamination. The morbidity and mortality in patients with enterocutaneous fistula following strangulated inguinal hernia is found to be high in some studies. Our patient developed surgical site infection 3 days after the operation with subsequent fever and vomiting and died 5 days after the operation.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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