Case Report

Giant Pedunculated Incisional Hernia

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Abstract

Ventral hernia is a common complication of abdominal surgeries, with the incidence of up to 20% in some series. Giant ventral hernia is that with a neck more than 10 cm wide. The loss of abdominal domain due to the shift of viscera into the hernia sac could lead to the complication after surgery. A 54-year-old female presented with a giant pedunculated ventral hernia. She had low tension mesh repair through a transverse suprapubic incision. The surgical repair of giant hernia with mesh has led to reduced complications. The sublay mesh repair method has further reduced the rate of underlay mesh recurrence.

Keywords: Giant, incisional, pedunculated hernia

Résumé

La hernie ventrale est une complication courante des chirurgies abdominales, avec une incidence pouvant atteindre 20% dans certaines séries. Une hernie ventrale géante est que avec un col de plus de 10 cm de large. La perte de domaine abdominal due au déplacement des viscères dans le sac herniaire pourrait conduire à la complication après l’opération. Une femme de 54 ans s’est présentée avec une hernie ventrale pédonculée géante. Elle a eu une réparation de maille à basse tension à travers une transversale incision sus-pubienne. La réparation chirurgicale d’une hernie géante avec maille a permis de réduire les complications. La méthode de réparation des mailles de sous-couche a réduit le taux de récidive de bas niveau.

Mots-clés: Hernie géante et pédonculée, incision

Introduction

A giant ventral hernia has been described as one with a hernia orifice (aponeurotic defect) of 10 cm or more in diameter. This presents a surgical challenge due to loss of the abdominal domain when all the contents reside outside it. The effects of these hernias on the patients include increase episodes incidence of complications, poor external support, and poor cosmetic appearance.

Our patient presented with a complicated ventral hernia that we treated with a low tension mesh repair through a transverse suprapubic incision.

The cosmetic outcome was acceptable to the patient. This article will discuss the causes and treatment of giant ventral hernias.

Case Report

We report the case of a 56-year-old mother of 4 who presented to us with a 10-year history of gradual protrusion from the anterior abdominal wall. It was initially painless and reduced spontaneously on lying down but lately only on manipulation. A year before presentation, she started having bouts of vomiting after meals. She also complained of episodes of colicky abdominal pain which resolved without treatment. She

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had associated backache. She is not a known hypertensive or diabetic. All her child births were through a midline cesarean section. The abdominal protrusion started after the last surgery.

Examination revealed a middle-aged female, not ill looking and not in any form of distress. She had a 20-cm long pedunculated hernia extending from 5 cm below the umbilical scar with the apex at the mid-thigh region. It measured 30 cm in its widest diameter. The protrusion was through a broad midline infraumbilical surgical scar. The skin over the hernia is variegated and thin. The content was irreducible [Figures 1 and 2].

She was scheduled for, and had hernia repair. The first incision was around the neck of the hernia to avoid trauma to its content [Figure 3]. The surgical findings were the hernia neck or aponeurotic defect of 20 cm in diameter [Figure 2], and the sac contents included the stomach, small intestine, large intestine, and their mesentery [Figure 4]. There were gangrenous lips of mesenteric fat trapped in several pockets within the sac.

The hernia was repaired using the Reeve-Stoppa-Watson method [Figure 5]. Through a separate supra-pubic incision, an abdominoplasty procedure was done for the patient [Figure 6]. She was discharged with an abdominal binder. Her postoperative recovery was eventful and was discharged on the 7th postoperative day on abdominal binder [Figure 7]. She has since remained normal and stable for the past 3 years [Figure 2].

**Discussion**

Ventral hernias are a common complication of abdominal surgeries, with the incidence ranging between 2% and 20%[4] and in extreme cases up to 91%. It is caused by chronic wound dehiscence with formation of hernia sac and canal months to years after surgery,[5,6] with a suggestion that malunion between the edges of the sutured aponeurosis occurs soon after surgery,[8] with manifestation of hernias years later. This dehiscence start within the first 5 days after surgery as shown by studies using metallic marker placed at the edge of the rectus sheath and follow with sequential computed tomography scans.[9]

There are several patient-related factors that can increase the risk of ventral hernia, including main ones such as obesity, chronic lung disease, Type II diabetes, malnutrition, and steroid treatment.[10] We were unable to establish any of these risk factors in patient before the occurrence of the hernia. The incidence of ventral hernia has been shown to increase with midline incisions,[11,12] which is the type of incision used for our patient cesarean sections. The tendency is for ventral hernias to progressively increase, the small resistance offered by the hernia sac leads to continuous herniation of viscera[13] and enlargement of the hernia by the weight of its content.[13] This could explain the size of our patient’s hernia. Although patients with giant ventral hernias do develop changes in respiratory function due to anatomical and physiological impairment of the diaphragm, our patient did not present with any features of respiratory distress.[14,15]

The initial preoperative factors such as peritoneal closure, wound closure, and wound infection may play an important role in hernia evolution.[10,15] Studies have suggested that sepsis inhibits collagen synthesis, but the exact mechanism is yet to be
determined. Our patient did not give a history that suggested wound infection after her surgeries.

Various methods of hernia repair have been developed, and the Rives-Stoppa technique is thought to be the most standard open surgical procedure. Our patient had this procedure, and her postoperative period was uneventful.

Recurrence which may occur under the prosthesis when the onlay method used is prevented by the sublay method. Infection is another complication often due to rejection of the prosthesis, but our patient did not develop any of these.

An incidence of 3.1% of incisional hernia after lower midline cesarean section was reported by Adesunkanmi and Faleyimu, though not high 20% of these could develop into giant hernia if not treated early. The most common incision of choice for treating giant hernias in our environment is a long midline incision which leaves an ugly scar.

**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.

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**Conflicts of interest**

There are no conflicts of interest.

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