

Ventral Hernia Planned a Surgical Challenge

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Abstract

Introduction: Herniary pathology is a stigma that for centuries has influenced the galénic-surgical work. There are many varieties of hernias such as congenital, acquired, with eponymous, namesakes, trauma, effort or even the same surgical practice. The one that moves us is the planned ventral hernia, which by definition is acquired by not closing the Aponeurotic muscle layer of the abdomen; leaving the abdominal viscera covered only with skin, with the lateral retraction in severe shape of the aponeurotic wall and with a pronounced muscle tension.

Objective: Disseminate to the medical community, which can dissect intestinal handles firmly attached to the skin, without the need to perform intestinal resection or laceration of handles, in a patient with planned ventral hernia, in the presentation of a clinical case.

Results and Discussion: Planned ventral hernias are not a common and simple surgical entity; since they do not comply with the expected anatomical components in the vast majority of hernias, which are: fibrosis of the surrounding tissues, a herniary sac formed by parietal peritoneum and the absence of direct contact with another real and functional anatomical structure; these hernias are the last resort used by the surgeon to keep the patient alive; which for years has been done with different surgical techniques; abdominal wall incisional hernias are a common problem and the success of abdominal wall reconstruction decreases inversely proportional to the increase in hernia size; not so, the planned ventral hernias are all large to giant. Repair of giant incisional hernias requires complex surgery and conventional mesh methods are unsatisfactory, with high rates of recurrences and complications; however, it is emphasized that no surgical technique is needed to treat a planned ventral hernia.

Conclusion: There is no detailed and standardized surgical technique that satisfactorily solves the planned ventral hernia, so there is no literature to express it and it is the purpose of this article.

Keywords: Incisional; Hernia; Ventral; Reconstruction; Recurrence; Aponeurotics; Technical; Surgical

Introduction

Herniary pathology is a stigma that for centuries has influenced the galénic-surgical work. The conduct of its treatment has been a challenge and its evolution is slow, diverse and controversial. There are many varieties of abdominal hernias, such as congenital, acquired, with eponyms, namesakes, trauma, effort or even the same surgical practice. The one that moves us is the planned ventral hernia (HVP), which by definition is acquired secondary by not closing the Aponeurotic muscle layer of the abdomen; leaving the abdominal viscera covered only with skin, with the lateral retraction of the aponeurotic wall in severe form, as well as a pronounced muscle tension [1]. There are already records of surgical procedures on hernias in ancient Mesopotamia 4 000 years BC. In the papyrus of Ebers 1 550 years BC it is mentioned “you see swelling on the surface of the belly, coming out, caused by coughing” [2]. On the other hand, it is desirable to discern that more than half of the surgical interventions in the abdominal organs are complicated by the formation of postoperative ventral hernias ranging from small to large or even giant [3] and that are different from an HVP.

Objective of the Study

Disseminate to the medical community, which is possible to dissect intestinal handles firmly attached to the skin, without the need to perform intestinal resection or laceration of handles, in a patient with HVP; with the filing of a clinical case.

Presentation of a Case

This is a 34-year-old female patient, with history of hypothyroidism in control, begins its condition in 2015 by performing C-section by term pregnancy, presenting placental accretism so that obstetric hysterectomy is practiced, the late postoperative shows intestinal occlusion data performing in a second time a Exploratory laparotomy And lysis of adhesions at five days; after this it evolves with a vesicovaginal fistula, which is repaired in a third surgical time six months later, after which it presents post-surgical eventration, with conservative management and stigmatizes as an HVP. She attends after a year with a giant HVP and morbid obesity; with a clinical picture of pain, abdominal deformity and depression. At the physical examination, the globose abdomen is observed at the expense of late post-surgical eventration, with loss of mastery, with dimensions of 40 x 30 cm, reducible, without any Skeletal muscle wall, with only skin, which is thinned, ulcerated in some regions and without adding the visual abdominal peristaltic movements (Figure 1). Externally referred to the surgery service where computed axial tomography is performed with reconstructions of the abdomen, observing loss of dominance, aponeurotic defect of 20 x 18 cm, without any herniary sac with intestinal handles inside, firmly attached to the skin (Figure 2).



Figure 1: Ventral hernia planned.



Figure 2: Computed axial tomography. Cut sagittal.

Preoperative tests, nutritional profile and thyroid function tests in normal parameters. In a preoperative way, the management is carried out in a comprehensive way with the services of nutrition, endocrinology, inhalation therapy and psychiatry, in order to perform the programming of the surgery.

Description of the surgical technique: After regional anesthesia, incision is made in lateralized supra umbilical medium skin, dissecting unhinged area on the upper left edge; there is giant planned ventral hernia with intestinal content firmly fused to the skin in its entirety with human impossibility any of its separation, without a herniary sac where the plane to be dissected, with dimensions of 22 cm in longitudinal axis, 20 cm transverse and 15 cm high with intestinal content, aponeurotic defect of 20 x 18 cm. It is searched for the plane of insertion and/or adhesion between the intestinal handle and the skin, with shear dissection is successfully achieved the separation of the components between intestine and skin that encompasses the entire area involved (all the hernia), without any injury of small intestine handles that were fully attached to the skin, in addition to lysis of the adhesions of the entire small intestine (Figure 3). It is completed with Wall plasty with Rives-Stoppa technique with the complete closure of the aponeurotic components and closed drainage is placed.



Figure 3: Surgical dissection separating skin from the intestine.

The postoperative evolution was satisfactory, graduating at 72 hours at home without any complication, being followed up for two years without relapse or clinical symptomatology (Figure 4).



Figure 4: Evolution in the late postoperative period.

Results and Discussion

HVPs are not a common and simple surgical entity. Since it does not meet the expected anatomical components in the vast majority of hernias, which are: fibrosis of the surrounding tissues that is actually connective tissue, a herniary sac formed by parietal peritoneum and the absence of direct contact with another real and functional anatomical structure (in this case intestine to skin). Moreover, the indication of this difficult decision to carry out a planned ventral hernia in the vast majority of cases is different from what was published in world literature, because it is done by saving the patient's life as the only and last option.

This is presented by the severity, complexity and poor prognosis of patients with two or more characteristics described below:

1. In patients with multiple consecutive abdominal surgeries more than three in the same hospitalization and with a high degree of complexity.
2. With severe malnutrition and impossibility of early recovery.
3. With severe infection of the abdominal cavity and systemic infection with generalized inflammatory response or even septic shock.
4. Severe anemia and the use of polypharmacy.

5. Associated comorbidities such as chronic or acute renal failure, uncontrolled diabetes mellitus, hypothyroidism or hyperthyroidism, morbid obesity, high blood pressure, heart disease among others.
6. Necrotizing fasciitis of the same abdominal wall with loss of musculoskeletal tissues.
7. Abdominal sepsis with continuous and frequent surgical washes, with retraction of abdominal aponeurotic components by the so-called open abdomen management.
8. For loss of abdominal aponeurotic components due to trauma or burn.

As already mentioned, HVP is the last resort used by the surgeon to keep the patient alive. For years it has been done with different forms or techniques; the surgical technique “Bolsa de Bogotá” that over time has been modified in multiple ways [4]. With disadvantages not reported in terms of morbidity and/or mortality and with unreliable statistics. Another way to perform an HVP is with the so-called “Temporary Closing of the Abdominal Wall with Polyethylene.” Where a much more revolutionary technique is described with insurmountable advantages such as protection, temperature conservation, very low cost, effectiveness, drainage effect, simple, an easy surgical reintervention and even allows an early recovery of the patient; with zero mortality and morbidity [5]. Abdominal wall hernias are a common problem and the success of abdominal wall reconstruction decreases inversely proportional to the increase in hernia size; not so, HVPs are all large to giant [6]. The clinical picture is very varied, but all converge that HVP symptoms are related to the absence and weakening of an abdominal wall and its own muscles. It is essential to mention physical deformity, the impossibility of performing systematized efforts or exercises of medium or high impact, chronic abdominal pain type colic to uninfined oppressive, constipation or diarrhea, magnified abdominal noises and even repetitive pictures of intestinal occlusion; that without detracting from importance they become complicated by necrosis of the herniary content, intestinal perforation, bleeding or ischemia and even a fatal severe abdominal sepsis [7]. Diagnosis is clinical, however by protocol it is prevailing to perform computed axial tomography in order to evaluate with certainty each patient in question the surgical technique to be performed [6,8,9]. With regard to the treatment of HVP that for years have been made multiple attempts, with diverse and varied surgical techniques, which have not demonstrated in the long term their worth, since they involve after surgical repair with numerous complications and with solutions sometimes merely palliative, with a high risk of morbidity and mortality that is not reported in the world literature. Repair of giant incisional hernias requires complex surgery and conventional mesh methods are unsatisfactory, with high rates of recurrences and complications [10]. Not so, there is no mention of the management of an HVP, which is even more complex; where attempts at surgical repair present disastrous or very unpromising results, beginning by saying that they are carried out with intestinal perforations or “fistulas”, intestinal resections, short bowel syndrome, stomata, high-expensed stomata; associated with severe malnutrition, cell dehydration, anemia, local and systemic infection, abdominal sepsis or even death; not so, if the above facts do not happen in reality, only complications in the medical literature such as relapse, deformation and weakness of the abdominal wall are reported even successfully with the same mesh.

Surgical techniques are diverse and although they are all aimed at seeking to help the healing of the patient is not mentioned its application for the pathology in question HVP; there are no publications in the world literature that the intestine is firmly attached to skin (IFAP) and that are accurate to treat this identity, since it is frequent and is not identified or treated. It is necessary to initiate the investigation of the treatment of incisional hernias with the use of synthetic mesh in all its alloplastic, biological or full thickness skin grafting variants with comparable results between the two techniques, but do not mention IFAP [10-12] with reports of low recurrence and low postoperative morbidity [13]. Another treatment alternative is the laparoscopic surgical technique for giant ventral hernias with a defect greater than 20 cm, with the advantage of decreased postoperative pain, accelerating their recovery, achieving in reducing mortality and morbidity, but only in patients without prior repair; (chosen patients) without mentioning that they do not take IFAP [14,15]. There is another technique called separation of components consisting of the release of the transverse muscle of the abdomen and with a hybrid handling with reinforcement with synthetic mesh; in itself it is to perform a muscular facial flap reconstructing the abdominal wall and

supplementing with a mesh; it is worth mentioning that it is imperating to perform progressive pneumoperitoneum [8,9] and even application of botulinum toxin [9] in order to counteract the “hijacking or loss of domicile” abdominal viscera that lost space in the abdominal cavity they originally had and have been outside it for a long time; preventing respiratory complications and sharemental syndrome [8,15-17].

Conclusion

The HVP with the above indications is a type of catastrophic hernia for the patient, surgeon and health services; impacting the quality of life of the patient. It is a fact that surgical resolution is completely a challenge for the surgeon, since it involves experience, practice, skill, knowledge, material and economic resources that severely transcend any health institution or the same economics of the patient.

We must conclude that HVP has given rise to different surgical techniques each with a precise indication, but the human factor remains decisive for successful surgery and not an apocalypse for the patient. The option of subjecting a patient to an HVP should be judicious, analyzing each particular case; assessing the risk-benefit, since its repair can lead the patient to intestinal perforations, fistulas, stomata, intestinal resections, abdominal sepsis or a catastrophe: death.

To date there is no detailed and standardized surgical technique that satisfactorily solves the HVP, so there is no literature that expresses it and is the purpose of this article, with optimal and efficient results and that although it is a single case, it will be the spearhead for more research.

Conflict of Interest

The authors state that there is no conflict of interest, no funding for this manuscript.

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