

Incisional Hernia Surgery Praxis. A Surgical Challenge in the Hospital Context

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ABSTRACT

Incisional hernia is one of the main pathologies faced by the surgeon in daily life, so it is worth detailing the basic principles of this surgical condition, which require a detailed analysis, as they are considered a point of attention in academic and hospital settings. That is why a meticulous bibliographic review was carried out with the objective of describing the importance of the Incisional Hernia praxis; since this surgery is part of the training process of the general surgeon and in the context studied, the number of scientific investigations regarding this topic is limited, so studies related to this complication should be increased. Finally, the optimal surgical treatment of this entity has not been achieved, revealing the failure of the closure of the abdominal wall after a laparotomy, for which this surgery requires high professional competence and clinical-surgical systematization during the training process to significantly improve health and quality of life of patients who suffer from them.

Keywords: Incisional Hernia; Clinical-Surgical Systematization; Laparotomy; Training Process; Quality of Life of Patients

Introduction

Since ancient times the different religions meant the influence of the Gods in the origin, causes and treatment of surgical conditions; These diseases were considered illnesses, difficult to manage and lacked scientific foundation. References were made to special abdominal wall tumours, presumed to be hernias. Likewise, Edwin Smith's Surgical Papyrus was the other Egyptian treatise that addressed all these conditions from the 17th century before the

Christian era. Subsequently, with the profound social changes, the industrial revolution, the scientific-technical development and the dissimilar advances in medicine, a new era of deepening knowledge and different discoveries began that enriched the epistemological interpretations of the health-disease process. These writings facilitated the vision of medical practices and procedures in antiquity. Thus, it is important to highlight that from the first days of surgery, incisional hernia was reported as a surgical complication [1,2].

Currently, hernias of the abdominal wall are considered a defect in the continuity of the fascial and/or musculoaponeurotic structures of the abdominal wall that give rise or protrusion of intra-abdominal content [3]. This pathology obviously has a great social and work impact, with its own complications that could put the patient's quality of life at risk. It is also important to take into account that these diseases are common, with a prevalence of 1.7% for all ages and 4% in people over 45 years of age; Therefore, inguinal hernias are the most frequent and constitute approximately 75% of all abdominal wall hernias, with a lifetime risk of 27% in men and 3% in women. [4,5]. Consequently, incisional hernias are a frequent complication of abdominal wall incisions, and a wide range of occurrence rates are currently reported; taking into account that the various etiopathogenesis is limited to research on the synthesis and decomposition of connective tissue in relation to the pathophysiological mechanisms of hernia formation.

In the same way, the hernia formation process is influenced by multiple endogenous factors such as genetics, age, gender, anatomical variants and exogenous factors such as smoking, comorbidities, surgical history. However, these factors do not adequately explain the development of abdominal wall hernias [6-8]. Therefore; it is conceived that, the incisional hernia shows the defect of the abdominal wall, with or without volume increase, in the area of a perceptible or palpable postoperative scar by clinical or imaging examination; Thus, it represents failure in the reconstruction of the wall of abdominal surgery, and it reaches a frequency of presentation that varies between 11% (for patients undergoing general abdominal surgery) and 23% when it is accompanied by infection of the surgical wound. For that reason, we feel motivated to carry out this research and update the knowledge of the Incisional Hernia praxis to transform the surgical practice of this condition because it represents a factor of great value in the context of health that requires training, updating and perfection of professional performance.

Developing

This disease presents incidence rates in the first year after laparotomy of 5% to 15% and may be underestimated since 35% of cases are diagnosed 5 years or more after surgery, at the same time the results of repair of an incisional hernia are not entirely satisfactory, since it presents recurrence from 31% to 44%. Thus, the evolutionary development of incisional hernias glimpses an upward trend to growth, which, if not received comprehensive treatment in the established time, can be imprisoned in approximately 15% of cases and strangulated in 2%. Therefore, it is considered an important source of morbidity and mortality of 0.24% in elective and urgent surgeries [8,9]. Jairam AP, López-Cano M, Garcia-Alamino JM, Pereira JA, Timmermans L, Jeekel J, and other literatures consider this complication as a postoperative subcutaneous visceral protrusion, which arises as a consequence of a loss of the musculoaponeurotic structures of the abdomen and represents the sequel to a laparotomy.

Amelung FJ, de Guerre LEVM, Consten ECJ, et al, Reyes Sánchez A, Valenzuela González J, Valle Valdez MA, García Ramos C. They consider that they are defects of the abdominal wall that occur after medical parietal lesions, such as infections, tumor necrosis or traumatic injuries, such as surgical or accidental ones, through which part of the abdominal content can protrude. Regarding the above, they assume that the physiopathogenesis and evolution of this process is similar to that of any hernia depending on several factors, such as the size of the defect, time of evolution, content of the sac, clinical picture of the patient, etc. The topography of incisional hernias reveals the appearance in any previously injured site, influenced by its pathology, since the hernial sac is always distended peritoneum.

It is important to highlight that numerous studies and meetings of experts have been carried out, without achieving standardization in the treatment of incisional hernia; motivated by several factors that lead to high rates of recurrence. In this regard, Goderich, Pardo and other researchers; They consider that in general surgery there is no more controversial issue than that of hernias in general and incisional hernias in particular, so very large hernias repaired with conventional primary closure techniques have a high recurrence rate. Today, incisional hernia represents a major source of morbidity, which includes entrapment in 6 to 15% of patients, and strangulation in about 2%. Due to the above, treatment cannot be considered easy, since it is not uncommon to have to perform large surgeries with poor results, and reach recurrence rates, according to different authors, between 25-52% [4-7].

In the medical literature, fairly wide incidence ranges are reported, which vary according to the time of follow-up of the patients (12% to 69%) and the presence or absence of other risk factors associated with this event. The authors of this research consider that despite scientific and technical advances, incisional hernias continue to be a public health problem, unlike what is expected as a result of advances in Medicine, and in particular General Surgery. Authors such as Reyes Sánchez A, Valenzuela González J, Valle Valdez MA, Garcia Ramos C; described that the incisional hernia abnormally protrudes the parietal peritoneum, through a pathological wound post-surgical or traumatic process, which covers muscle-fascio-aponeurotic planes, and may have abdominal visceral content and / or tissues, in the presence of factors risky; its post laparoscopy incidence goes up to 6%. Therefore, it is considered an important source of morbidity and mortality of 0.24% in elective and urgent surgeries, with a prevalence of females. From the epidemiological point of view, it has been shown that the occurrence of this surgical complication is not decreasing; rather, the morbidity associated with incisional hernias significantly impacts the health and quality of life of patients who suffer from them.

Each year, four million people undergo abdominal wall operations, of which 20% develop hernias at the incision site. In the United States, for example, each year more than 100,000 patients undergo

incisional hernia repair; Other countries do not have an efficient health registration system, nor do they have reliable statistics that allow calculating the economic and social burden that the different surgical procedures bring to the country, especially laparotomies and eventrorrhaphies, as well as the eventual complications that from them are derived [8-11]. A study carried out in Ecuador during the period from 2010 to 2014, established that the frequency of incisional hernia ranged from 2% to 15% and could even reach a total of 23%, out of a total of 212 patients with this diagnosis. Something similar occurred in Mexico, where several collaborators mentioned that the frequency of incisional hernias can vary between 10% and 20%. Likewise in Spain where there has been approximately an increase in incisional hernias in the last 5 years [11,12].

In Cuba, incisional hernia is considered a repeated complication of abdominal surgery. Its incidence varies between 2 and 15% of patients, and some authors indicate that it can reach 23% when it is related to a surgical wound infection. However, in recent years, the recurrence rate of incisional hernias has decreased, mainly due to the adequate use of synthetic prostheses [12,13]. Jaén Oropeza, et al. studied the frequency of this pathology and its risk factors, in the same way that they described important statistical data, and suggested action plans for the diagnosis, treatment and follow-up of the patient with this pathology; This group of researchers considered that in general surgery this issue is highly controversial, however the reasons mentioned above lead to the objection that mortality from incisional hernia exhibits a low rate. The persistence of risk factors, the comorbidities of the patients and the occurrence of complications darken the prognosis.

Investigations carried out in Cuba, Spain and the United States reflected low and null mortality rates. It only remains to confirm that the incisional hernia represents a challenge for surgeons and frequently symbolizes the failure of abdominal wall closure after laparotomy. Thus, the advent of prosthetic materials in the field of surgery improves the quality of life in patients with different types of abdominal wall hernia and accesses a hernia repair with any variant of incisional hernioplasty. So that the reconstruction of the abdominal wall currently has a general index related to the anatomical location of the hernia in 45% of the cases; postlaparotomy in the midline from 11 to 15% and post laparoscopy from 0.2 to 1.2%. The American Hernia Society and the European Hernia Society reflected on the enormous scientific refinement in surgery, its importance in the world of modern medicine and the complexity of hernia surgery [12,13].

Finally, it can be affirmed that the evolutionary development of this process glimpses an upward trend to growth, that if they do not receive comprehensive treatment in the established time, they can be imprisoned and strangled. Therefore, there is concern because it is considered an important source of morbidity, complications,

including death in elective and urgent surgeries. In addition, this disease requires a careful analysis, since it is considered a point of care in academic and hospital settings since surgery Herniation is part of the training process of the general surgeon and in the city of Santiago de Cuba the number of scientific investigations referring to this subject is limited, so the studies related to this complication must be increased, and the adequate approach of the problems should be generalized. patient: taking into account the increasing progress of surgery, which has not yet achieved the optimal surgical treatment of this entity.

Conclusion

Incisional hernia represents a challenge for surgeons and often symbolizes the failure of abdominal wall closure after laparotomy, therefore treatment requires high professional competence and clinical-surgical systematization during the training process to significantly improve health and quality of life of patients who suffer from them.

Conflicts of Interest

The authors declare no conflicts of interest.

Authors Contribution

- a) Dr. María de Jesus George Bell: Conception of the idea and preparation of the article. Data collection as well as analysis and interpretation. Contribution with the design, Search and review of bibliography; review and approval of the final version of the manuscript.
- b) Dr. Josefa Bell Castillo: Preparation of the article. Data collection as well as analysis and interpretation. Contribution with the design, Search and review of bibliography; review and approval of the final version of the manuscript.
- c) Dr. Wilberto George Carrión: Preparation of the article. Data collection as well as analysis and interpretation. Contribution with the analysis and interpretation of the data; Search and review of bibliography.
- d) Dr. Elvis Pardo Olivares. Preparation of the article. Data collection as well as analysis and interpretation. Contribution with the analysis and interpretation of the data.
- e) Dr. Jorge Rondón Labrada. Preparation of the article. Data collection as well as analysis and interpretation. Contribution with the analysis and interpretation of the data.
- f) Dr. Ernesto Casamayor Callejas Preparation of the article. Data collection as well as analysis and interpretation. Contribution with the analysis and interpretation of the data.

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