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Avoidable death from complicated epigastric hernia in a resource limited setting

Mort évitable par une hernie de la ligne blanche compliquée en milieu défavorisée

Ewole Ella A.C[1,2], Kamto Kuatche T[2], Eya Stephane[1], Ndzie Hugues[1,2], Bengono Bengono R.S[1,3]

Clinical Case

1. Faculty of Medicine and Pharmaceutical Sciences of Sangmelima
2. Surgery Unit, Sangmelima's Reference Hospital
3. Anesthesia and Intensive Care Unit, Sangmelima's Reference Hospital

Corresponding author : Ewole Ella Armand Collins, Surgery Unit, Sangmelima's Reference Hospital, PO Box 890, Sangmelima, Tel : ; email: eacollinses@gmail.com

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ABSTRACT

An epigastric hernia is a defect in the ventral abdominal wall, that is often diagnosed under routine exam, and requires surgical management which if not undertaken may lead to strangulation. We present the case of a 20-year-old female of poor social setting, with no relevant past history who was brought to the emergency room with severe abdominal pains, fever and vomiting, of five days for which she had been taking traditional herbal medications. Upon physical examination she was clinically febrile, pale and septic, with signs of dehydration and hemodynamic instability. There was a necrotic supra-umbilical offensive ulcer and crepitus on almost the entire surface of the anterior abdominal wall. A working diagnosis of necrotizing fasciitis was made and she was planned for immediate surgery. Intraoperative findings were necrotizing fasciitis and necrosed loop of bowel in the anterior abdominal wall suggestive of strangulated hernia which worsened into necrotizing facitis. The postoperative period was marked by septic shock and death. Strangulated epigastric hernia remain a surgical emergency as it can be deadly if complicated. Care should be taken about the use of traditional medicine and proper counseling should be made to patients.

RESUME

Une hernie épigastrique est une lésion de la paroi abdominale antérieure nécessitant une prise en charge chirurgicale. En l'absence de traitement, elle peut se compliquer en un étranglement, voire le décès. Nous rapportons le cas d'une jeune femme de 20 ans, admise aux urgences pour des douleurs abdominales intenses, la fièvre et les vomissements, évoluant depuis cinq jours avec une notion de phytothérapie traditionnelle. L'examen physique présentait une pâleur cutanéo-muqueuse, des signes de déshydratation et une instabilité hémodynamique. Un ulcère sus-ombilical nécrotique et malodorant et des crépitements sous-cutanés étaient présents sur la quasi-totalité de la paroi abdominale antérieure. Un diagnostic de fasciite nécrosante a été posé et une intervention chirurgicale réalisée. Les découvertes peropératoires ont révélé une fasciite nécrosante et une anse intestinale nécrosée dans la paroi abdominale antérieure, suggérant une strangulation intestinale sur hernie de la ligne blanche compliquée de faciite. La période postopératoire était marquée par la survenue d'un choc septique et le décès. L'étranglement d'une hernie épigastrique reste une urgence chirurgicale, car il peut être mortel. Il convient d'être prudent quant à l'utilisation de la médecine traditionnelle et de prodiguer des conseils adaptés aux patients.

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Introduction

An epigastric hernia is a defect in the ventral abdominal wall, typically located midline above the umbilicus, and is often diagnosed during routine physical examinations [1]. About 65% of adult umbilical and epigastric hernias will require surgical treatment [1]. Even though epigastric hernias are asymptomatic, approximately 3% to 5% will necessitate emergency intervention due to incarceration or strangulation of intra-abdominal contents such as bowel [1,2]. Ideally, surgical repair should be performed before such complications occur. An epigastric hernia is not necessarily dangerous when it can be reduced, but may however develop complications if it gets strangulated. If it doesn't improve on its own, or if patients aren't able to push the hernia in, the contents of the hernia can be trapped (incarcerated) in the abdominal wall. An incarcerated hernia can become strangulated, which cuts off the blood flow to the tissue that's trapped and can lead to life-threatening complications. Excruciating pain due to ischemic changes in entrapped gastrointestinal tissue may endanger life. If surgical management is delayed, toxic materials from strangulated gut may spread and cause local sepsis or necrotizing fasciitis and further deterioration of the patient's overall general condition. Such irreversible complications may often cause the death of these patients [3]. We report a rare case of avoidable death from a patient who died from severe necrotizing fasciitis of the whole anterior abdominal wall a strangulated epigastric hernia in a low resource setting.

Patient presentation

We received a 20-year-old female in the emergency room after she was brought by an acquaintance of hers. She presented with an acute episode of generalized excruciating abdominal pains of five-day duration and severe lethargy. The patient reported that, history dated few months prior to consultation when she had a progressive onset of spasmodic supra-umbilical pains and swelling which were intermittent, for which she had beliefs of mystical origins and thus went for prayers and took herbal medications prescribed by a naturopathic doctor, with no formal diagnosis made. It is worth noting that her economic background was quite unfavorable too. five days prior to consultation, she had a sudden onset of a new episode but which this time was constant and rather spread to the whole anterior abdomen, associated with the development of a wound above the umbilicus. This was associated with spontaneous vomiting, fever and constipation. Her past medical history was relevant for an epigastric hernia diagnosed a few months back for which she had not undergone treatment. Physical exam revealed a clinically pale and septic patient, with signs of dehydration and hemodynamic instability. She had fever of 41°C, tachycardia 130 b/min, tachypnea 40 breaths/ min and BP of 92/50 mmHg. Her abdomen was mildly distended, moving with breathing bearing a large whitish fowl smelling ulcer midline above the umbilicus see Fig. 1. Palpation was painful and crepitations were felt beneath the skin throughout the entire abdominal wall. Deep palpation and percussion were not possible due to the pains, and no bowel sounds could be perceived upon auscultation.

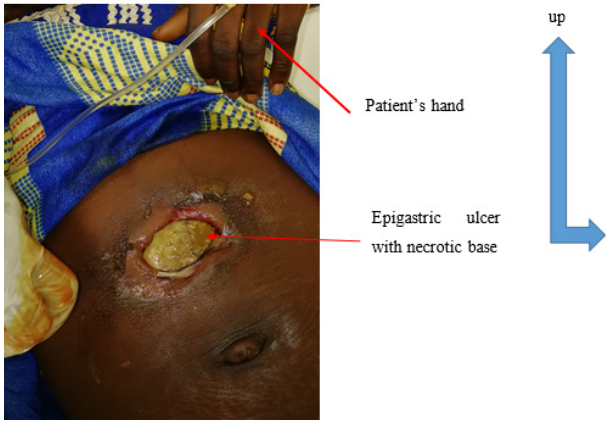

Figure 1: patient's abdomen showing necrosed skin overlying the hernia area

Her blood workup was remarkable of severe leukocytosis with left shift 20,4 c/l and anemia Hb=8,4 g/dl and thrombopenia 58 c/l) on full blood. She had hypernatremia 140mmol/l and normal renal function. Plane abdominal x-ray showed multiple central air fluid levels characteristic of small bowel obstruction. A working diagnosis of necrotizing fasciitis of the anterior abdominal wall was made and she was programed for surgery after appropriate resuscitation. Intraoperatory findings were necrotizing fasciitis interesting the fascial layer of the whole anterior abdominal wall with a loop of necrosed bowel in it see fig. 2-4,. The peritoneal cavity was totally spared without any sign of pus nor inflammation. An extensive debridement was made and an end to end anastomosis of the bowel endings observed after their edges were trimmed. Samples were collected for culture and histologic studies, and the patient was placed on broad spectrum postoperative antibiotherapy and sent to the intensive care unit. The post operatory period was marked by persistence of the fever, evolution into a state of shock and she finally died on post operatory day two.

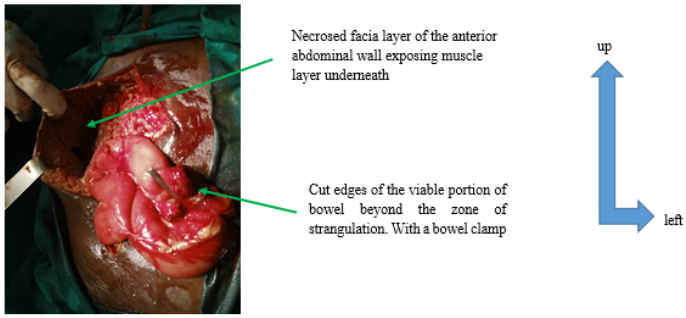

Figure 2: Intraoperatory image showing incised abdominal wall with necrosed fascia layer of the anterior abdominal wall, and remnant cut edges from strangulated bowel

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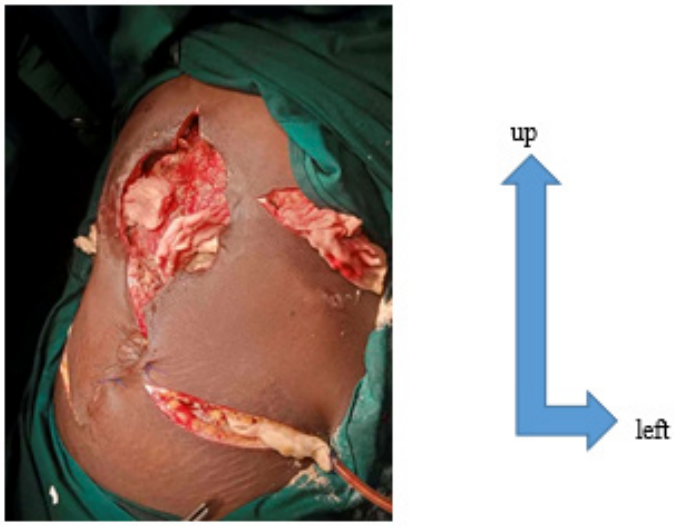

Figure 3: intraoperatory image showing the extent of fascia necrosis with abdominal mops in between the subcutaneous and the muscle layer

Figure 4: necrosed bowel from debrided tissue

Discussion

Delay and refusal to surgical treatment are attitudes that exist in medical profession, worldwide in general and in the Africa in particular, there are a lot of beliefs that guide these behaviors in many patients. According to a study carried out in Bouake in ivory Coast by Loukou et al. financial constrains (58,5%), trust in traditional medicine (39,6%), and religious beliefs (1,9%) are the most common causes of this behavior [4,5]. This goes in line with the rundown of events by our patient, who, due to strong religio-magical beliefs on the one hand and financial constrains on the other hand turned herself towards traditional medicine, which unfortunately could not yield any satisfactory result with respect to the situation at hand. This therefore implies that a proper counselling should be given to patients with hernia about the fact that there is no other treatment than surgery, let them get the appropriate reassurance about the procedure and as for the cost, they should know that these surgeries are quite affordable.

Postoperative mortality was studied by Samrawith et al. in Ethiopia and they found out that 54.2% of patients who died within 7 postoperative days died of septic shock, and the factors which influenced these early post-operative death included patients operated as emergency cases, patients with poor ASA performance score of 3 or more [6]. These conditions listed above correspond to those of our patient, cumulatively to the findings of Butterworth et al. who concluded that delay to emergency surgery increased the risk of high morbidity and mortality, even though their study involved only pediatric participants. All these factors could explain the fate of our patient. Therefore, counselling to timely management should be done towards every patient with an emergency surgical pathology.

Mindless of the progress in medical knowledge of herniae and the variety of surgical methods for treatment, we could see here that mortality due to epigastric herniae remain a reality even though there is lack of data to quantify this fact. Death due to a hernia was also described by Dongmo et al. and nilsson et al. by Dongmo et al. in Yaounde described a case of postoperative retroperitoneal hematoma due to an inguinal hernia repair [7,8] this prompts us to be aware of the fact that though considered trivial care must be taken when undertaking surgical care of a hernia

Conclusion

The strangulation of an epigastric hernia remains a surgical emergency as it can be deadly if complicated. A proper diagnosis is mandatory and counseling should be made to the general population about proper consultations when sick. For patient who present pathologies with no other treatment than surgery, they should be counselled about the potential complications of their condition. Care remains quite straight forward for a hernia when uncomplicated.

Conflict of interest:

The authors declare that they have no conflict of interests.

Authors' contributions:

Ewole Ella AC and Kamto Kuatche were the surgeons who first met and examined the patient and did the, surgery and treatment while Ewole Ella AC and Eya Stephane, were responsible for writing the first draft of the manuscript. Bengono Bengono R.S supervised the writing of the paper and completed the final editing. All the authors read and approved the final manuscript.

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