Epigastric Hernia in Pregnancy: A Management Plan Based on a Systematic Review of Literature and a Case History

Samuel A. Debrah · Amalachukwu M. Okpala

Received: 31 May 2011 / Accepted: 12 June 2012 / Published online: 27 June 2012
© Association of Surgeons of India 2012

Abstract Symptomatic epigastric hernia is rare in pregnant women. A case history, management of which prompted a systematic review of the literature and proposed plan for treatment of such cases, is hereby presented. There is paucity of information on management of this condition in the standard literature as searches in Pubmed, Science Direct, Hinari, Medline, African Journal Online, Bioone as well as Cochrane library revealed. There are two schools of thought for the management of hernias in pregnancy—watchful waiting and herniorrhaphy in pregnancy. There is no consensus or definite guideline on the management of epigastric hernias in pregnancy. Based on the literature review, a management algorithm is proposed, which combines the two schools of thought.

Keywords Epigastric hernia · Pregnancy · Management

Introduction

Abdominal wall hernias are not common in pregnancy [1]. They are usually managed by the “watchful waiting” policy during pregnancy and treated definitively a few weeks after delivery [2]. Other studies however recommend herniorrhaphy during pregnancy, since antepartum complications outweigh

elective operation in the case of irreducible hernias [1]. Literature searches through Pubmed, Medline, Hinari, Science Direct, Africa Journal Online, and Cochrane library, summarized in Table 1, revealed treatment options for different types of hernias except epigastric hernias, and there was no consensus or official guidelines proposed for management of hernias as a whole in pregnancy.

Case Report

A 30-year-old multiparous woman, who was 30 weeks pregnant, presented with 1-month history of a reducible epigastric swelling which had become painful and irreducible over the past 2 days. She denied any bowel obstructive symptoms, chronic cough, or dyspepsia. On examination the patient was found to be afebrile and hemodynamically stable, and obstetrical examination confirmed a pregnant uterus consistent with 30 weeks’ gestation. Examination of the epigastrium revealed a nonreducible, firm, tender bulge of 5 cm in diameter. A diagnosis of incarcerated epigastric hernia was made. She was admitted and had an urgent abdominopelvic ultrasound performed, which confirmed the diagnosis of an epigastric hernia, as well as a normal, live singleton fetus. Thirty minutes later, the swelling had reduced and the epigastrium was no longer tender. She was detained for observation for further 24 h and thereafter discharged home well for review at the outpatient department (both surgical and obstetric) with a plan for postpartum herniorrhaphy.

Discussion

Epigastric hernia is a hernia in the midline of the anterior abdominal wall between the umbilicus and the xiphisternum

S. A. Debrah (✉)
Department of Surgery, School of Medical Sciences,
University of Cape Coast,
Cape Coast, Ghana
e-mail: sdebrah@aol.com

S. A. Debrah
e-mail: s.a.debrah@uccsms.edu.gh

A. M. Okpala
Department of Surgery, Central Regional Hospital,
Cape Coast, Ghana

Table 1 Types of hernias and treatment options proposed

Name of paper	Type of hernia	Treatment option
Augustin et al. [1]	Groin (Femoral, Inguinal), Umbilical, Incisional, Parastomal, Diaphragmatic.	Herniorrhaphy in pregnancy.
Gabriele et al. [2]	Umbilical, Inguinal.	Caesarean section with repair.
Buch et al. [6]	Groin, Umbilical.	Watchful waiting strategy with post partum repair.
Ghnnam et al. [7]	Paraumbilical.	Caesarean section with repair.
Wai, PY et al. [8]	Ventral	Laparoscopic repair in pregnancy.

and through a defect in the linea alba. It accounts for 1 % of all hernias seen in hospital, but the true incidence may be higher because, as the majority of them are asymptomatic, many patients do not seek medical advice [3]. The incidence of epigastric hernias occurring in pregnancy has not been reported in literature.

A proposed algorithm for the management of epigastric hernias in pregnancy is drawn up in Fig. 1. This proposes an approach toward epigastric hernias occurring in pregnancy, with a combination of watchful waiting and emergency herniorrhaphy depending on the clinical state on presentation.

Fig. 1 Management algorithm for epigastric hernia in pregnancy

Assessment of the mother should be done in conjunction with fetal monitoring. However, as a general rule, the condition of the mother should always take priority because proper treatment of surgical diseases in the mother will usually benefit the fetus as well as the mother [4].

Conclusion

Non-obstetric surgical problems may complicate about 2 % of pregnancies, inevitably leading to the involvement of the general surgeon in the management of such a case [5]. A general surgeon will encounter pregnant women presenting with a variety of general surgical issues, elective, urgent, and emergent [5]. Therefore, the surgeon should have a basic understanding of the issues specific to pregnancy that make care more challenging for the pregnant woman presenting with a non-obstetric surgical problem [5]. There is no definite guideline on the management of hernias in pregnancy, more so epigastric hernia. The clinical management of a patient with a hernia in pregnancy then depends on the surgeon to whom the patient presents. Thus, all clinical decision-making skills of the experienced surgeon must come into play in order to make the correct therapeutic decisions when evaluating the pregnant patient in order to improve outcomes for the both mother and fetus [4]. An algorithm has been drawn up with a general approach toward the management of epigastric hernia in pregnancy. The final decision however depends on the discretion of the surgeon, with decisions made based on the clinical state of the patient on presentation, and sound clinical judgment supported by a team approach, necessary investigations, and evidence-based medicine.

References

- Augustin G, Matosevic P, Kekez T, Majerovic M, Delmis J (2009) Abdominal hernias in pregnancy. *J Obstet Gynecol Res* 35(2):203–211
- Gabriele R, Conte M, Izzo L, Basso L (2010) Cesarean section and hernia repair: simultaneous approach. *J Obstet Gynecol Res* 36(5):944–949
- Badoe EA, Archampong EQ, da-Rocha Afodu JT (2000) Principles and practice of surgery including pathology in the tropics, 3rd ed. Ghana Publishing Corp, Tema, Ghana
- Parengi S, Levine D, Henry A, Isakovich N, Pories S (2007) Surgical gastrointestinal disorders during pregnancy. *Am J Surg* 193(2):223–232
- Melnick DM, Wahl WL, Dalton VK (2004) Management of general surgical problems in the pregnant patient. *Am J Surg* 187:170–180
- Buch KE, Tabrizian P, Divino CM (2008) Management of hernias in pregnancy. *J Am Coll Surg* 207(4):539–542
- Ghnnam WM et al (2009) Paraumbilical hernia repair during caesarean delivery. *Ann Saudi Med* 29(2):115–118
- Wai PY, Ruby JA, Davis KA, Roberts AC, Roberts KE (2009) Laparoscopic ventral hernia repair during pregnancy. *Hernia* 13(5):559–563