Case Report

Laparoscopic repair of a large umbilical hernia in a super obese woman and its outcome

Sarath Babu Gillellamudi*, Rehman Muhamad, B. Anil Kumar,
Tarun Gogineni, M. Aparna, V. Chaitanya

Department of General Surgery, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation, Chinna Avutapalli Gannavaram, Krishna District-521286, Andhra Pradesh, India

Received: 29 April 2014

Accepted: 8 May 2014

*Correspondence:

Dr. Sarath Babu Gillellamudi,
E-mail: gillellamudi@gmail.com

© 2014 Gillellamudi SB et al. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

The umbilical hernia is a common surgical problem mainly encountered in the 5th and 6th decades of life. The umbilical defect is observed in more than 90% of elderly patients. It is seen mainly in obese patients, especially in women. A 52-year-old super obese woman with body mass index 53.3 kg/m² presented with intermittent, crampy, abdominal pain. Laparoscopic umbilical hernia repair with combined herniorrhaphy and intraabdominal mesh fixation offers an efficient, safe, and effective repair for umbilical hernia in super obese women.

Keywords: Umbilical hernia, Laparoscopy, Super obese

INTRODUCTION

The umbilical hernia is a common surgical problem mainly encountered in the 5th and 6th decades of life. The umbilical defect is observed in more than 90% of elderly patients. It is seen mainly in obese patients, especially in women. Umbilical hernia has gained little attention from surgeons in comparison with other types of abdominal wall hernias (inguinal, postoperative); however, the primary suture for umbilical hernia is associated with a recurrence rate of 19-54%. As with inguinal hernia the umbilical hernia repair has undergone various developments with Laparoscopic Repair of Umbilical Hernia (LRUH) is gaining increasing popularity due to its low recurrence rate, short hospital stay, and low complication rate.¹

CASE REPORT

A 52-year-old super obese woman presented with intermittent, crampy, abdominal pain which is gradual in

onset, vague in nature, mainly around the umbilicus, progressive with no aggravating or relieving factors at umbilicus since 3 days. Swelling was first noticed 8yrs back which gradually increased in size and attained present size. There was no history of fever, vomitings, constipation and burning micturition. The patient had comorbidities like diabetes since one month and morbid obesity weighing 120 kilograms height 150 centimeters and body mass index 53.3 kg/m². On physical examination, a large tender bulge of 10 centimeters diameter was found on the patient's abdomen around the umbilicus that was most prominent while the patient was standing. There were no signs of inflammation, visible peristalsis. Cough impulse was present and the swelling was not reduced on lying down. She was diagnosed as irreducible uncomplicated umbilical hernia. An abdominal ultra sound scan showed a defect in anterior abdominal wall of size 13×12 centimeters with bowel and omentum as content of hernia.

Laparoscopic procedure: We decided a laparoscopic approach and mesh placement and high risk consent was taken including consent for ventilatory support in view of morbid obesity. A pneumoperitoneum is achieved with a veress needle insertion; through the palmer's point and the ports were placed as shown in figure 1. Laparoscopic examination of the abdomen is performed. The incarcerated contents were reduced. This can be accomplished with a combination of blunt and sharp dissection with scissors. The primary repair of the defect was done using non absorbable prolene suture using interrupted sutures. A 20 centimeter circular dual layer mesh was used to cover the defect and fixed using non absorbable tackers.

Figure 1: Pneumoperitoneum achieved with a veress needle insertion; through the palmer's point and the ports were placed.

Post-operative course: The post-operative course was eventful and she was on ventilator support for one day. She was extubated after 24 hours and she developed respiratory distress with falling saturations and had to be reintubated. A chest radiograph post reintubation was diagnosed as adult respiratory distress syndrome and left mid zone aspiration pneumonia. With parenteral antibiotics ventilator support she was extubated on seventh post-operative day. She was started on graded oral fluids and soft diet and was discharged on 15th post-operative day after she passed stools and was on regular diet. She was followed up after fifteen days and then after three months and six months for recurrence or any signs of complications.

Figure 2: Patient after post-operative course.

DISCUSSION

The umbilical hernia of the adult is in almost 90% an acquired hernia and is not a result of persistence of infantile hernias. It represents an indirect herniation through an umbilical canal.

That canal has four borders: the umbilical fascia posteriorly, the linea alba anteriorly and the medial edges of the two rectus sheaths on each side. Herniation is due to a gradual yielding of the cicatricial tissue that closes the umbilical ring. This happens due to increasing intra-abdominal pressure.

Predisposing factors include extreme obesity, a history of multiple pregnancies with prolonged labor, ascites, and large abdominal tumors.²

In terms of approach, compared to Mayo repair, the laparoscopic approach confers the advantages of reduced postoperative pain, shorter hospital stay, and a diminished morbidity rate in umbilical hernia.³ Laparoscopy intra-abdominal mesh fixation was done with tackers in our case as it was technically easy and takes less operating time and is comparable to sutures.⁴ Laparoscopy in morbid obese patients is associated with complications during surgery as it is difficult to maintain the haemodynamics during surgery due to pneumoperitoneum. Our patient has been on ventilator and had post-operative morbidity but recovered well. Obese patients have a higher risk of recurrence when their BMI is $>30 \text{ kg/m}^2$; therefore, they need to be operated on using meshes. Incarceration of external hernias is a relatively common process in obese adults and is associated to a high rate of complications and mortality.⁵

CONCLUSION

Laparoscopic umbilical hernia repair with combined herniorrhaphy and intra-abdominal mesh fixation offers an efficient, safe, and effective repair for umbilical hernia in super obese women.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. V. Abhishek, M. N. Mallikarjuna, B. S. Shivaswamy. Laparoscopic umbilical hernia repair: technique paper. *ISRN Minimal Invas Surg.* 2012;2012:1-4.
2. Muschaweck U. Umbilical and epigastric hernia repair. *Surg Clin North Am.* 2003;83:1207-21.
3. Lau H, Patil NG. Umbilical hernia in adults. *Surg Endosc.* 2003;17(12):2016-20.
4. Douglas JM, Young WN, Jones DB. Lichtenstein inguinal herniorrhaphy using sutures versus tacks. *Hernia.* 2002;6(3):99-101.
5. Rodriguez-Hermosa JJ, Codina-Cazador A, Ruiz-Feliu B, Roig-Garcia J, Albiol-Quer M, Planellas-Gine P. Incarcerated umbilical hernia in a super-obese patient. *Obes Surg.* 2008;18(7):893-5.

DOI: 10.5455/2349-2902.isj20140519

Cite this article as: Gillellamudi SB, Muhamad R, Anil Kumar B, Gogineni T, Aparna M, Chaitanya V. Laparoscopic repair of a large umbilical hernia in a super obese woman and its outcome. *Int Surg J* 2014;1:60-2.