



THE CHALLENGING LAPAROSCOPIC REPAIR OF UMBILICAL HERNIA IN A SUPER OBESE WOMAN WHERE HYPOTHYROIDISM IS A HIDDEN FACTOR

General Surgery

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ABSTRACT

The most urgent goal for hernia surgeons is the battle against burgeoning epidemic of obesity. Untreated hypothyroidism causing chronic constipation is one of the causes of umbilical hernia in the obese. A 55 year old super obese woman with BMI of 60.2 kg/ sq.m presented with irreducible umbilical hernia. She underwent IPOM Plus surgery which offers an efficient, safe, and effective repair for umbilical hernia in the morbidly obese.

KEYWORDS

Umbilical hernia, Super obese, IPOM Plus, Laparoscopy

INTRODUCTION

The umbilical hernia is a fascial defect through the umbilical ring, being unrelated to any previous incisions. It may be congenital or acquired. Its pathophysiology is related to a combination of mechanical deficits of the abdominal wall i.e incomplete fusion of abdominal wall congenitally, collagen disorders, and mechanical factors impacting the abdominal wall such as chronic cough, chronic constipation, physical work, pregnancy or ascites. However, the most common cause of chronic strain is obesity.

CASE REPORT

A 55 year old super obese woman presented swelling in the umbilical region since one year and abdominal pain since 15 days which was insidious in onset, moderate in intensity, localised around the umbilicus, crampy, without exacerbating or relieving factors. This swelling around the umbilicus was first noticed one year ago. Patient gave no history of fever or vomiting. Patient was diagnosed with hypothyroidism one year ago, for which she was started on Thyronorm 100 mcg OD. Patient gave history of chronic constipation for the past 3-4 years. In addition to this, patient was morbidly obese, with a weight of 154 kilograms, height 160 centimeters and Body Mass Index of 60.2kg/sq.m. Refer to Figure 1.



Figure 1

On physical examination, a bulge of 3 cm diameter was found on the patient's abdomen around the umbilicus, which was more prominent when the patient was standing. Cough impulse was present and the bulge did not reduce while lying down. Patient was diagnosed as irreducible umbilical hernia. An abdominal ultrasound revealed a defect in the anterior abdominal wall of 3 cm size with omentum as content of hernia.

LAPAROSCOPIC PROCEDURE

The IPOM Plus (Intraperitoneal Only Mesh + Defect closure with suture) technique of laparoscopic surgery was decided. Grave risk consent was taken for including consent for ventilatory support in view of morbid obesity.

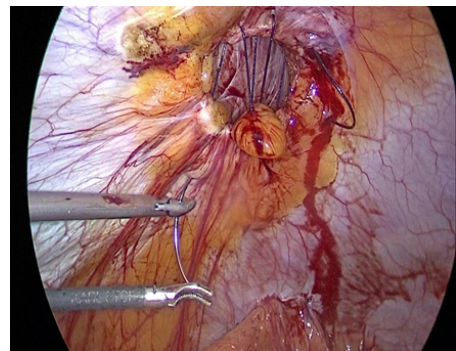


Figure 2

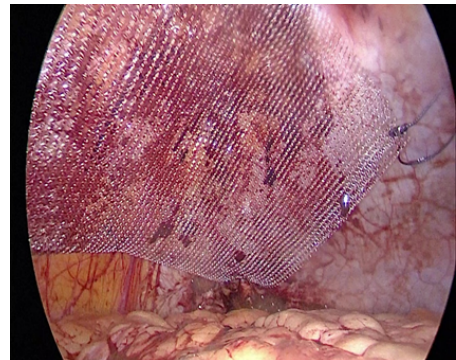


Figure 3

Veress needle insertion was done through Palmer's point and pneumoperitoneum was achieved. Ports were then placed. Laparoscopic examination of the abdomen was done. Omentum in the sac was reduced. Primary repair of the defect was done using Number 1 vicryl suture in a continuous fashion as shown in Figure 2. A 10 X 7.5 cm mesh was used to cover the defect (Figure 3) and trans fascial fixation technique. After fixing the mesh, greater omentum was spread in between the bowel and the mesh. Patient was extubated after about 30 minutes of observation.

POST OPERATIVE CARE

The post-operative period was uneventful. The patient was given a stat dose of Enoxaparin 80 mg following surgery as a prophylactic measure against DVT. Patient was encouraged to mobilise on 1st post-operative day. She was also started on graded oral fluids and soft diet on the same day. Patient passed stools on the 3rd post-operative day and was

discharged subsequently.

DISCUSSION

Umbilical hernia in adults is mostly an acquired hernia and is not a result of persistence of infantile hernias. It represents an indirect herniation through the 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 intraabdominal pressure.¹

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

In terms of approach, compared to Mayo repair, the laparoscopic approach offers the advantages of reduced postoperative pain, shorter hospital stay, and a diminished morbidity rate in umbilical hernia.³ 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 had been extubated after 30 min of observation and recovered well. Obese patients have a higher risk of recurrence when their BMI is >30 kg/m²; 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.⁴

CONCLUSION

The achievement of low recurrence rate and minimized wound complications is a combination of goals that has eluded the open approach for umbilical hernia repair. It must be noted that untreated hypothyroidism causing chronic constipation contributes to the development of umbilical hernia. However, the most urgent goal for surgeons is the battle against burgeoning epidemic of obesity.

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