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## A case of umbilical hernia in 62 years old male patient

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### Abstract

Umbilical hernia is a rather common surgical problem. Approximately 10% of all primary hernias comprise umbilical and epigastric hernias. We reported a case of umbilical hernia in 62 years old male patient.

**Keywords:** epigastric hernias, umbilical, Surgical

### Introduction

Umbilical hernia is a rather common surgical problem. Approximately 10% of all primary hernias comprise umbilical and epigastric hernias. Approximately 175,000 umbilical hernia repairs are annually performed in the US. It has been reported that the share of umbilical and paraumbilical hernia repairs among all repairs for abdominal wall hernias increased from 5% to 14% in UK in the last 25 years <sup>[1]</sup>.

Despite umbilical hernia being common, there are no set surgical guidelines for its repair and there is no consensus on the best type of repair. Recurrence rates range from 1% to 43%, but the literature offers little consensus on factors that affect recurrence <sup>[2]</sup>. Umbilical hernias are more common in women than men; however, there are series in which male patients are more frequent. Typically, a lump is observed around the umbilicus. Pain is the most common indication to visit a physician and undergo a repair. Recurrence may develop even in cases where a prosthetic mesh is used. Recurrent umbilical hernias often tend to enlarge faster than primary ones and may behave as incisional hernias <sup>[3]</sup>.

The standard repair is an open umbilical hernioplasty by primary closure of the fascial defects; however, the high recurrence rate associated with this procedure is somewhat problematic. Recently, many cases of tension-free mesh repair for umbilical hernia have been reported. Asolati *et al.* found that type 2 diabetes, hyperlipidemia, and human immunodeficiency virus-positive status may be a factor in increased recurrence rates. Obesity (body mass index [BMI; calculate as weight in kilograms divided by height in meters squared] >30) has also been associated with higher rates of recurrence <sup>[4]</sup>. We reported a case of umbilical hernia in 62 years old male patient.

### Case Report

A 62 years old male patients reported to general surgery department with complaint of pain in umbilical region. History revealed that patient developed severe pain since 1 week.

There was history of reddish discoloration of the skin around the umbilicus associated with fever. There was no history of abdominal distension, vomiting and constipation.

His general physical examination was normal. Patient was subjected to CT scan taken with Toshiba 3400 TG model. CT imaging showed an umbilical hernia with an incarcerated portion of small intestine and a hernial orifice of ~2 cm. Patient was planned for surgery under general anesthesia. After the induction of GA, the hernia was reduced. A 12-mm trocar was inserted just below the epigastric region, and pneumoperitoneum was established by insufflation with carbon dioxide to a 10-mmHg abdominal pressure. Two 5-mm trocars were placed in the right and left lateral abdominal region, respectively. On laparoscopic examination of the abdominal cavity, we identified the portion of incarcerated small intestine. Herniorrhaphy (Mayo's repair) was done to close the umbilical hernial defect. Post-operative period was uneventful. Sutures were removed on the 10th post-operative day. After 3 months of follow up patient was asymptomatic.

### Discussion

An umbilical hernia has a tendency to be associated with high morbidity and mortality in comparison with inguinal hernia because of the higher risk of incarceration and strangulation

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that require an emergency repair. Although the number of articles with the title word “umbilical hernia” increased 2.6-fold between the periods 1991–2000 and 2001–2010, there still appears to be a certain discrepancy between its importance and the attention it has received in the literature [5].

The borders of the umbilical canal are the umbilical fascia posteriorly, the linea alba anteriorly and medial edges of the two rectus sheaths on two sides. Herniation happens due to increasing intra-abdominal pressure. Predisposing factors include obesity, multiple pregnancies, ascites, and abdominal tumors. The content of the hernia sac may be preperitoneal fat tissue, omentum, and small intestine in the majority; a combination of those can take part. Large intestines are very rarely involved. The neck of the umbilical hernia is usually narrow compared with the size of the herniated mass, hence, strangulation is common. Therefore, an elective repair after diagnosis is advised [6].

Umbilical hernias are a common problem encountered by general surgeons. Despite umbilical hernias being common, little has changed in their indications and methods of repair for many years. Several studies have attempted to analyze the factors associated with recurrence with short-term follow-up [7]. We reported a case of umbilical hernia in 62 years old male patient.

Guérin *et al.* [8] reported a case in 42-years old, obese woman who was admitted to hospital 3 hours after the sudden development of abdominal pain. Her umbilical region was swollen and she was diagnosed with incarceration of an umbilical hernia by computed tomography. Authors achieved hernia reduction. From a laparoscopic view, the portion of strangulated small intestine was neither necrotic nor perforated. The size of the hernial orifice was  $\sim 2 \times 2$  cm, and thus, they selected a  $12 \times 12$  cm composite mesh to cover the hernia defect by at least 5 cm in all directions. The patient recovered uneventfully and was discharged on postoperative day 9. She remains free of recurrence 20 months after surgery.

There is no argument that an operative procedure is the primary treatment for umbilical hernia; the reduction of the incarcerated contents and closure of the hernial orifice are the basic principles of the surgery. Open umbilical herniorrhaphy with the simple fascia suture technique has been widely used by many surgeons and is a long-standing procedure, because it is very simple and may sometimes be performed with local anesthesia. However, the recurrence rate is as high as 10–20%. Tension-free repair with a mesh was introduced for umbilical or ventral hernia since the 1990s and evidence suggests that open mesh repair has significantly lowered the recurrence rates [9].

Sanjay *et al.* [10] stated that the most common sites for Richter’s hernia are the femoral ring (71%), deep inguinal ring (23%) and ventral or umbilical hernias (6%). The growing popularity of laparoscopic surgery has led to a new possible site for development of Richter’s hernia. In most cases as less than two thirds of the circumference of the bowel wall is involved, the lumen of the gut remains free and thus features of intestinal obstruction are often absent. Richter’s hernia is a deceptive entity whose high death rate can be reduced by accurate diagnosis and early surgery.

## Conclusion

Authors found that umbilical hernia is a common condition in adults. Herniorrhaphy (Mayo’s repair) is a successful surgical procedure in cases of hernias.

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