

# A Challenging Case of Incisional Hernia Repair in Patient with Multiple Comorbidities

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## Abstract:-

### ➤ Introduction:

Development of hernia over previously inserted port site is common complication of laproscopic abdominal surgeries, so treatment needs to be done accordingly especially in comorbid patients.

### ➤ Presentation of case:

We discuss the case of 73 year old woman visited our surgery OPD with complaints of abdominal pain and vomiting. On physical examination, a swelling of approx. 6cm x 3cm size was visible and palpated on coughing and straining.

### ➤ Clinical discussion:

A laparoscopic IPOM procedure was utilized as our patient was experiencing multiple comorbidities (implying that the chances of postoperative wound contamination was high), and since she was taking antithrombotic drugs, a surgical technique with an insignificant dissection and minimal bleeding was the most suitable.

### ➤ Conclusion:

When fixing incisional hernias in a patient with multiple comorbidities, techniques like IPOM Plus with minimal bleeding and dissection becomes most suitable.

## I. INTRODUCTION

Laparoscopic procedure has acquired fast acknowledgment for various surgical diseases around the world. In spite of the fact that laparoscopic procedure has altered the surgical milieu, it has its own dangers and complications. Port Site Hernia (PSH) is one such unambiguous difficulty of laparoscopic procedure which is frequently under-assessed because of different variables [1]. Port site hernia is nothing but formation of a hernia at the previously inserted port/cannula site [2]. Different etiological variables related with PSH are midline ports, bigger trocar size, wound disease and closure of the sheath at port site in wrong way [1]. It can show from painless enlargement to more agonizing incarcerated or strangulated hernia. This type of problem was first detailed in 1968 in a large number of patients who went through laparoscopic method for gynecological surgeries[3]. Nonetheless, the primary instance of PSH after laparoscopic cholecystectomy was accounted for in 1991 [4]. The quantity of this type of hernias in the umbilicus have increased lately as laparoscopic

methods have been performed more often[5], this ascent in number of port site hernias will probably keep on expanding.

In this case report, we present a patient with port site incisional hernia having pacemaker in situ and describe the treatment approach used.

## II. CASE

A 73 year old woman visited PDU Civil hospital, Rajkot with complaints of abdominal pain and vomiting. On physical examination, a swelling of approx. 6cm x 3cm size was visible and palpated on coughing and straining. Her height was 158 cm and her weight was 70 kg.

She is known case of type 2 diabetes, Hypertension, and history of IHD and PTCA and has PACEMAKER in situ since 2.5 years and is taking her cardiac and other medication regularly. She had undergone laparoscopic cholecystectomy 2 years back.

Incisional hernia subsequently developed at mid line port site near umbilicus for which the patient was previously admitted in our hospital and was treated conservatively with supportive abdominal binder. The hernia gradually enlarged and also became painful and so the patient was posted for operative intervention.

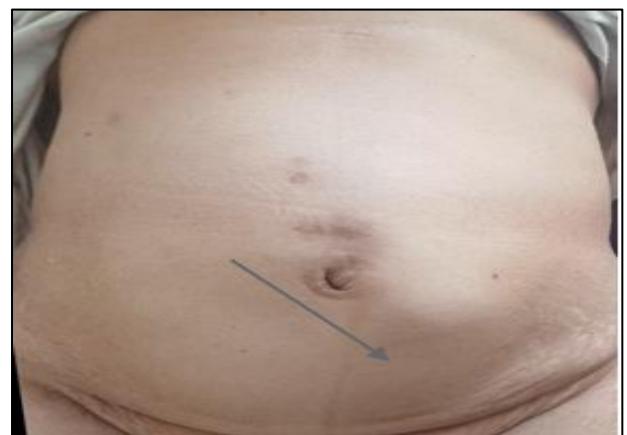


Fig 1: Pre Operative Clinical Image of Hernial Site

Abdominal computed tomography (CT) examination diagnosed ventral incisional hernia in midline near umbilicus with herniation of omental fat and few bowel loops with defect measuring approx. 52mm(CC) and 51mm (TR).

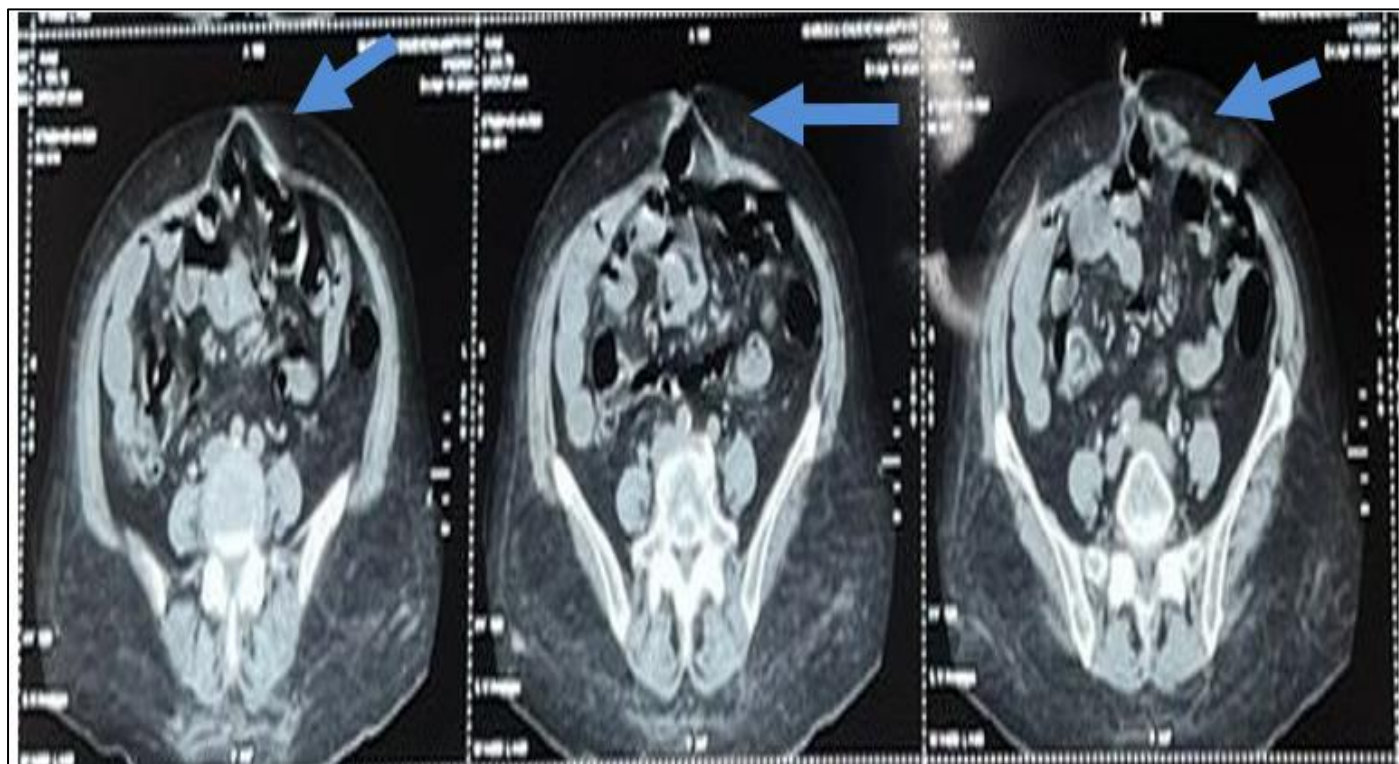


Fig 2: Hernial Defect as Seen on CT Scan

As patient was known case of cardiac disease and had pacemaker, multi disciplinary team opinion was considered and operative procedure was planned with a cardiologist being present during the intra operative course.

After all workup, patient was operated for incisional hernia using laparoscopic IPOM Plus using 15cm x 15cm proceed mesh under general anesthesia.

➤ *The Main Points of the Surgery Performed are as Follows:*

- It was considered best to perform laparoscopy to initially diagnose the exact site of the hernial orifice. Also, as she had diabetes and was at increased risk of wound infection, we decided to use laparoscopic approach for the surgery.
- To control the future risk of bleeding, clopidogrel was discontinued perioperatively and resumed later on. Since the standard surgical method of placing the mesh in the retrorectus, pre- transversalis, or preperitoneal layer was judged to be at high risk for postoperative bleeding and hematoma development, the decision was made to perform laparoscopic intraperitoneal onlay mesh repair (IPOM), which does not require extensive dissection.
- As using a 12 mm port could lead to another hernia, so we decided to use only 5 mm ports. A 5mm optical port inserted on right upper quadrant and two 5 mm working ports were inserted in the left upper and lower abdomen (Fig. 3). The omental fat as hernial content was reduced and the defect was secured using barbed sutures.
- The port site incisional hernia (Fig 2) was repaired using IPOM plus technique and 15cm × 15cm size proceed mesh was placed. The exposed mesh on the abdominal cavity was fixed using tuckers.



Fig 3: Laparoscopic View of Hernial Site Defect

Pacemaker setting were revert back to original and patient was shifted to recovery room for observation.

The patient had complaint of minor pain postoperatively and was discharged on 3rd postoperative day with uneventful course. Patient is being under continuous follow up with results that are satisfactory.



Fig 4: Post Operative Clinical Image of Hernial Site

### III. DISCUSSION

Ventral and incisional hernia fixes through laparoscopic method are frequently done in light of the fact that the surgical site infection rate is less than open fix [6,7]. Customarily, IPOM and IPOM plus repair, which adds closure of hernial defect, have been generally utilized as first-line approach in laparoscopic repair surgeries [8]. Our patient had multiple comorbidities and a higher chance of mesh and wound infections, so laparoscopic fix was viewed as ideal. Since laparoscopic IPOM was leading to complications like adhesions formation between different viscera and between peritoneum, the utilization of techniques which are minimally invasive like placing a mesh in the extraperitoneal space, such as eTEP [9] and MILOS [10], has spread in very short span lately; nonetheless, as there is more dissection in these techniques, they have a higher chance of postoperative bleeding and seroma formation [11]. We chose not to do preperitoneal dissection extensively in light of the fact that chance of bleeding was more as the patient was taking antithrombotic drugs.

In laparoscopic IPOM, a port of size 12mm is normally inserted into the superior part of left side abdomen with few adhesion as the first port, and a mesh is entered from there [8]. However, the ports bigger than 10 mm may increase the chance of new abdominal hernias. To let happen this, we made a tiny incision around the umbilical region with the hernia to enter the mesh from there, and only ports of size 5mm were used. Lavage was done in medial wound before closing to stop infection.

The dorsal side of the mesh was fixed by suturing it to the peritoneum. Thus, the minimum of necessary preperitoneal detachment was performed, as well as a protective dissection (using an ultrasonic harmonic scalpel) to minimize bleeding.

And so, the laparoscopic IPOM fix was utilized as our patient was experiencing multiple comorbidities (implying that the chances of postoperative wound contamination was high), and since she was taking antithrombotic drugs, a surgical technique with an insignificant dissection and minimal bleeding was the most suitable. And in spite of the various comorbidities, the surgery was successfully performed without any complications.

### IV. CONCLUSION

When repairing incisional hernias in a patient with multiple comorbidities, it becomes necessary to use proper surgical method for repair like in our case IPOM plus was chosen so that minimum dissection and bleeding occurs and surgery could be completed without any major complications.

- **Consent:** Informed consent was obtained from the patient for publication of this case report and accompanying images.
- **Author Contribution:** Dr. Mihir
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