



## Clinical Profile of Incisional Hernia in a Rural Medical College - A Descriptive Study

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### Abstract

**Background:** Incisional hernia is protrusion of abdominal contents that occurs in the site of previous incision. This study was conducted to study the demographic profile of incisional hernia and its clinical presentation.

**Materials and Methods:** The study was conducted in the Department of General surgery, Rajah Muthiah Medical college and Hospital, Chidambaram for a period of 2 years from October 2018 to September 2020 with 50 patients who are diagnosed and admitted as Incisional hernia. With history and clinical examination, incidence, risk factors and clinical presentation were analyzed and results compared with various studies.

**Results:** The incidence of incisional hernia were common among middle aged individuals 3<sup>rd</sup> 4<sup>th</sup> and 5<sup>th</sup> decade and females (68%) and common among heavy workers than sedentary workers. In majority of cases incisional hernia occurred after 3 years of previous procedure. Patient presented with swelling and pain as major complaint and none of the cases were uncomplicated incisional hernia and majority through lower midline scar in our study.

**Conclusion:** Incisional hernia being a most common entity, it should be kept in mind in all abdominal surgeries and try to reduce the modifiable risk factors of incisional hernia prior to surgery. Incisional hernia is a clinical diagnosis and should not be missed in obese individuals.

**Keywords:** swelling, incidence, surgical scar.

### Introduction

Incisional hernia is defined as an abnormal protrusion of abdominal contents through weak scar of any cause include post surgery or post trauma<sup>1</sup>. The incidence varies from 2 to 11%<sup>1-6</sup>. The risk factors predisposing for incisional hernia includes old age, female sex, obesity, anemia, malnutrition, Diabetes mellitus, smoking and surgery related problems include faulty closure technique, inappropriate suture material etc.

Clinical manifestation usually starts early after surgery and in course of time, gradually swelling increases in size and cause discomfort and pain and end up in complications like incarceration, obstruction, strangulation and risk the patient's life<sup>7</sup>. Incisional hernia better treated with meshplasty which is either open or laparoscopic technique because it has greatest tissue in growth with least complication rate<sup>8</sup>.

**Methods and Materials**

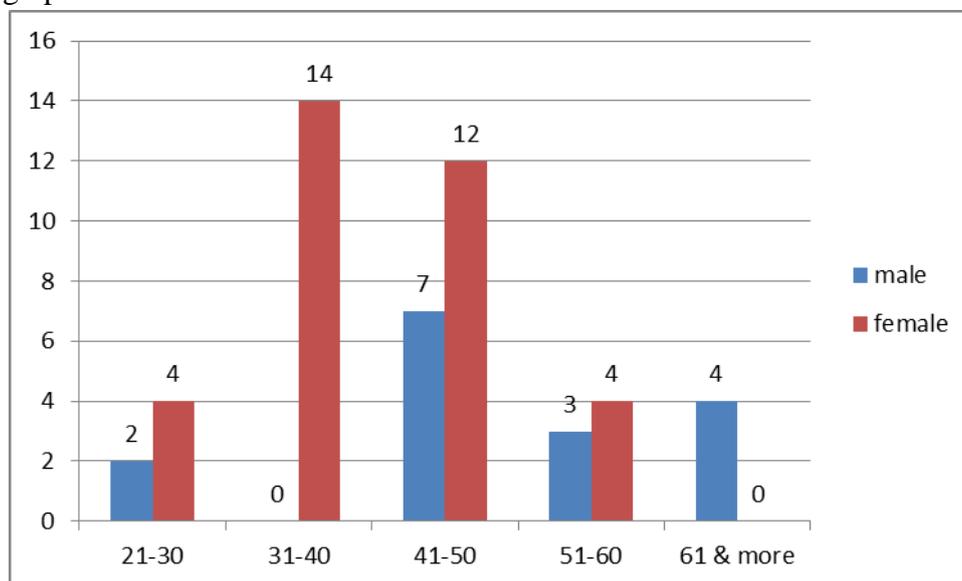
The study was conducted in the Department of General surgery, Rajah Muthiah Medical College and Hospital for a period of 2 years from October 2018 to September 2020 with 50 patients who are diagnosed as Incisional hernia. In our study, patients less than 18 years of age, pregnant women, associated with other abdominal wall hernias were excluded. With detailed history and clinical examination, demographic predeliction, risk factors and clinical presentation were analyzed and results are depicted and correlated with other studies.

**Results**

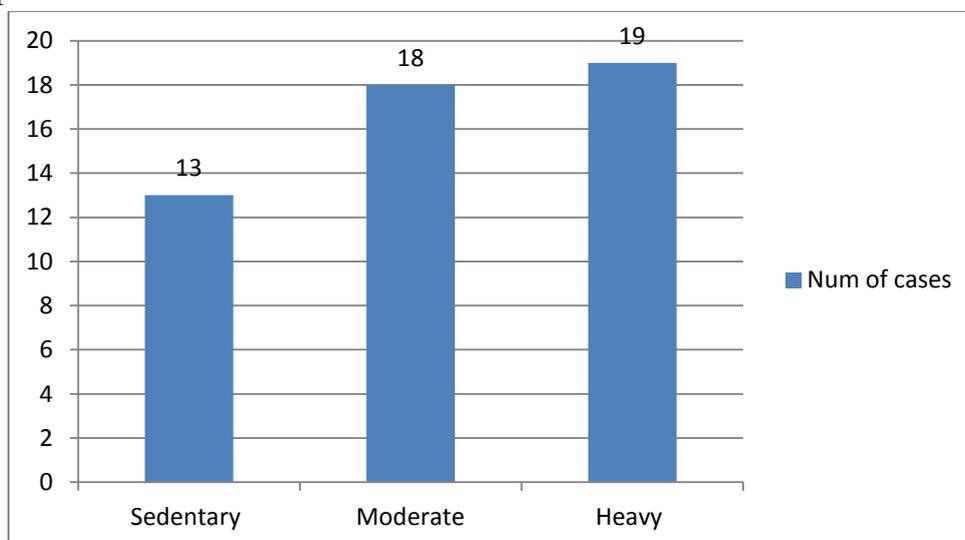
This study was conducted to observe the demographic profile of incisional hernia, and its clinical presentation.

**Demographic Incidence:** In our study, patient’s age ranging from 26 to 80 years of age and most of the patients with incisional hernia are in the age group of 3<sup>rd</sup> 4<sup>th</sup> and 5<sup>th</sup> decade and majority were females (68%) and most of them were heavy workers (38%) .

**Figure 1:** Demographic distribution



**Figure 2:** Occupation



**Time of onset of hernia since previous surgery**

**Table 1:** Time of onset of hernia since previous surgery

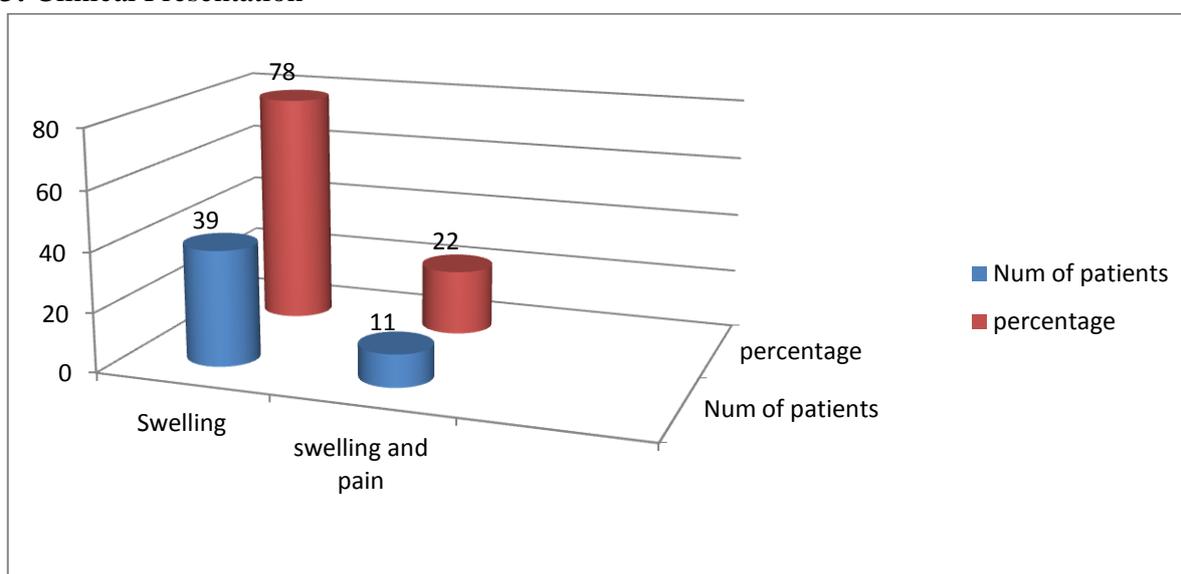
Duration since surgery	Number of cases
Less than 6 months	2
6month – 1year	8
1year – 3 year	18
More than 3years	22

From the above data, it is observed that 22 patients presented with incisional hernia were after 3 years of previous surgery, 18 patients presents within 1-3 years of surgery and only 2 patients presented within 6 months of surgery.

**Clinical Presentation**

In our study 78 percent patients presented with swelling alone and 22 patients presented with swelling and pain. None of the patient presented with pain alone as a chief complaint.

**Figure 3:** Clinical Presentation



**Previous surgical scar site**

The patients who had previous surgery through lower midline incisions (32%), upper midline (20%), Pfannensteil (18%), Sterilization scar

(18%), Mc Burney (2%), laparoscopic port scar (2%). In our study, 60% case of incisional hernia occurred through midline scar whereas remaining 40% cases through transverse scar.

**Table 2:** Previous surgical scar site

Scar site	Number of cases	Percentage %
Lower midline	16	32
Upper Midline	10	20
Pfannensteil	9	18
Sterilization	9	18
Midline scar	4	8
Mc Burney	1	2
Laparoscopic port scar	1	2
Total	50	100

## Discussion

This study mainly focus on demographic profile of incisional hernia, and its clinical presentation. The incidence of Incisional hernia were more common among 31 to 50 years of age in our study. In Farnahul Huda<sup>9</sup> & Abhijit kumar study mean age was 41.9 years. This may be due to that certain surgeries like cesarean section, hollow viscus perforation are done in large number in this group of age. The youngest patient in our study was 26 years of age and oldest patient was 80 years of age. In Farnahul Huda, Abhijit Kumar<sup>9</sup> observed that 60% female predominance in their study. J B Shah<sup>10</sup> studies and Goel and Dubey<sup>11</sup> series have male to female ratio 1:1.17 and 1:1.25 respectively. In our study 68% showing female predominance. This female predominance is may be due to laxity of abdominal muscles due to multiple pregnancies and obesity. Incisional hernia were observed more among both moderate (36%) and heavy (38%) workers and less commonly among sedentary workers. All abdominal hernias are common among lifting heavy weight workers and elderly with malnourishment. In our study 44% cases developed Incisional hernia after 3 years of previous surgery, 36% within 1 to 3 years of

surgery and 20% within 1 year of surgery. But in many studies, it is usually within first year of previous procedure.

Most of the patients presented with swelling alone and none of them presented with complications like strangulation, irreducibility or obstruction. In our study swelling is seen in all 50 case whereas swelling associated with pain in 11 cases. In Tulaskar et al study<sup>12</sup>, history of swelling was present in all 100% cases and pain was noted in 67% patients and vomiting in 11% patients.

Incisional hernia were more common in midline incision as compared to transverse incision. In our study 32% through infra umbilical midline incision and 20% and 8% through supra umbilical and midline incision. In Tulaskar et al study<sup>12</sup> 71.8 % of Hernia's occurred in lower midline incision, 15.6 % in upper midline incision, and 3.1% each through pfannensteil, paramedian, lumbar incision, Kochers incision which is not similar to our study. In the lower abdomen posterior rectus sheath was deficient below the arcuate line and increased hydrostatic pressure in lower abdomen predispose the lower midline scar for incisional hernia. Midline fascia is poorly vascularized and hence it is slow to heal, and regain its tensile strength.

**Table 3:** Comparison study of gynecological procedure and lower midline incision

Study group	Gynecological procedure	Lower Midline incision	Number of cases(n)
Tulaskar et al <sup>12</sup>	78 %	71.8%	64
AgbakwuruEA et al <sup>13</sup>	70.4 %	81.9 %	44(female)
Present study	66%	40%	50

## Conclusion

Incisional hernia is usually common in the age group of 31 to 50 years of age and females. Like any other abdominal wall hernias, it is common among lifting heavy weight and heavy workers. In our study 44% cases of incisional hernia occurred after 3 years of previous surgery. The most common mode of presentation will be swelling in the scar site.

Incisional hernia being a most common entity, it should be kept in mind in all abdominal surgeries

and try to reduce the modifiable risk factors of incisional hernia prior to surgery. Incisional hernia is a clinical diagnosis and should not be missed in obese individuals.

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