



INCIDENCE OF INCISIONAL HERNIA BASED ON AETIOLOGY AND SITE

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ABSTRACT

Background: Incisional hernia is a long term complication of Abdominal surgery with incidence varying from 2-20 % 'Tension' and 'Inadequate healing' are the usual causes Large hernias can cause cosmetic, moral Discomfort and Intestinal obstruction **Aim:** To evaluate incidence of incisional hernia based on Aetiology and Site. To ascertain cause by history, examine clinically for location & size and classify by European Hernia Society **Materials & Methods:** A prospective observational study on 32 patients with age > 18 years. conducted in Department of General Surgery of MIMS Nellimarla, from Jan 2023 to Feb 2024. Including a total of 32 patients. The diagnosis was made with clinical history, clinical examination, location and size **Results:** Most common age group in our study were of 41-50 years with mean of 43.8 + 6.8 years, female predisposition with 71.8% especially multiparous Significant association with Surgical site infection has been noted Most common previous surgery is Abdominal Hysterectomy. **Conclusion:** Incisional hernia is preventable by avoiding infection during primary surgery, peritoneal toileting, Proper use of antibiotics and surgical techniques.

KEYWORDS : Abdominal Surgery, Predicting, Incisional Hernia.

INTRODUCTION

A hernia is a medical condition characterized by the abnormal bulging of an organ or portion of a system through a natural or pathological hole in the wall of the cavity that contains it.¹

A ventral hernia refers to any hernia that protrudes through the abdominal wall, but an Incisional hernia (IH) specifically refers to a hernia that protrudes through a surgical scar.

Hernias occurring along the midline incision are more prevalent compared to hernias occurring at other locations. A prevalent indication is the presence of a protrusion accompanied by a discernible cough impulse at the location of the surgical cut.

Patients who have incisional hernias are additionally susceptible to problems such as imprisonment, blockage (if the contents are bowel), or strangulation.

Multiple meta-analyses and studies have demonstrated that use continuous nonabsorbable or slowly absorbable suture material for mass closure of the abdomen is the most effective strategy for avoiding incisional hernias.²

Despite the absence of compelling data from randomized controlled trials, several studies highlight the need of maintaining a suture length:wound length ratio of at least 4:1. This means that each stitch should cover 1 cm of tissue at 1 cm intervals.³⁻⁶

Aims

To evaluate incidence of incisional hernia based on Aetiology and Site

Objectives

To ascertain cause by history, To clinically examine for location & size and To classify by European Hernia Society.

MATERIALS AND METHODS

Source of Data:

Patients admitted to Dept of General Surgery -Maharaja Institute of Medical Sciences Nellimarla.

- **Study Period:** June 2023 to Feb 2024.
- **Sample Size :** 32
- **Type of Study:** prospective observational study.
- **Method of Data Collection:** Data was collected via a proforma prepared for the study from all patients undergoing surgery in the stipulated time period.
- **Inclusion Criteria:** All the patients who have their given consent and were a fit to study.
- **Exclusion Criteria:** Surgery done for malignancy, Pregnancy, Patients who are immunocompromised and taking immunosuppressants.
- **Statistical Analysis:** done by MS XL 2007. Qualitative variables were expressed as frequencies and percentages.

RESULTS

Table 1 : Age Distribution

Age group	Incidence
21-30	3
31-40	7
42-50	13
51-60	7
>61	2

The mean age of the study was 43.8 years. The youngest patient was 27 years of age and oldest being 71 years of age. Maximum number of patients in the study belonged to age group of 42-50 years (40%).

Sex Distribution

This study involved a total of 32 patients (23 female and 9 male patients).

Among The Female Patients, 82% (18) Were Multiparous.

Gender	Incidence
Male	9
Female	23

Comorbidity : 38% Diabetes mellitus, 34% Hypertensive

BMI: 14 (43.75%) were of BMI 30-39.9 BMI 56% were labourers

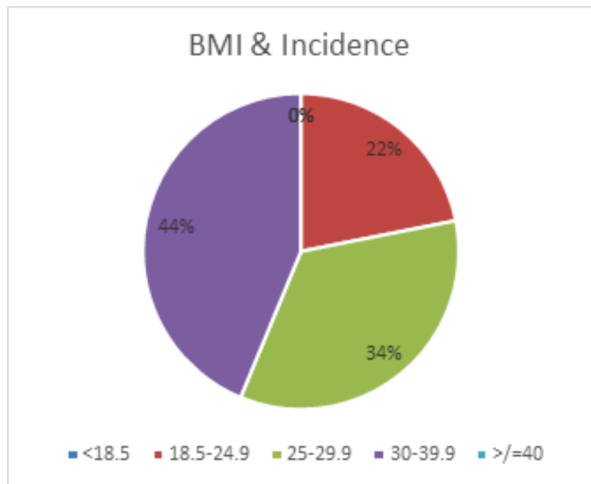
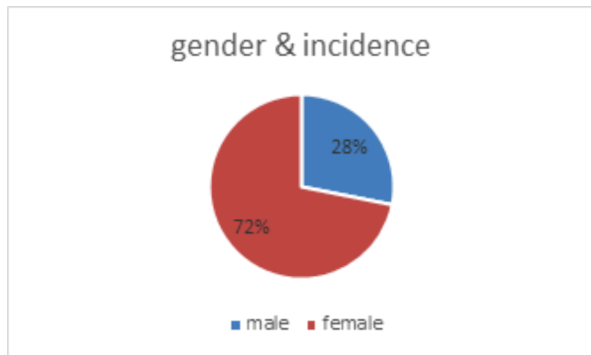


Table 3: Hernial Sites (European Hernia Society)

Below umbilicus	20
Umbilicus and above	9
Lateral	3

Out of all patients, 20 patients had previous infraumbilical midline incisions.

Table 4: Previous Surgery

Hysterectomy	12
Tubectomy	7
Open cholecystectomy	2
Appendectomy	1
Others	10

On majority, 12 (38%) were found to have been operated previously for Hysterectomy 19(60%) had an incidence of surgical site infections in post operative period

DISCUSSION

The youngest patient was 27 years old, while the oldest patient was 71 years old. The average age was 45 years, which is similar to the findings of Malika Agarwal et al,⁷ Deshmukh S N et al⁸, and Purushothaman R et al¹¹.

The male to female ratio is 9:23, which is similar to the ratios reported by Jaykar RD et al⁹, Malviya A et al¹⁰, Purushothaman R et al¹¹, and Malika Agarwal et al⁷

The primary risk factors identified were surgical site infection (SSI) with a prevalence of 60% and smoking with a prevalence of 40%. These findings are similar to the study conducted by Malika Agarwal et al⁷, where SSI was reported with a prevalence of 47%, as well as the study conducted by Jaykar RD et al⁹.

Among the anatomical locations, the majority of instances (62%) were located infra umbilically, followed by umbilical

and supra-umbilical sites (28%), and lateral sites (10%). Jaykar RD et al⁹ discovered that the most frequent location was below the navel in 21 instances (42%), followed by the navel itself in 16 cases (32%). The research conducted by Deshmukh S N et al⁸ found that the lower midline accounted for 37 instances (74%). Similarly, Malviya A et al¹⁰ reported a percentage of 47%, Purushothaman R et al¹¹ reported 80%, and Malika Agarwal et al⁷ reported 68%.

Our study found that 59% of the incisional hernias occurred after surgeries on the female pelvic organs, such as (hysterectomy, tubectomy, and laparotomy.)

CONCLUSIONS

1. Incisional hernias primarily occur in individuals aged 40-50 years, with a higher likelihood in females, particularly those who have given birth several times.
2. The most typical location is the infra-umbilical midline.
3. The most often performed prior surgical procedure is a hysterectomy.
4. A strong correlation is observed with surgical site infection.

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