

A PROSPECTIVE STUDY OF AGE AND GENDER PRESENTATIONS OF SURGICAL SITE INFECTIONS AFTER ABDOMINAL SURGERY

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Abstract

Background: Is to describe the gender and age differences in the incidence and prevalence of SSI after abdominal surgeries. **Materials and Methods:** A Prospective observational study to calculate the incidence of surgical site infection after abdominal surgery in Dhanalakshmi Srinivasan medical college and hospital between January 2021 to December 2022. 85 patients presenting with acute abdomen pain of age from 15-90 who are undergoing Non traumatic cause for surgery both elective and emergency in General surgery department. **Results:** The rate of SSI was found to be 1 (12.5%) in the age group of 5 to 20 years, 0 (0%), in the age group of 21 to 35 years, 1 (5.3%) in the age group of 36 to 50 years, 5 (16.1%) in the age group of 51 to 65 years, 2 (18.2%) in the age group of 66 to 80 years, and 0 (0%), in the age group of 81 to 95 years. The greatest percentage was 18.2 percent (2 out of 9) in the 66-80-year-old age group. In terms of gender distribution, there were 85 patients, 50 of whom were male (58.8%) and 35 of whom were female (41.2%). The ratio of men to women was 1:0.7. **Conclusion:** According to the study's findings, bacteria that live in our bodies normally account for the majority of surgical site infections (SSI). SSI incidence was 9 among 85 patients who underwent emergency non traumatic abdominal surgery, with incidence rate of 10.96% The commonest age group presentation with greatest percentage present in the 66-80 year old age group with men as predominant gender to be affected.

INTRODUCTION

Surgical site infection (SSI) has always been a major cause of significant post operative morbidity variably affecting the quality of life of people extending their duration of stay in the hospital and also leads to mortality.

Aim & Objectives

Is to describe the gender and age differences in the incidence and prevalence of SSI after abdominal surgeries. The study material comprises A Prospective observational study to calculate the incidence of surgical site infection after abdominal surgery in Dhanalakshmi Srinivasan medical college and hospital between January 2021 to December 2022.

MATERIALS AND METHODS

Inclusion Criteria

1. Emergency abdominal surgery
2. Non traumatic cause for surgery
3. Age 5- 95

Exclusion Criteria

1. Elective surgery
2. Traumatic cause for surgery
3. ASA grade >4
4. Loss to followup
5. Death of patient
6. Not willing to participate
7. Patients undergoing additional surgery

After obtaining institutional ethical and scientific committee approval, this prospective observational study was undertaken.

RESULTS

This prospective observational study All cases were evaluated clinically. Only essential investigations necessary for diagnosis and preoperative assessment were carried out before operations. Postoperatively

swab was sent for culture and sensitivity test in every cases with discharge from the wound or collection of pus anywhere in the abdominal surgery site. The patients of both sexes and different ages were included in the study.

Table 1: Age distribution of the patients

Age	Frequency	Percent
5-20	8	9.4
21-35	11	12.9
36-50	19	22.4
51-65	31	36.5
66-80	11	12.9
81-95	5	5.9
Total	85	100.0

Table 2: Surgical Site Infection (SSI) distribution by different age Groups

Age	SSI +	SSI -	Total
5-20	1(12.5%)	7(87.5%)	8(100%)
21-35	0(0%)	11(100%)	11(100%)
36-50	1(5.3%)	18(94.7%)	19(100%)
51-65	5(16.1%)	26(83.9%)	31(100%)
66-80	2(18.2%)	9(81.8%)	11(100%)
81-95	0(0%)	5(100%)	5(100%)
Total	9(10.6%)	76(89.4%)	85(100%)

$$\chi^2 = 4.170 \quad P > 0.05 \text{ df} = 5$$

The rate of SSI was found to be 1 (12.5%) in the age group of 5 to 20 years, 0 (0%), in the age group of 21 to 35 years, 1 (5.3%) in the age group of 36 to 50

years, 5 (16.1%) in the age group of 51 to 65 years, 2 (18.2%) in the age group of

66 to 80 years, and 0 (0%), in the age group of 81 to 95 years. The greatest percentage was 18.2 percent (2 out of 9) in the 66-80 year old age group. However, these variations lacked statistical significance.

Pie diagram showing distribution of the patients by sex.

In terms of gender distribution, there were 85 patients, 50 of whom were male (58.8%) and 35 of whom were female (41.2%). The ratio of men to women was 1:0.7.

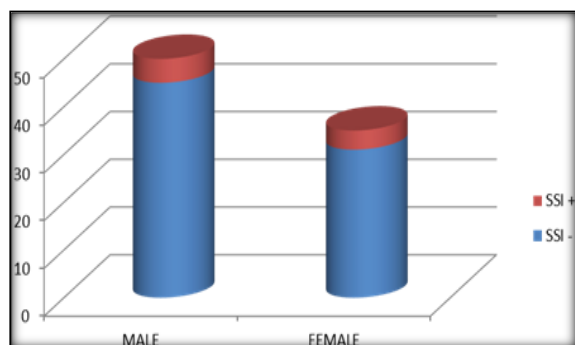


Figure: Surgical Site Infection (SSI) distribution by sex

$$\chi^2 = 0.833 ; P > 0.05 \text{ df} = 1$$

Regarding the distribution of SSI by gender, it was found that 4 (11.4%) of the 35 female patients and 5 (10%) of the 50 male patients both got SSI.

Females had a somewhat higher rate of SSI. The gender gap in the SSI did not reach statistical significance ($P > 0.05$).

DISCUSSION

In order to lower the rate of surgical site infections, the study was conducted with the goal of identifying the causes of surgical site infections (SSI) following emergency, non-traumatic abdominal surgery.

In the current study, 9.6% of the 85 patients who were enrolled had SSI, making up the total SSI rate. Our research supported the conclusions made by Kakati B et al.^[1] who discovered a 15.2 percent SSI risk in emergency abdominal surgery. Our research was in agreement with Mukeshpancholi et al.⁽⁴⁶⁾ who discovered 17.9 percent SSI rate in emergency abdominal surgery.

The current study found that the rates of SSI in various age categories were as follows: 1 (12.5%) in children ages 5 to 20, 0 (%) in adults ages 21 to 35, 1 (5.3%) in children ages 36 to 50, 5 (16.1%) in children ages 51 to 65, 2

(18.2%) in children ages 66 to 80, and 0 (%) in children ages 81 to 95. The 18.2 percent (2 out of 9) rate was highest among people aged 66 to 80. Our research supported the findings of Patel S et al. (2) who came to the conclusion that the age group over 55 had the highest SSI rate at 36.3%.

Out of 85 patients, 50 (58.8%) were men and 35 (41.2%) were women in terms of sex distribution. The ratio of men to women was 1:0.7. Our study was consistent with the finding of Kakati B et al . where 51.53% were male and 48.46% were female.

Regarding the distribution of SSI by gender, it was found that 4 (11.4%) of the 35 female patients and 5 (10%) of the 50 male patients both got SSI. Females had a somewhat higher rate of SSI.

CONCLUSION

This prospective observational study concludes

1. The commonest age group presentation with greatest percentage present in the 66-80-year-old age group. followed by the age group of 36 to 50 and in the age group of 5 to 20 years respectively, the least affected were in the age group of 21 to 35 years
2. In terms of gender distribution, there were 85 patients, 50 of whom were male (58.8%) and 35 of whom were female (41.2%). The ratio of men to women was 1:0.7. However, these variations lacked statistical significance.

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