ABSTRACT

OBJECTIVES

• To analyse incidence of wound infections

• To identify most common organisms

• To determine the relationship of post-operative wound infection with certain predisposing factors
MATERIALS AND METHODS

SETTING

This prospective study was conducted at TMCH (Thanjavur Medical College and Hospital, Thanjavur) during the period of September 2016-September 2017.

SAMPLE POPULATION

Those patients underwent major laparotomy during the above mentioned period are included in this study, patients undergoing appendectomy, laparoscopic surgery, those who are not willing for participating in study and those patients who are morbidly ill are excluded from the study.

DATA RECORDING

Data recording done using proforma, a sample of which is enclosed in appendix I, collection of data was done by M. S PG of department of surgery.

CLASSIFICATION OF CASES

Patients were grouped into 3 categories as mentioned earlier. Clean, contaminated and contaminated and dirty.
SUMMARY AND CONCLUSION

- Our study on post laparotomy wound infection was carried out for a span of one year duration on a sample size of 323 patients an overall incidence of 11.4 % (36 out of 323) had SSI classwise categorization were based on National Research Council Adhoc Committee showed 13% clean, 3.3 % clean contaminated and 17.9% in contaminated cases.

- Factors which influence wound infection shows the following observations in our study.

  - The factors considered are age , sex ,co morbidities , type of surgery, nature of surgery, duration of surgery, aetiology for laparotomy and performing surgeon.

  - Sex was not having a difference in incidence rate in development of SSI.(incidence in males were 11.4 vs females were 11.5% )

  - Increasing age showed a strong association for the development of SSI. Under age 20 the development of SSI was 0% whereas age over 61 has an incidence of 22.7% with a p value of 0.01, which is statistically significant.

  - 2 categories of pre-existing illness we have studied which includes general and local/specific factors. Anaemia, TB ,malignancy and diabetes were the general factors we analysed.

  - Malignancy showed a high incidence of SSI.(31.3%) as compared with other group (10%) with a p value of 0.024. which is statistically significant. Diabetes,
TB, anaemia did not show any statistically significant association for development of SSI.

- UTI and LRI were categorized under local/ specific factors, analysed as a risk factor for development of SSI. They showed a p value of 0.018, 0.004 respectively, both are statistically significant.

- Various aetiological factors which result in laparotomy were having a p value of 0.000 showed that it is/ statistically significant risk factor for development of SSI. Highest incidence is seen in category with ileostomy / colostomy reversal group which maybe due to malnourishment by underlying malignancy or reduced food absorption due to inadequate length of bowel and fecal cointamination. Category 3( upper GI surgeries, gastrectomy TV GI, ) wound infection rate were high since many of the cases were having malignancy.

- There are very few SSI in gynaecological related laparotomy may be due to sterile nature of ovarian or uterine pathology.

- When we are comparing emergency surgery vs elective surgery incidence of wound infection were 15.4 vs 10.4. the analysis had a p value of 0.312 which was statistically insignificant.
• Regarding duration of surgery and performing surgeon did not show any positive correlation with development of wound infection because their p value were 0.342 and 0.487 respectively.

• We found incidence of SSI in clean ,clean contaminated and contaminated were 13%,3.3%, 17.09% respectively. Bias in overdiagnosing wound infection is supposed to be the reason for this variation.

• Antibiotic resistance and inadequate control of previous infections such as LRI and UTI maybe the reason why the patient with preoperative and perioperative cases had a strong association with SSI (p value of 0.015 which is statistically significant).

• Out of 36 infected cases 34 had complete resolution with pour treatment . POD 4 was the day on which most of the infections were diagnosed, diagnosis were made by combined clinical and microbiological means in 75% of the cases.most common organisms identified as aetiological agents in development of SSI were e coli ,klebsiella, staphalococci and streptococci(constitutes about 60%)
ABBREVIATIONS USED

SSI  Surgical Site Infection
NNIS  National Nosocomial Infection Control
S.AUREUS  Staphylococcus aureus
E COLI  Escherichia coli
CT  Computerised Tomography
LRI  Lower Respiratory Tract Infection
URI  Upper Respiratory Tract Infection
UTI  Urinary Tract Infection
DM  Diabetes Mellitus