



“ CLINICAL STUDY OF SURGICAL SITE INFECTIONS, WITH RELEVANCE TO RISK FACTORS AND PATHOGENESIS

KEYWORDS

SSI, most sensitive antibiotic, diabetes, obesity.

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ABSTRACT *BACKGROUND-* Surgical site infection(ssi) is a major source of morbidity following operative procedures.SSI prolongs hospitalization and increases costs that can be avoided if infection had not occurred.

OBJECTIVE- To analyse the risk factors associated with SSI, the understanding of which will help to prevent the occurrence, reduce morbidity and economic burden

METHODS- This study was done from september 2011 to september 2013 at MNR hospital sangareddy.100 cases of post operative wound infection were selected by purposive sampling and the determinants and risk factors were studied

RESULTS and CONCLUSION- 65% of patients who had SSI were operated on emergency basis.Diabetes was present in 40% of cases out of which 15 had delayed wound healing.Obesity was present in 20% of cases out of which 10 had delayed wound healing and 8 had wound dehiscence.E.coli was commonest organism responsible for wound infection.Amikacin was most sensitive antibiotic in this study.Linezolid was most sensitive antibiotic among gram positive isolates.

INTRODUCTION

SSI is a major source of morbidity.Despite application of refined surgical techniques, changes in operating room, use of preventive antibiotics, surgical site infection remains a common event.

This clinical study will discuss regarding pathogenesis, risk factors associated with ssi with focus on proper management, which will be a help for clinical practice of surgery.

MATERIAL AND METHODOLOGY

This study was done at MNR hospital sangareddy between September 2011 and September 2013.100 cases of post operative wound infection during the study period were selected by purposive sampling and determinants associated with ssi namely commonest organism involved, most sensitive antibiotic, age of patient, diabetes, obesity, type of surgery-clean, clean contaminated, contaminated and dirty case, emergency versus elective cases were studied.

RESULTS

ESCHERICHIA COLI was the most common organism in our study, it was causative agent in 39 out of 100 cases.

E.coli was also the commonest responsible for wound infection in all types of surgeries clean, clean contaminated, contaminated, dirty.

	Clean	Contaminated	Clean contaminated	dirty	total
E coli	10	7	6	16	39
proteus	3	2	1	6	12
klebsiella	4	1	3	5	13
mrsa	8	2	2	2	14
pseudomonas	3	1	4	3	11
Streptococcus pyogenes	1	5	2	3	11

Amikacin was most sensitive antibiotic

Amikacin was most sensitive antibiotic against gram negative organisms.

Linezolid was most sensitive antibiotic against gram positive organisms.

Diabetes was present in 40 out of 100 cases, delayed wound healing found in 15 cases.

Obesity was present in 20 cases out of which 10 had delayed wound healing and 8 had wound dehiscence

Age of patient, highest no. of cases with wound infection were between 40 to 50 years of age.

DISCUSSION

A number of studies in literature indicated gradual increase in emergence of antibiotic resistant microorganisms in patients undergoing surgery(1)

Diabetes was present in 40% of patients in our study, but a direct causal relationship of diabetes with ssi can not be proved due to presence of other confounding factors. However other studies by William G.Cheadle(2), Latham Robert et al(3) have found that diabetes increases risk of postoperative wound infection.

Reasons for complications in morbidly obese patients can be attributed to technical difficulties in operating on obese patients, operations taking more time thus increasing chances of contamination, more trauma. Different studies by Habte Gabr E et al(4), Raymond J et al(5) showed that obesity is an independent risk factor for development of SSI.

The increased incidence of ssi in clean surgeries can be due to cross infection in wards.

In our study more cases who had ssi were operated on emergency basis, this is consistent with other studies, this can be due to

increased number of contaminated cases operated on emergency basis.

In our study most number of cases of ssi were between 40 to 50 years of age group .many studies have shown that ssi is more common in old age group.the increased incidence of ssi in younger group in the study can be attributed to increased disease burden in young patients who mostly underwent contaminated and dirty surgeries.

CONCLUSION

SSI is a common complication in surgical wards and responsible for increased morbidity and financial burden to patient.This can be prevented by proper preoperative ,intraoperative and post operative management of pateints.Rationale use of antibiotics,control of morbidities like diabetes and proper care of obese patients and avoiding cross infections are important factors in management of SSI.Since these risk factors and determinants of SSI are largely preventable,it requires a team effort rather than just the surgeon which can prevent its occurrence.

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