
Incidence of Surgical Site Infections - a study at a tertiary care hospital

INTRODUCTION:

Surgical site infections (SSI) are commonest nosocomial infections after Urinary tract infections (UTI), responsible for increasing cost, substantial morbidity and occasional mortality related to surgical operations and continue to be major problem even in hospital with most modern facilities and standard protocols of pre operative preparation and antibiotic prophylaxis. Surgical site infections (SSIs) are defined as infections occurring up to 30 days after surgery (or up to one year after surgery in patients receiving implants) and affecting either the incision or deep tissue at the operation site.

The Center for Disease Control and Prevention (CDC) definition describes three levels of SSI:

1. Superficial: affecting the skin and subcutaneous tissue
2. Deep: affecting the fascial and muscle layers
3. Organ or space infection, which involves any part of the anatomy other than the incision that is opened or manipulated during the surgical procedure, for example joint or peritoneum.

Despite advances in surgical techniques and improvements in preventive measures SSIs remain a significant clinical problem as they are associated with substantial mortality and morbidity and impose severe demands on healthcare resources.

- It has an adverse impact on the hospital as well as on the patient [1] SSI are associated with significant risk of readmissions, intensive care unit (ICU) admissions, long-term complications, and death.
- It is responsible for increasing length of stay of patient which results in social and economic loss to the patients and family
- SSI is the index of the health care system of any hospital.

SSI remain a substantial cause of morbidity and death, possibly because of the emergence of antibiotic-resistant micro-organisms, larger numbers of elderly surgical patients or those with a variety of chronic and immune compromising conditions, diabetes and greater use of prosthetic implants and organ transplantation. With the increase in incidence of nosocomial infections and multi drug resistance, a meticulous and periodic surveillance of various hospital acquired

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infections is called for. With an active Infection Control team operating in the hospital, SSI is naturally one of the topmost priorities on the agenda. Hence the following study is important

OBJECTIVES:

To study the incidence of surgical site infections at bhaskar general hospital. To study the etiological and risk factors for surgical site infections at bhaskar general hospital. To identify the modifiable factors for surgical site infections in our hospital, and recommend measures to decrease the incidence of SSI.

METHODOLOGY:

A cross sectional study will be conducted in departments of general surgery, orthopedics, gynecology and obstetrics, for a period of 60 days at Bhaskar general hospital. The details of the patients undergoing surgery in these departments will be recorded and the patient is followed up till the time of discharge. During post operative period any signs of SSI are noted and culture swabs will be sent appropriately. The treatment given will be noted and the culture reports are analyzed. The co-morbid conditions and risk factors are noted and will be analyzed. The preoperative prophylactic antibiotics and degree of intraoperative prophylactic contaminants will also be noted and analyzed

It is an observational/ cross sectional study carried out at departments of gynecology and obstetrics, general surgery, orthopedics, at Bhaskar general hospital, telangana, India. It is a 300 bedded tertiary care centre and a teaching hospital. Patients data who have undergone surgery for a period of 60 days is carried out for this study, after obtaining informed consent to be a part of the study, data were collected as per a predesigned questionnaire for all the patients. Risk factors, like patient characteristics (Age, Sex, medical background), surgical site indications, morbidity, type of wound, type of anesthesia, prophylactic/post operative antibiotics, date of surgery, duration of surgery were systematically analyzed and plotted to predict SSI. After surgery, follow up checkup done every 24 hours for 7 days continuously as per CDC (Centre for Disease Control and Prevention) for signs of SSI. If SSI is noticed samples of pus is collected and sent for microbiology culture, Speciation is done at microbiology department for commonest organisms among the culture are found out and immediate follow-up treatment is done. Patients were followed up after discharge

IMPLICATIONS:

The data collected will be analyzed to identify the etiological and risk factors for surgical site infections. The recommendations will be drafted regarding modifiable factors to decrease the incidence of SSI. The successful implementation may decrease the surgical site infections in

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bhaskar general hospital. The recommendations may be applicable to other hospitals of similar environment. The recommendations can help in preparing national guidelines to decrease SSI, thus contributing to the health care system in our country

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