



A STUDY OF CLINICAL PROFILE, INVESTIGATIONS, TREATMENT AND OUTCOME OF SURGICAL SITE INFECTION:

Surgery

**Dr Satishchandra
B. K**

Associate Professor, Department of Surgery, Kanachur Institute of Medical Sciences.

ABSTRACT

Surgical site infection or surgical site infections are one of the most common infectious problems that are frequently encountered in our office. A plethora of clinical profiles are encountered in our day to day practice. According to some studies around 25-30 percent of all infection cases are accounted by Surgical site infection. Resistant variants are also frequently encountered which adds the bulk to the difficulties that are already faced. So this study puts in an effort to find the clinical profile, investigations, treatment and outcome of surgical site infection.

KEYWORDS

surgical site infection, clinical profile, investigations, Treatment, Outcome.

INTRODUCTION:

SURGICAL SITE INFECTION are one of the most common infectious problems that are frequently encountered in our office^{1,2}. A plethora of clinical profiles are encountered in our day to day practice³. According to some studies around 25-30 percent of all infection cases are accounted by SURGICAL SITE INFECTION. Resistant variants are also frequently encountered which adds the bulk to the difficulties that are already faced⁴⁻⁷.

Fever because of infection is the most common symptom that will be encountered but it is said that the symptoms actually depends upon a lot of factors and immunity is definitely the one to be considered^{8,9}. A plethora of signs and symptoms can be encountered in our day to day practice³. Abdominal abdominal pain, vomiting and flank pains are the other symptoms that patients commonly complain of^{10,11}. E-Coli is supposed to be the frequently and most commonly encountered bacteria in SURGICAL SITE INFECTION. Diabetes and other immunosuppressed states account for more number of cases. Extended-spectrum beta-lactamases are enzymes that are produced by these bacterias that gives resistance to most beta-lactam antibiotics.^{12,13}

So this study puts in an effort to find the clinical profile, investigations, treatment and outcome of SURGICAL SITE INFECTION.

AIMS AND OBJECTIVES:

To study the clinical profile, investigations, treatment and outcome of SURGICAL SITE INFECTION.

MATERIALS AND METHODS:

This study was done in the Department of Surgery, Kanachur Institute of Medical Sciences, Mangalore and K. S. Hegde Medical Academy

This study was done from Nov 2011 To Oct 2018

This study was done using 100 patients who came with SURGICAL SITE INFECTION and were included when they were found to be positive culture.

Inclusion criteria:

culture positive

Exclusion Criteria:

Immuno-suppressant drugs

CKD and AKD patients

Previous history of SURGICAL SITE INFECTION

RESULTS

Table 1: Age Distribsurgical site infectionon

Number	Mean age	Std Deviation
100	65.16 years	15.46 years

Table 2: Sex Distribsurgical site infectionon

Number	Male	Female
100	32	68

Co-Morbidities:	Frequency
HTN	22
DM	59
DM and HTN	19

Table 4: Signs and Symptoms:

Signs and Symptoms	Frequency
Burning Micturition	49
Fever	71
Abdominal Pain	52
Vomiting	19
Quantity of urine decreased	07

Table 4: Bacterial Profile

Bacteria	Frequency
P - Pseudomonas aeruginosa	22
EC- Escherichia coli	59
AB- Acinetobacter baumannii	19
EA- Enterobacter aerogenes	11
K- Klebsiella pneumoniz	03
Mixed	38
MRSA	05

Table 5: Sensitivity

	EC	P	AB	EA	K	MRSA
Amikacin	8	3	1	2	3	
Gentamycin	6	4	1		3	
Ceftazidime	2				2	
Ciprofloxacin	2	1			3	
Norfloxacin					1	
Levofloxacin	4	1			3	
Nitrofurantoin						
Fosfomycin						
Trimethoprim/Sulfamet hoxazole	2					1
Piperacillin/Tozabactam	2		1	2	2	
Tigecycline		1		1		
Cefta			1			
Amoxiclav		1				
Doripenem	4	3		1	1	
Meropenem	4	3		3	4	
Linezolid						1
Teicoplanin						1
Vancomycin						1
Tetracycline						1
Ceftazidime	1				2	
Cefexime		1			2	
Cefoperazone/Sulbactam	1			2	2	
Cefepime	2	1			2	
ceftazidime					2	
Ampicillin/Sulbactam			1			

Table 6: Recurrence.

Follow Up	Recurrence frequency after treatment
1 st week	03
2 nd week	Nil
3 rd week	11
4 th week	16
5 th week	Nil
6 th week	02

DISCUSSION:

The total number of cases that were taken were 100. The mean age of the population was 45.16 years and the standard deviation was 15.16 years.

There were 22 males and 68 females in the study Hypertension was observed in 22 patients and 59 patients were known diabetics and 19 of them were known hypertensives and diabetics.

Fever was present in 71 patients followed by abdominal pain in 52 patients. The burning micturition was found in 49 patients. The vomiting was complained in 19 patients and decreased quantity of urine was complained in seven patients.

In majority of the cases the E-Coli was found to be the organism and there were fixed infections. The most common effective drug was found to be Amikacin and Gentamycin. MRSA was found in 5 patients. 32 percent of the cases were found to be recurrent after 6 weeks.

The patients were followed each week for six weeks and only thirty two percent of the cases showed recurrence.

The study conducted stands in agreement with other studies.^{14,15}

CONCLUSION:

There are a plethora of signs and symptoms but the most common is fever and lower abdominal pain. The most common bacteria was E-Coli and 32 percent of the patients there was recurrence.

REFERENCES:

1. Wolf JS Jr, Bennett CJ, Dmochowski RR, Hollenbeck BK, Pearle MS, Schaeffer AJ. Best practice policy statements on urologic surgery antimicrobial prophylaxis. *J Urol* 2008;179:1379-1390[Erratum, *J Urol* 2008;180:2262-3.]
2. Hawn MT, Itani KM, Gray SH, Vick CC, Henderson W, Houston TK. Association of timely administration of prophylactic antibiotics for major surgical procedures and surgical site infection. *J Am Coll Surg* 2008;206:814-819
3. Belda FJ, Aguilera L, Garciade la Asuncion J, et al. Supplemental perioperative oxygen and the risk of surgical wound infection: a randomized controlled trial. *JAMA* 2005;294:2035-2042[Erratum, *JAMA* 2005;294:2973.]
4. Kurz A, Sessler DL, Lenhardt R. Perioperative normothermia to reduce the incidence of surgical-wound infection and shorten hospitalization. *N Engl J Med* 1996;334:1209-1215
5. Yasunaga H, Ide H, Imamura T, Ohe K. Accuracy of economic studies on surgical site infection. *J Hosp Infect* 2007;65:102-107
6. Kirkland KB, Briggs JP, Trivette SL, Wilkinson WE, Sexton DJ. The impact of surgical-site infections in the 1990s: attributable mortality, excess length of hospitalization, and extra costs. *Infect Control Hosp Epidemiol* 1999;20:725-730
7. Napolitano LM. Decolonization of the skin of the patient and surgeon. *Surg Infect (Larchmt)* 2006;7:Suppl 3:S3-S15
8. O'Grady NP, Alexander M, Dellinger EP, et al. Guidelines for the prevention of intravascular catheter-related infections. *Infect Control Hosp Epidemiol* 2002;23:759-769
9. Mangram AJ, Horan TC, Pearson ML, Silver LC, Jarvis WR. Guideline for prevention of surgical site infection, 1999: Hospital Infection Control Practices Advisory Committee. *Infect Control Hosp Epidemiol* 1999;20:250-278
10. Ishizaka K, Kobayashi S, Machida T, Yoshida K. Randomized prospective comparison of fosfomicin and cefotiam for prevention of postoperative infection following urological surgery. *J Infect Chemother* 2007;13:324-331
11. Itani KMF, Wilson SE, Awad SS, Jensen EH, Finn TS, Abramson MA. Ertapenem versus cefotetan prophylaxis in elective colorectal surgery. *N Engl J Med* 2006;355:2640-2651
12. Milsom JW, Smith DL, Corman ML, Howerton RA, Yellin AE, Luke DR. Double-blind comparison of single-dose alatrofloxacin and cefotetan as prophylaxis of infection following elective colorectal surgery. *Am J Surg* 1998;176:6A Suppl:46S-52S
13. Arnaud JP, Bellissant E, Boissel P, et al. Single-dose amoxicillin-clavulanic acid vs. cefotetan for prophylaxis in elective colorectal surgery: a multicentre, prospective, randomized study. *J Hosp Infect* 1992;22:Suppl A:23-32
14. Fujita S, Saito N, Yamada T, et al. Randomized, multicenter trial of antibiotic prophylaxis in elective colorectal surgery: single dose vs 3 doses of a second-generation cephalosporin without metronidazole and oral antibiotics. *Arch Surg* 2007;142:657-661
15. Mohri Y, Tonouchi H, Kobayashi M, et al. Randomized clinical trial of single- versus multiple-dose antimicrobial prophylaxis in gastric cancer surgery. *Br J Surg* 2007;94:683-688