

Research Article

Incidence of Infection Frequency in Inguinal Mesh Hernioplasty with Single Prophylactic Dose of I.V Antibiotics

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ABSTRACT

Objective:To analyze the infection frequency of open field inguinal hernioplasty in the surgical field with antibiotics of single prophylactic doses and to investigate organisms and sensitivities.

Method:It is an interventional prospective studyThe study was conducted in the Surgery Department of Punjab Medical college, Faislabad for the period of 8 months from March 2014 to October 2014.A total of 105 cases of mesh open inguinal hernioplasty were included. Preoperative evaluation was performed for anesthesia condition before mesh repair. Single dose i / v antibiotics were used and the infection of the early postoperative surgical site was investigated. Edema, redness, seroma and skin discharge from the wound area were collected. Culture was done to define common organisms in wounded and infected cases.The data were collected and analyzed to see the frequency of the wound infection and the susceptibility of the infecting organism.

Results: The incidence of surgical infection in the wound area was observed at 3.2% and this demonstrates that the culture of the pus is more frequent and that the organism is the second most common cause of superficial infection of E-coli. surgical field.

Conclusion:The incidence of infection at the surgical site is low in open inguinal mesh hernioplasty, low in antibiotic prophylaxis in one dose and Staphylococcus aureus is a common criminal organ.

Keywords:Mesh herniopalsty, Inguinal hernioplasty, Prophylactic antibiotics, Surgical site infection.

INTRODUCTION

The most common pathology in general surgery is inguinal hernia and is the most common are abdominal hernias approximately 75% of all. Male are more affected in this pathology. Typically, repairing of hernia is considered a bacteria free procedure, but it can be a related complication, such as foreign body reaction,metal use, seroma, paininfection and at one pointis recurrence. The most common inguinal hernia mesh repaircomplication to be considered is Surgical site infection. Prosthetic material such as polypropylene mesh is the most common use in inguinal hernia repair. Prosthetic material is preferred for hernioplasty, which is easily and rapidly combined. Despiteof many benefits, the use of these materials can cause problems as wo infections that can beminimized with therapeutic

and prophylactic antibiotics. Locally and internationallyfew studies have been done to determine the wound infectionfrequency and to confirm in the surgical area growth of bacteria. However, it is believed that in deepinfection, in removing the infected web there should be no delay to ensure that the Pot operated inguinal sepsis dissolves. The purpose of this study is to analyze the infection frequencyrate in network of mesh repair and to explore organisms commonly involve, to investigate their susceptibility to antibioticsappropriately in the wound infectionprevention.

METHODOLOGY

105 of total adult patients presented in OPD at Surgery Department of Punjab Medical college,

Faisalabad for the period of 8 months from March 2014 to October 2014 with inguinal hernia. 18 years above age patients included in this study. In spinal anesthesia all cases repaired with Mesh hernooplasty (poly propylene). cases of Emergency herniorrhaphylike obstructions and strangulation or femoral hernia and women'swere excluded. Preoperative assessment was done as per standard protocol. prophylacticallysingle shot of intravenous antibiotic ceftriaxone 1 gm given to everypatients. Polypropylene mesh usedin all patients and 2/o interruptedprolene stitches sutureused to hold mesh. Diclofenac 75 mg 1/mpostopreativelysingle dose after 12hrs thereafter oral form analgesics given. Surgical site infection examinedearly post operatively. Purulent fluid discharge called infection that need drainage should be examined. Collection of sterile serous fluid is known asseroma which should be aspirated. Patients advised to attend OPD after discharge on 1 , 2 and3 week for examination of wound infection and complications after operation. A note was made during study period of all the patients having infection on surgical site and then incidence of infection in percentage was calculated .All the studied variables like wound pain, infection, edema, redness and discharge number of cases having culture sensitivity and surgical site infection of organism were analyzed.

RESULTS

105 patients with open propylene mesh or primary recurrent inguinal hernia were repaired. All were male and aged between 18 and 72 years and had a mean age of 46 years. 29.32% (n = 63) of the patients were over 60 years old and 25.12% (n = 54) were between 51 and 60 years old. (Table I)

TABLE - I: FREQUENCY OF INGUINAL HERNIA IN VARIOUS AGE GROUPS (n=215)

AGE	NO: OF PATIENTS	PERCENTAGE
18 - 30	36	16.74%
31 - 40	29	13.48%
41 - 50	33	15.34%
51 - 60	54	25.12%
60 and above	63	29.32%

Among the findings of the wound examination, 1.9% (n = 3) 0.9% edema (n = 02), seroma 2.3%

(n = 05), and seroma was aspirated. needle. Surgical site infection rate was 3.2% (n = 07) in mesh repair cases (Table II).

TABLE - II: POST OPERATIVE WOUND SITE EXAMINATION FINDINGS (n=215)

FINDINGS	NO: OF CASES	PERCENTAGE
Wound redness	03	1.39%
Wound edema	02	0.9%
Wound seroma	05	2.3%
Wound discharge	07	3.2%

Report of culture shows that the most common pathogen for infection is Staphylococcus aureus and the second most common organism is E-coli responsible for surgical field infection, highlighting the report of sensitivity in Table III.

TABLE – III: PUS CULTURE AND ORGANISM SENSITIVITY REPORT (n=07)

ORGANISM	NUMBER	SENSITIVITY
Staph: aures	04 (57.14%)	Cephalexin,
Staph: Epiderms	01 (14.28%)	Co-Amoxiclave, vancomycin
E - Coli	01 (14.28%)	Ciprofloxacin
No growth	01 (14.28%)	

DISCUSSION

Inguinal hernia (Bassini, mac-wow) The above treatment is now switched with a few days to open or laparoscopic repair for twenty years. Both approaches are the most modern, but open pore repair is simpler and easier to learn, and the risk of infection is still present in both procedures. In this study, superficial surgical site infection was detected in 3.2% of cases. The incidence of wound infection associated with inguinal mesh healing was found to be 3.9% and 2.8% in the various international studies recorded in the literature. In our study, surgical site infection is seen in 3.2%. Consistent with international work. In several local studies, the infection rate in the surgical area is 7.5% and 2.5%. The infection of the wound was superficial and initially treated with drainage, antiseptic dressing and broad spectrum antibiotics. Our findings can be compared with various studies reported to have 1-5% of the incidence of 13-15 wound infections. In our case, SeroA was comparable to Seroma 5% and 3.2%, respectively, compared to the work done by Waqar and Nausheen S. In order to reduce the frequency of

surgical site infections, antibiotics have a significant role in the single dose I prophylactic / volume hernioplasty of open or laparoscopic knitting. Due to the high infection rate, our configuration is still controversial and this may be due to insufficient cleaning and contamination facilities. Free environment in the operating theater and crowded lounges. In a study conducted by Tarzi, the infection within the general population was 2% and in our study, e-coli was the most common organism, whereas *Staphylococcus aureus* was the most common organism.

CONCLUSION

The incidence of surgical infection in the wound area was observed at 3.2% and this demonstrates that the culture of the pus is more frequent and that the organism is the second most common cause of superficial infection of E-coli. surgical field. The incidence of infection at the surgical site is low in open inguinal mesh hernioplasty, low in antibiotic prophylaxis in one dose and *Staphylococcus aureus* is a common criminal organ. In the open propylene mesh (foreign body) hernioplasty, the infection at the surgical site was scarce and the culture report showed that *Staphylococcus aureus* was more frequent.

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