

# **A Comparative Study between Delayed Primary Closure and Immediate Primary Closure of Skin in Laparotomy for Peritonitis**

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## **I. Introduction**

- Various types of techniques are available for closure of abdomen in emergency conditions which are following:
  - (1) layered closure - sequential closure of each fascial layer
  - (2) mass closure - closure as a whole single layer
- All techniques which are available have a advantages & disadvantages over one above.
- Immediate primary closure-here linea alba, subcutaneous tissue and skin are closed in same sitting.
- Delayed primary closure- in this technique Linea alba is closed with Prolene 1 no. in continuous simple fashion.
- Subcutaneous layer and skin kept open and sterile wet saline dressing kept and both these layers are closed after 72hrs with Ethilon 2-0 in vertical mattress fashion.
- The ideal abdominal closure should be efficient, provide strength, and serve as a barrier to infection. It should have low rates of fascial dehiscence, infection, hernia formation, suture sinus formation, and incisional pain.
- There are many technical considerations and patient factors that may help prevent these complications

## **II. Aims And Objectives**

- To compare factors affecting the outcome of delayed primary closure of skin and immediate primary closure of skin in case of emergency laparotomy for peritonitis
- To assess and compare the percentage of early as well as late complications in case of delayed primary closure and immediate primary closure of skin in emergency laparotomy done for peritonitis.

## **III. Methodology**

**STUDY DESIGN :** A PROSPECTIVE OBSERVATIONAL STUDY. STUDY PERIOD FROM NOVEMBER 2020 TO NOVEMBER 2021. ALL DATA TO BE COLLECTED THROUGHOUT DURING THIS PERIOD IN THE EMERGENCY AS WELL AS IN SURGICAL WARD SETUP.

**PARTICIPANTS ENROLMENT :** TARGET POPULATION: ALL THE PATIENTS PRESENTING WITH COMPLAINTS OF ABDOMINAL PAIN EITHER DE NOVO OR FOLLOWING TRAUMA AND DIAGNOSED AS HAVING PERITONITIS. INCLUSION CRITERIA: - ALL PATIENTS, AGED>12 YEARS AND <80 YEARS.

**EXCLUSION CRITERIA:** -IMMUNOCOMPROMISED PATIENTS (HIV+, HYPOPROTEINEMIA) - PATIENTS WITH PRE- EXISTING SKIN INFECTION

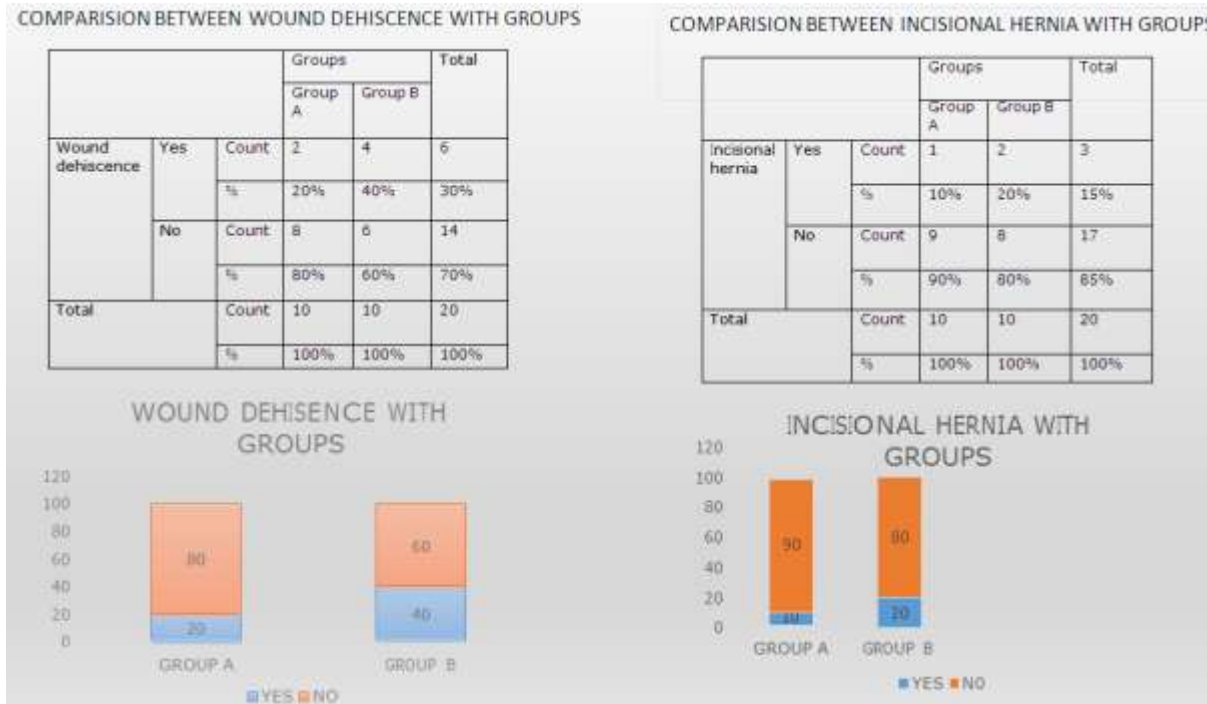
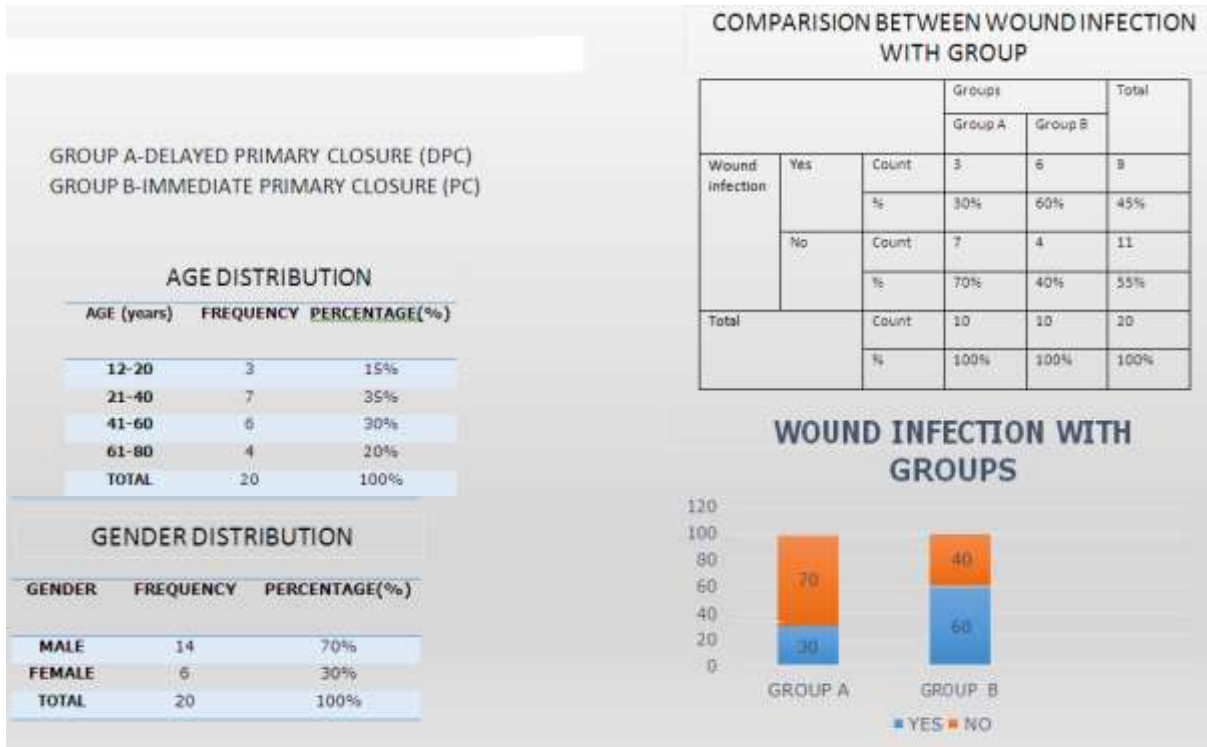
**SAMPLE SIZE:** 20 CASES (10CASES OF DELAYED PRIMARY CLOSURE AND 10 CASES OF IMMEDIATE PRIMARY CLOSURE)

PATIENTS DIAGNOSED WITH PERITONITIS WILL BE ASSESSED FOR FOLLOWING PARAMETERS:

1. HISTORY
2. GENERAL EXAMINATION
3. PER ABDOMEN EXAMINATION
4. BLOOD INVESTIGATIONS HB, TLC/DC S. CREAT /RBS S. BILIRUBIN
5. X-RAY A) CHEST B) ABDOMEN

6. USG AND CT SCAN.

IV. Results And Analysis





## V. Discussion

The present study on “A COMPARATIVE STUDY BETWEEN DELAYED PRIMARY CLOSURE AND IMMEDIATE PRIMARY

CLOSURE OF SKIN IN LAPAROTOMY FOR PERITONITIS” was conducted in tertiary care hospital, Ahmedabad Gujarat in Department of GENERAL SURGERY, over a period extending from November 2020 to November 2021. The study includes 20 patients who underwent emergency exploratory laparotomy for peritonitis. Out of 20 patients, 10 were randomised in Group A- Delayed primary closure which formed the study population and 10 patients were grouped in group B-immediate primary closure which formed the control group.

**AGE** The mean age of the patients in my study was 40 year.

**SEX** In my study there were 70% male and 30% female.

**WOUND INFECTION:** In our study, 3 out of 10 patients (30%) in group A developed wound infection as compared to

6 (60%) in group B..

**WOUND DEHISCENCE:** From group A (DPC) 2 patients (20%) and from group B (PC) 4 patients (40%) developed wound dehiscence. The difference was found to be statistically highly significant.

**INCISIONAL HERNIA:** In my study, out of 20 patients in group A, 1 patient (10%) developed incisional hernia and from group B 2 patients (20%).. The fallacy of our study was that we followed up patients only up to 6 months.

**DURATION OF HOSPITAL STAY:** The mean duration of hospital stay in my study in group A (DPC) was 9 and in group B was 13. The mean duration of hospital stay in delayed primary was less as compared to immediate primary closure group.

## VI. Conclusion

From Our Study We Have Concluded That Delayed Primary Closure Is An Effective Method Of Reducing Ssi Along With Its Associated Complications Like Wound Infection, Wound Dehiscence, Incisional Hernia And Its Associated Morbidity Than Immediate Primary Closure. It Also Reduces The Duration Of Hospital Stays. Number Of Patients Who Developed Incisional Hernia Was Less In Group A (Dpc) As Compared To Group B (Pc) However The Difference Was Not Significant Statistically. Therefore Our Recommendation Is To Practice Delayed Primary Closure In All Patients Undergoing Exploratory Laparotomy In Case Of Peritonitis.