



A PROSPECTIVE STUDY ON ABDOMINAL WOUND DEHISCENCE AND ITS MANAGEMENT.

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ABSTRACT

Background:- Abdominal wound dehiscence is a partial or total separation of previously approximated wound edges, due to failure of proper wound healing. This scenario typically occurs 5-8 day following surgery when healing is still in stages. It is the most dreaded complication faced by surgeon with mortality rate of 42%.

Aims & Objective :-

- To identify the various risk factors for Abdominal wound dehiscence.
- To find out the effective management of wound dehiscence.

Methodology: It was a prospective study conducted in dept. of General Surgery at GMC Jammu. Total 50 patients were included in the study that presented with wound dehiscence. **Result:** In our study it was observed that patients with comorbidities (DM, Malignancies) have higher rate of wound dehiscence. The patients who were explored for perforation peritonitis due to duodenal ulcer perforation and appendicular perforation have more incidence of burst abdomen compared to other cause. Patients operated in emergency setting have more wound dehiscence rate than the patients operated electively.

Conclusion: The appropriate surgical approaches toward abdominal wound closure (viz choice of best suture material , good technique) can reduce the incidence of wound disruption. Adequate washes given intraoperatively in perforation peritonitis, use of suction drains, controlling blood sugar level pre operatively, post operatively and antiseptic dressing in the post operative period can significantly reduce the wound infection rate. The horizontal and paramedian incision has lower dehiscence rate than vertical / upper midline incision.

KEYWORDS : Abdominal wound dehiscence, Duodenal perforation. Appendicular perforation

INTRODUCTION :-

Wound dehiscence is defined as Partial / Complete disruption of abdominal wound closure with / without Protrusion of abdominal contents. Dehiscence occurs when proper aseptic precautions are not being taken intraoperatively. The technique of abdominal Rectus Sheath closure is also a deciding factor in the wound disruption. Wound if closed with tight sutures have higher chance of dehiscence. Burst Abdominal is indeed one of the unwanted/feared complication faced by surgeons. Hypoproteinemia, Hypoalbuminemia, Hyperbilirubinemia are significant risk factor in wound infection.

MATERIAL & METHODS :-

- It was a prospective study conducted in the department of General Surgery , GMC Jammu from January 2023 to December 2023.
- Total of 50 patients were taken after taking informed consent.

Inclusion Criteria –

- All Abdominal dehiscence / Burst abdomen cases who were >18 years of age.

Exclusion Criteria-

- <18 years of age.
- Wound dehiscence due to gynecological surgeries.

RESULTS :-

1. Distributions of wound dehiscence rate according to age.

Age	No. of cases	%age
21 - 30	3	6%
31 - 40	10	20%
41 - 50	6	12%
51 - 60	13	26%
>60	18	36%

Max. wound dehiscence in age group >60 years i.e. 36% .

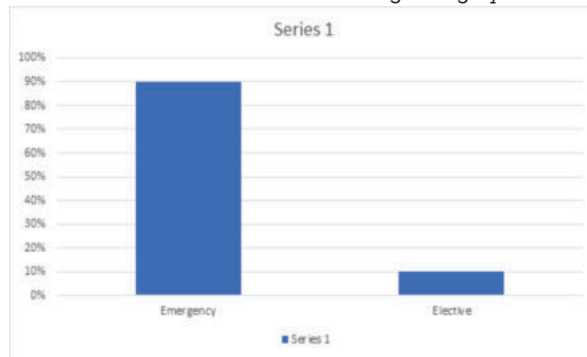
2. Incidence of wound dehiscence according to underlying pathology (Underlying pathology)

Diagnosis	Number	%Age
Duodenal ulcer perforation	14	28%

Appendicular perforation	12	24%
Gastric & Ileal perforation	9	18%
Acute intestinal obstruction	8	16%
Tumors	7	14%

Max. incidence of wound dehiscence is seen in duodenal ulcer (28%) & Appendicular perforation (24%).

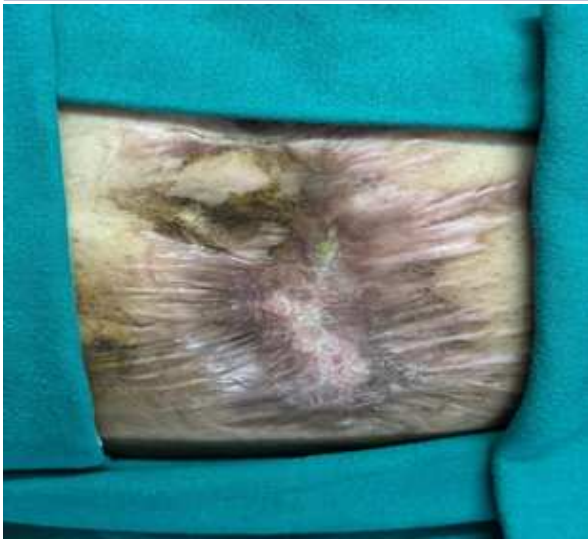
3. Incidence of wound infection according to surgery.



Incidence is max. (90%) in emergency cases.



Wound dehiscence(Fig. 1)



Healing by secondary intention (Fig. 2)

4. Incidence of wound dehiscence according to type of Incision.

Incision	No. of cases	%Age
Upper Midline	16	32%
Para Median	8	16%
Lower Midline	12	24%
McBurney Incision	8	16%
Lanz Incision	6	12%

Higher Incidence is seen in Upper Midline (32%).

5. Wound dehiscence and Comorbid condition.

Condition	No. of cases	%Age
DM	21	42%
HTN	12	24%
CRF	8	16%
Anemia	8	16%
Steroid use	1	2%

Diabetic Patients have higher Propensities of wound dehiscence.

6. Management of Wound dehiscence.

Type of wound dehiscence	No. of Patents	Management
Partial wound dehiscence	28	Healing by secondary intention
Complete wound dehiscence	12	Secondary suturing
Complete wound dehiscence	8	Tension suturing
Complete wound dehiscence	2	Mesh repair

Healing by Secondary intention occurred in 28 patients.(Fig.2)

Secondary suturing was done in 12 patients.

Tension suturing was done in 8 patients.

Mesh repair was done in 2 patients.

DISCUSSION:-

Our study included 50 patents having wound dehiscence over a period of 1 year from January 2023 to December 2023.

In this study the causes of abdominal disruption their remedy is assessed.

In a study Conducted in Department of Surgery,Cleveland veterans Affair's Medical Centre USA, 107 cases were reported to have abdominal dehiscence over a period of 7 years. In our study out of 50 patients developing wound dehiscence ; 90% were operated on emergency basis and 10% were operated on elective basis. This is in contrast to study

conducted by John Spiliotis et al and SH Waqar et al which showed 60% and 40% wound infection (dehiscence) rate in Emergency Operation respectively.

In a study carried out in Gastro surgery department of Hvidoure Hospital in Copenhagen University in 2002 reported that incidence of wound dehiscence & burst abdomen is more common in Vertical incision as compared to horizontal incision (P = 0.0001). In our study, the wound dehiscence rate in case of

1. Upper midline incision was 32%
2. Lower midline incision was 24%
3. McBurney incision was 16%
4. Lanz incision was 12%

CONCLUSION :-

The incidence of wound dehiscence is highest in the old age patents (Paticularly older than 60 years of age).

The Comorbid conditions (Diabetic Mellitus,hypertension ,chronic renal failure and COPD) increases the chances of wound dehiscence / Burst abdomen by several folds. The risk of wound dehiscence is more in upper midline incision than para median incision or transverse incision. The technique of abdominal rectus sheath closure and choice of suture material has direct association with burst abdomen.

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