Wound Dehiscence
Janix M. De Guzman, MD
Surgical Resident
Department of Surgery, OMMC
jan6mdg@yahoo.com

Definition:
Wound dehiscence is separation within the fascial layer. This is a common complication of deep surgical site infection.\(^1\)\(^3\)

Epidemiology:
Based on the 1997 Healthcare Cost and Utilization Project (HCUP) State Inpatient Database for 19 States, the Postoperative Wound Dehiscence (Hospital-Level) rate was 1.95 per 1,000 population at risk.\(^4\) Dehiscence occurs in 1.3% of patients under 45 years of age, and 5.4% of patients over 45 years of age.

Affects 0.5 to 3.0% with an average of 2.6% of all mid-line laparotomy wounds.

Etiology:
Fascial dehiscence is maybe caused by technical factors, patient characteristics and local factors.

Technical factors include failure of wound closure techniques such as broken sutures, slipped knots or inadequate suture bites. A multicenter, randomized, prospective trial comparing interrupted versus continuous polyglycolic acid suture closure of midline abdominal incisions showed a significantly higher dehiscence rate in the interrupted suture group.\(^5\)

Patient characteristics and local factors that contribute to fascial dehiscence with statistical significance include malnutrition, low albumin, respiratory problem, and wound infection.\(^6\)

Diagnosis:
Abdominal wound dehiscence presents as with or without evisceration. Evisceration indicates extrusion of peritoneal contents through the fascial separation. Dehiscence without evisceration can be detected by the classical appearance of salmon-colored fluid draining from the wound and evisceration manifest when skin sutures are removed. As compared to a superficial surgical site infection which manifests with purulent discharge from the incision or a drain located above the fascial layer and after wound is deliberately opened no evisceration was noted. The average time between surgical procedure and wound dehiscence was 2.7 days.\(^6\)

Abdominal fascial dehiscence was associated with intra-abdominal infection in trauma laparotomy cases. No clinical or laboratory factors help identify FD patients likely to have IAI. Therefore, FD should be viewed as a sign of possible
underlying IAI. Appropriate radiographic imaging or direct visualization of the entire abdominal cavity should be pursued before managing the dehisced fascia.\(^7\)

**Management:**

**Medical**
- Appropriate antibiotics\(^8\)
- Analgesia
- Fluid Resuscitation

**Coupled with either of the following depending on the patients condition:**

**Non-operative**
- Sterile occlusive wound dressing
- Use of absorbant and binder
- Vacuum Assisted Closure\(^9\)

**Operative**
- Wound debridement and resuturing
  - Interrupted or mass closure with non-absorbable sutures often used
  - The use of ‘deep tension’ sutures is controversial

**Outcome:**

Based on the matching analysis of the 2000 Healthcare Cost and Utilization Project (HCUP) Nationwide Inpatient Sample (NIS) data reported by Zhan and Miller, postoperative wound dehiscence was associated with an excess length of stay of 9.42 days, excess charges of $40,323, and an excess mortality rate of 9.63\%.\(^10\)

Wound dehiscence repair by interrupted sutures had no better outcome than repair by continuous sutures. Suture material did not influence incidence of incisional hernia. Incisional hernia develops in the majority of patients after wound dehiscence repair, regardless of suture material or technique. The cumulative incidence of incisional hernia was 69 per cent at 10 years.\(^11\)

**Reference:**


