**Possible Complications** an exploratory laparotomy

Immediate complications include the following:

* Paralytic ileus
* Intra-abdominal collection or abscess
* Wound infections
  + is the discharge of pus from a primarily closed wound, or evidence of soft tissue necrosis or cellulitis about a wound that remains open for delayed or secondary closure.
* Pulmonary atelectasis-
  + the collapse or closure of the lung resulting in reduced or absent gas exchange
* Enterocutaneous fistula

Delayed complications include the following:

* Adhesive intestinal obstruction
* Incisional hernia
* Necrotizing fasciitis
  + occurs when the rectus or lateral abdominal wall investing fascia becomes necrotic and undergoes dissolution from invasive infection arising from the surgical wound of the abdominal wall. Fascial necrosis may be associated with ischemia secondary to closure under extreme tension. In complex circumstances, ischemia and necrosis may precede infection, but commonly ischemia and invasive infection are synergistic partners. Fascial dissolution may occur focally or may extend to the full extent of the surgical incision. Necrosis of fascia is accompanied by varying degrees of overlying skin and subcutaneous tissue necrosis, or underlying muscle necrosis.
* Dehiscence
  + the separation of the fascial closure of the reoperated abdominal wound with the exposure of intraabdominal contents to the external environment. Dehiscence is secondary to technical failure of sutures, shear forces from tension, or fascial necrosis from infection and/or ischemia.
* Evisceration
  + the uncontrolled exteriorization of intraabdominal contents through the dehisced surgical wound outside of the abdominal cavity. Evisceration may occur from omentum but is of greatest concern when bowel protrudes through the separated fascia. Dehiscence with or without evisceration poses the potential risk of mechanical injury or desiccation of the intestinal wall which may lead to perforation or fistulization of the bowel.
* The stitches
  + should be kept in no longer than 14 days as a longer period increases the risk of surgical site infection.
* Myaiasis-
  + the parasitic infestation of the body of a live mammal by fly larvae (maggots) that grow inside the host while feeding on its tissue.
  + Easily prevented by the daily use of a fly repellent and larvicidal

**Contraindications**

The primary contraindication for exploratory laparotomy is unfitness for general anesthesia. Peritonitis with severe sepsis, advanced malignancy, and other comorbid conditions may render patients unfit for general anesthesia.

**Management of wound infection** **from the closed abdominal wound**

1. Involves removal of skin sutures/staples, opening and drainage of pus, and mechanical debridement of fibrin. Systemic antibiotics are not necessary unless necrotic soft tissue or a perimeter of cellulitis is present.
2. The open wound is managed with moist gauze dressings without topical antiseptics nor antibiotics.
   1. Secondary intention is required.
   2. Invasive infection in open wounds requires debridement of necrosis and systemic antibiotics.
3. Gram stain of exudate may guide antibiotic choice.
4. Debridement may be required daily.

**In necrotizing fasciitis**, the dead tissues need to be debrided until only viable, bleeding tissue remains. Antibiotic choices are in table II. Localized debridement may spare elements of muscle or posterior fascia. Small areas of debridement may create fascial defects. If no bowel is exposed, these small defects may be subsequently managed by secondary intention or small split thickness skin grafts.

**Dehiscence** requires consideration for exposed or protruding bowel. Dehiscence with omentum exposed but without evisceration is managed with local care, subsequent skin grafting, and hernia repair as necessary. With evisceration, then a mesh reconstruction is entertained. Mesh is not used when intestinal suture lines are present to avoid fistulization (5) (method 2 in table I). Mesh is then placed 10–14 days later after suture line healing. Either absorbable or permanent mesh is used. Absorbable mesh is less abrasive to the intestine but results in ventral hernia (6). Polypropylene mesh is preferred for permanent results. After granulation of the mesh, then bipedicle flaps are used for closure. Skin grafting on permanent mesh results in buckling of mesh, erosion of skin grafts and delayed fistula from wound contraction. In patients with repeated planned reoperations (eg. Pancreatic abscess) non-absorbable mesh is placed initially and then divided in the midline. Reoperation can proceed through the divided mesh without repeated suturing of fascia. After each procedure, the mesh is sutured back together. The staged abdominal repair(STAR) represents this type of procedure where zippers, velcro, or slide fasteners (Ethizip®) may be used.