# Post laparoscopic surgery port site infections and there managment


## Abstract:

### Introduction:

The laparoscopic surgical approach for surgical intervention has been used for a long time. The advantages of laparoscopic surgery over open surgery are an early return to activity, decreased postoperative pain, and fewer postoperative complications. Laparoscopic surgery has its own unique complications. Besides, major complications like vascular or bowel injury, port-site infections (PSI), port-site hernias, pyoderma, and metastasis at the port site following laparoscopic onco-surgery are rare.

### Materials and Method:

Surgical excision of the sinus tract and secondary closure of the wound with negative drain placement Followed by anti-tubercular drug treatment. Follow-up with the patient to check for recurrence.

### Conclusion:

Early surgical intervention and the start of anti-tubercular drug treatment reduce the recurrence of sinus.



### Key wards:

Port site infection (PSI), Non tubercular infection, Laparoscopic surgery complication.

## Introduction:

- The laparoscopic surgical approach for surgical intervention has been used for a long time. A lower rate of complications and a better post-operative outcome have often been observed with laparoscopic surgery compared to conventional open surgery.

- Laparoscopy has its ownunique complications.Besides, major complications like vascular or bowel injury, port-site infections (PSI), port-site hernias, pyoderma, and metastasis at the port site following laparoscopic oncosurgery are rare.

- Post-surgical infections, based on the timing of their presentation, are classified into two categories:
    - Early onset Post-surgical infections: It is present within a week of the surgical It is caused by organisms contaminated endogenously or exogenously at the surgical site, especially Gram-negative or Gram-positive bacteria.
    - Delayed or late-onset post-surgical infections usually present between three and four weeks after the surgical procedure. It is mainly caused by atypical mycobacteria. Instead of advances in surgical techniques and sterilization techniques, late-onset post-surgical infections are emerging with an ascending trend and may even cause sporadic outbreaks.

## Case Report:

A 48-year-old woman presented to our hospital with complaints of multiple pus discharging openings present over the right lower anterior abdominal wall for six months, swelling over the right anterior abdominal wall, and redness over swelling for fifteen days.

The patient developed those complaints after one month of laparoscopic hysterectomy with bilateral salpingo-oophorectomy done one year ago for fibroid of the uterus. That time for this pus discharging sinus tract medical management with antibiotics and surgical management with debridement of sinus tract over right side lower anterior abdominal wall done. Then that debrided sinus tract was healed. The patient had no complaints for the next five months. After that, the patient developed the above-mentioned chief complaint.

Patient has not a known case of diabetic mellitus, hypertension. Patient having no past history of immunocompromise (TB, HIV, HbsAg). The past history of the LSCS operation was sixteen years ago.

**On examination following finding was present**:

(A) The pus discharging Opening present over the 15cm lateral to right side of umbilicus.

(B)Another pus discharging opening present 5cm medial to right ASIS.

(C)Another pus discharging opening present 10cm medial to right ASIS.

(D)There was 10x10 cm2 swelling present which was fluctuant inconsistency, with tenderness, skin over the swelling was red and temperature over swelling was warm present at right infero-lateral to umbilicus.

(E) Healed port side scar marks


**Figure – 1 Present as show in image**

**On investigation:**

- Blood investigation: Hb 11.2 mg/dl, WBC 8100/cmm, ESR 40
- MRI Local part suggestive of Multiple small variable sized ill-defined abnormal signal intensity collection, few of them inter communicating involves subcutaneous plane over right anterior and lateral abdominal wall, largest one measure approximately 1.7(CC) x 1.8 (TP) x 3 (AP) cm in size.
- FNAC from right side inguinal lymph node suggestive of Granulomatous lymphadenitis.
- CBNAAT of pus and tissue suggestivenegative for atypical and typical mycobacteria.

**Therapeutic intervention:**

We did an excision of the sinus track, which contained pus and caseous material done under general anesthesia, followed by a wound left open for secondary intention healing. The excised sinus was sent for histopathological examination.

**Figure- 2 Intra operative image**

Post-operatively, after fifteendays of daily dressing and injectable antibiotics, the wound didn't improve. Then we start using empirical anti-tubercular drugs according to the body weight of the patient.

After fifteen days of continuing dressing with AKT drugs, we did secondary suturing and negative drain placement under local anesthesia.



**Discussion:**

- Surgical procedure stimulates a series of changes in the immune system and inflammatory response. After trauma immune suppression happen which increase in the incidence of septic complication.
- It is now accepted that the immune system is better preserved in laparoscopic than open surgery. This is demonstrated by the decrease release of different markers including C-reactive protein (CRP) and interlukin (IL) 6.

- The cause of post-surgical infectionis laparoscopic instruments are not cleanedcompletely it leads to collection of debris of charred tissue and blood within the joints of the instruments during surgery. Usage of this contaminated instruments lead to deposition of the endospores on to the subcutaneous tissue during the procedure. These endospores germinate in the infected tissue for that result clinical manifestations appear.

**Figure-3 Image after fifteen days of secondary suturing**

- Atypical mycobacterial infection is a rare but one of the known morbid complications of laparoscopic surgery.
- Prevention of this type of infections is utmost importance, which can be achived throughadherence to infection control methods and appropriate sterilization of instruments in the operating theatres. Use of disposable trocars is the best option to avoid such morbid complication.

## Conclusion:

- Awareness of the handling and cleaning of laparoscopic instruments makes a difference in the occurrence of postoperative laparoscopic surgical site infections.
- The treatment includes both antimicrobial therapy and surgical excision. We recommend early surgical excision to reduce the morbidity associated with the disease.

## Referrences:


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