Case Report on Port Site Sinus

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ABSTRACT

Port site infection (PSI) is an infection which is seen at port site after any laparoscopic surgery or at the site where any other medical devices are inserted into the body. It is one of the rare but preventable complications of successful laparoscopic surgeries due to improper sterilization of instruments. PSI is already known to be a rare complication but if it is occurring because of mycobacterium then it is considered to be the rarest. One of the commonest causative organisms is Staphylococcus and mycobacterial species also. Antibiotics are prescribed based on culture sensitivity reports. If mycobacterium is seen to be the cause, then second line anti-tubercular drugs (ATT drugs) like Macrolide (Clarithromycin), Quinolones (Ciprofloxacin), Tetracyclines (doxycycline) and aminoglycosides (amikacin and tobramycin) are prescribed. A case of male patient is reported who underwent laparoscopic surgery (TAPP) and developed pus discharge from supraumbilical port site. Sinus tract excision for port site infection was tried two times but every time recurrence was seen. Anti-tubercular drugs was started by patient after collecting excision biopsy reports showing Langerhans cells which are associated with TB and progress was seen in patient.

Keywords: PORT SITE INFECTION, PUS DISCHARGE, LANGERHANS CELLS, TAPP.
**INTRODUCTION:** Port site is the locus over the skin through which a laparoscopic or other device like implanted medicine reservoir, is installed into the body. [1] Laparoscopic surgery since 1987 has played a great role in all types of surgical procedures and showed its advantages. As the days passed, it has also brought complications into focus and one such complication is Port site infection (PSI). PSI is considered to be a type of surgical site infection (SSI) but only bound to laparoscopic surgery and infections are restricted to superficial and deep surgical sites only. The most common clinical manifestations in non-mycobacterial infection seen are wound discharge and erythema. Staphylococcus Aureus are the commonest microorganism causing infection. [2]

Port site infections are common but port site TB is very rare preventable complication and most important reason for infection can be improper sterilization of instruments of laparoscopic surgery. [3, 4] Both surgical as well as non surgical methods like local wound dressings and antibiotics can be used to treat PSI. Antibiotics are prescribed depending upon culture sensitivity reports and mainly for atypical mycobacteria, second line antitubercular drugs (ATT drugs) like Macrolide (Clarithromycin), Quinolones (Ciprofloxacin), Tetracyclines (doxycycline) and aminoglycosides (amikacin and tobramycin) are chosen. [2]

**CASE REPORT:**
A 21 years old male patient underwent laparoscopic transabdominal pre-peritoneal (TAPP) for Right inguinal hernia (RIH) on 04-12-2015. Later he developed sinus at port site for which LA sinus tract excision was done on 26-04-2016 and later he was admitted on 17-05-2016 and during that period blood counts were within normal level, on 26-05-2016 tissue samples were sent for histopathology suggesting chronic granulomatous lesion, on 09-06-2016 an abdominal ultrasound scan was conducted and a crampled and wavy mesh was noted in right iliac fossa region- infect with adjacent hypoechoic area, s/o infected sinus tract with collection and later on 11-06-2016 patient was evaluated with Monteux test and all were negative for tuberculosis but even though TB department suggested to give drug regimen for atypical mycobacterium as excision biopsy showed Langerhans cells. He was prescribed Faronem, metronidazole and Antitubercular drugs (ATT for 20days) and later Faronem was replaced with Amikacin. He was asked to go back to home and come for another checkup on 08-07-2016. Later he consulted medical practitioner on 17-07-2016 with chief complaints of pus discharge from supraumbilical region (port site) since 4months.

On examination Patient was conscious and coherent, afebrile with pulse rate 82/minute and BP 110/70mmHg and a small sinus trout at supraumbilical port site. Whole blood count, Liver function test and biochemistry reports are normal. On 11-7-2016, another surgery was done that was Diagnostic laparoscopy+Adhesiolysis+Open arphalectomy+Sinus tract excision for port site sinus condition. Antibiotics like Amikacin, Metronidazole and Amoxicillin-Clavulanate were prescribed. Patient responded well to these drugs. So soon he was discharged.

**DISCUSSION:**
Laparoscopic surgeries have proved themselves in all types of surgeries with lots of advantages like less pain, small incision and less hospital stay. But still complications are seen due to many causes like improper sterilization of instruments, unhealthy environment and so on. One of the rare complications of this laparoscopic surgery is Port site infection (PSI). There are many different ways to prevent complications like PSI. Preventions includes like taking away different parts of laparoscopic surgical instrument and cleaning each part very carefully with high concentration (3-4%) of chemical sterilants for 8 to 12 hrs and best achieved by ultrasonic technology, combination of laparoscopic surgeries like laparoscopic cholecystectomy...
and laparoscopic hernioplasty should be avoided. [5]

The major causes of port site infections are found to be pseudomonas, Staphylococcus and so on. There are two types of Port site infection. One of those types of infection occurs within a week after surgery due to either of gram negative or gram positive bacteria because of improper sterilization, unhealthy conditions etc. Empirical antibiotic therapy (common antibiotics) is started for PSI along with local dressings. After getting culture sensitivity report, concerned antibiotics are started. Atypical mycobacterium's are the cause for another type of port site infection and common antibiotics doesnot work in this case. So second line antitubercular drugs are preferred. [6] Surgical method can also be used to treat laparoscopic port site infection along with the non surgical method. [7] Combination of Surgical drainage, debridement and antimicrobial treatment has been used in this case. [8]

Faropenam prescribed in this case is a broad spectrum antibiotic acting against many gram-positive and negative aerobes and anaerobes and is indicated in uncomplicated skin and skin structure infections. Later it is replaced with amoxicillin-Clavulanate in this case. A proven evidence was found showing that faropenam has same efficacy and safety as clarithromycin, cefuroxime, amoxicillin-clavulanate. It was further replaced with amikacin and ceftriaxone. [9] Atypical mycobacteria does not respond to first line antitubercular drugs, so second line antitubercular drugs are prescribed. It includes combination of Macrolides (Clarithromycin), quinolones (Ciprofloxacin), Tetracyclines (Doxycycline) and aminoglycoside (Amikacin). [2] Metronidazole is prescribed for prophylactic purpose to prevent post operative infections due to anaerobic bacteria like E-Coli, Klebsiella, Actinomyces etc. [10]

REFERENCES: