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Case Report

Port site Tuberculosis Presenting as a Chronic Discharging Sinus in the Epigastric Region after Laparoscopic Cholecystectomy in the Department of Surgery in Tertiary Care Hospital

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Abstract

Laparoscopic cholecystectomy is routinely performed in the surgical department now a days. However port site tuberculosis is a rare complication following laparoscopic cholecystectomy .We report here a case of a young female who underwent laparoscopic cholecystectomy outside our hospital then developed a chronic discharging sinus in the epigastric port site. Two attempt of debridement and dressing then one time debridement then wound closure done but recurrence. Sinus tract was excised after sinogram and send the tract for histopathological examination and shows tuberculosis. The patient was kept for antitubercular drug and no recurrence after 3 month follow up.

Key words: Laparoscopic cholecystectomy, Port site TB, Anti tubercular drug.

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Introduction

Laparoscopic cholecystectomy is the gold standard treatment of cholelithiasis now a days. Laparoscopy has its own set of complications in addition to those operation proper.[1] Port site infections are not uncommon.[2] But port site TB is rare complication following laparoscopic procedure with only a few isolated cases reported in the literature.[3] Although ultramodern aseptic techniques and highly sophisticated methods of sterilization are employed now a days, yet it has been noted that in many cases there is postoperative infection of these wounds. The frequency of these infections depends on a number of important factors. According to Waqar A Jan et al 2008 although the frequency and risk factors for wound infection following conventional open cholecystectomy has been extensively been studied in literature, they have not been thoroughly evaluated for laparoscopic cholecystectomy4. During the last few decades the techniques of surgery have made a lot of strides and advancements from the older methods of open surgery to the modern methods of minimal access surgery, referred to as laparoscopic surgery or robotic surgery. Now a days Laparoscopic surgery is commonly done with respects to cholecystectomy, appendectomy, urology, gynaecology, pancreatectomy, gastrectomy, colorectal surgeries, hernias and even to oncosurgery.[4,5]

We report here a case young female who underwent laparoscopic cholecystectomy (LC) outside our Hospital then presented to us with discharging sinus in the epigastric port site.

Case Report

A 40 year - old female presented to us with complaints of purulent fluid discharge coming from a wound on her upper abdominal wall. The patients had undergone laparoscopic cholecystectomy 3 months back for symptomatic gall stone disease in peripheral Hospital. Postoperative period was uneventful, but patients epigastric port wound did not heal even after 1 month .She developed a small discharging sinus over her

upper anterior abdominal wall at the port site for which debridement for the wound was done thrice over a period of 2month and regular dressing done in the same Hospital, but every time there was recurrence within 2-3 weeks. There was no history of loss of appetite, evening rise of temperature, cough, hemoptysis, weight loss or abdominal pain or anti tubercular therapy (ATT) in the past.Nondiabetic, normotensive and no history of Jaundice.

On examination a small opening with scanty serous discharge was present in the epigastric port site (Fig:-I). Margins of the wound were undermined with unhealthy granulation tissue.There was no erythema or tenderness and rest of the per abdominal examination reveals normal. Her investigations were unremarkable except for the raised ESR (erythrocyte sedimentation rate) which was 35 mm in 1st hour. Mantoux test was negative. X-ray chest PA view was normal . A sinogram (Fig:-II) was done which showed non branching sinus tract ending present in the epigastric region whose direction was upwards in the anterior abdominal wall (Fig:-III). Complete excision of the sinus tract was done after delineation of methylene blue dye under general anesthesia, after achieving complete hemostasis wound was lay open given a pack within it, then regular dressing done. After receiving histopathological report which showed chronic granulomatous lesion along with epitheloid cells in a lymphocyte back ground suggestive of tuberculosis (TB) (Fig:-IV). Then ATT (anti-tubercular therapy) with 4FDC (Rifampicin, pyrazinamide, isoniazid and ethambutol)was used and after 10 days dressing, secondary suture was done .The patient had no recurrence after 3 months of follow up(Fig:-V). ATT (antitubercular therapy) is planned for 9 months (2months intensive phase with 4 drugs followed by 7 months continuation phase with 2drugs)

Fig-I: Photograph of sinus tract at epigastric port site.

Fig-II: Sinogram done at the epigastric port site.

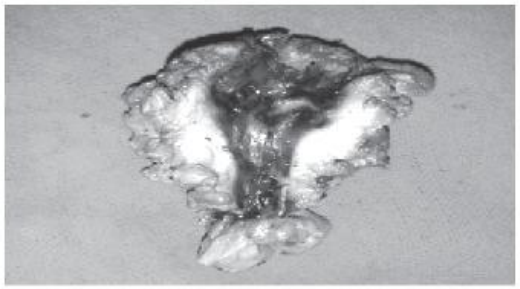

Fig-III: Complete excision of sinus tract.

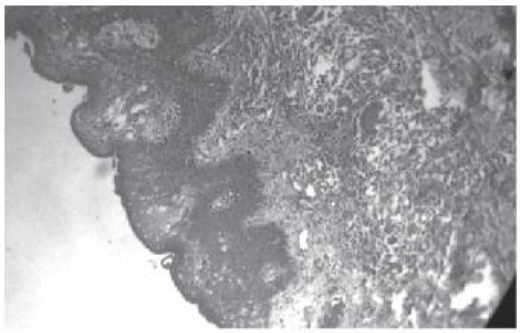

Fig-IV: Microscopic figure of tubercular granuloma.

Fig-V: Healed wound without recurrence.

Discussion

Most of the surgical centres in the world today, laparoscopic procedures are being increasingly performed. They are associated with some unique set of complications apart from other common surgical complications.[6] Port site infections are not uncommon.[2] However, only isolated reports of PSI (port site infection) with tubercular and nontubercular mycobacteria presenting as non healing discharging sinus tract exist.[7,8,9] Cases of port site TB (tuberculosis) have been reported after LC (laparoscopic cholecystectomy), laparoscopic oophorectomy, hysterectomy, adhesionolysis, laparoscopic inguinal hernia repair, laparoscopic appendectomy.[10] This assumes paramount importance to trackle this complications in developing countries like India in the view that occurs in the highest TB (tuberculosis) burden countries in the world regarding absolute number of incident cases that occurs each year.[11] port site mycobacterial infection is exogenous, but it can be endogenous also. Exogenous mode of transmission include improper sterilization of instruments and use of tap water containing resistant atypical mycobacteria to clean these instruments before immersion into glutaraldehyde solusion.[12] Mansor et al reported port site TB at the epigastric port during gallbladder extraction in a case of gallbladder TB.[4] Cunnigaiper and Venkatraman reported port site TB which occurred after diagnostic laparoscopy for primary infertility and peritoneal tuberculosis were found peroperatively.[7] In our case, patient was operated in a peripheral Hospital, and exact policy adopted for sterilization is not known.

Moreover the excised gallbladder of this patient was not sent for histopathological examination. In our patient there was no focus of tuberculosis so possibility of transmission of TB to port site through infected laparoscopic instruments is possibility.

The history in such a case is typically the presence of discharging sinus after non healing wound at port site.[13] Usually, the epigastric port site (In case of laparoscopic cholecystectomy) or specimen retrieval site (In other laparoscopic procedure) is almost involved as that port is associated maximal handling site during surgery. The investigation in that cases include pus culture and sensitivity to rule out any port site infection or secondary infection. ZN staining is used for direct demonstration AFB. Polymerase chain reaction(PCR) has very high negative predictive value for demonstrating mycobacterial DNA and is very useful in such isolated cases.[14] Delineation of sinus tract can be done by sinogram X-ray and preoperatively by methylene blue dye. Treatment of patients with such a case may started with antitubercular drugs after histopathological report from the port site sinus tract. It was reported Patients wound may heal with ATT (antitubercular therapy) only.[15] Gupta et al. confirmed TB (tuberculosis) by histopathological examination from the wound site and followed by sinus tract excision followed by antitubercular therapy and it was done in our case

Conclusion

Port site tuberculosis is not so common but devastating to the patients also for the surgeons. It is also burden to our health economy. So proper sterilization of instruments is necessary by 2% Glutaraldehyde solution and before sterilization wash of the instruments with sterile tap water and after withdrawal from glutaraldehyde solution maintain proper sterility.

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