

A Rare Case of Pyogenic Spondylodiscitis after Laparoscopic Sacro-Hysteropexy

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How to cite this paper: Ismail, A.M., Wahab, H.A. and Shaban, S. (2022) A Rare Case of Pyogenic Spondylodiscitis after Laparoscopic Sacro-Hysteropexy. *Open Journal of Obstetrics and Gynecology*, 12, 510-514.

<https://doi.org/10.4236/ojog.2022.126044>

Received: April 26, 2022

Accepted: June 18, 2022

Published: June 21, 2022

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Abstract

Introduction: Pyogenic spondylodiscitis is a rare and severe complication of laparoscopic Sacro-Hysteropexy with a polypropylene mesh. The proper and early diagnosis following by medical treatment, if not responding, so we shift to surgical approach is very important to prevent irreversible complications.

Case Presentation: A female patient 32 years old admitted to our Gyne-Oncology unit in El-Galaa Maternity Teaching Hospital, in Jan 2022 with a significant weakness in both lower limbs up to complete paralysis, by history she has done a laparoscopic Hystero-Sacro-Pexy with synthetic polypropylene mesh 2 weeks ago, all investigations were normal except WBCs was 14,000 and CRP was 28, MRI Finding was an Encysted collection likely seroma at sacral promontory 4 × 3 cm, surgical removal of the mesh was done, the mesh related to the sacrum was severely infected and pus formation was noticed, 4 hours after the operation there was a Dramatic response and complete resolution of symptoms within few days. **Conclusion:** Because of the rarity of this complication in the literature, Spondylodiscitis awareness of symptoms, timely diagnosis, and treatment including surgical removal of synthetic mesh after Sacro-Pexy are fundamental to prevent irreversible complications.

Keywords

Spondylodiscitis, Pyogenic, Sacro-Pexy, Pecto-Pexy, Mesh

1. Introduction

Laparoscopic Sacro-hysteropexy by a mesh considered as a subtype of the sacral colpexy in women who seeking fertility to correct apical prolapse [1].

Spondylodiscitis is a condition that includes a spectrum of spinal infections such as discitis, osteomyelitis, epidural abscess, meningitis, subdural empyema,

and spinal cord abscess [2].

Lumbar spondylodiscitis is a rare and severe complication, which can cause LBP, fever, and radiating pain symptoms, such as pain in the buttock and leg, and even mobility limitation [3].

Pyogenic spondylodiscitis is a rare and severe complication of laparoscopic Sacro-Hysteropexy with a mesh. The proper and early diagnosis following by medical treatment, if not responding, so we shift to surgical approach is very important to prevent irreversible complications.

2. Case Report

A female patient 32-years-old admitted to our Gyne-Oncology unit in El-Galaa Maternity Teaching Hospital, in Jan 2022 with a significant weakness in both lower limbs up to complete paralysis of both limbs associated with severe irritating pain in hip joints, the patient could not walk and presented to us on wheel chair.

By history she has done a laparoscopic Hystero-Sacro-Pexy with synthetic mesh 2 weeks ago in a private sector due to 3rd degree uterine prolapse and she was discharged after one day stay at hospital in a good condition.

The patient then start to feel a progressive pain in lower back increased with hip movement 10 days later, and the pain not respond to any analgesics, she started to feel heaviness with rising pain in both lower limbs, increase in semi-setting position and decrease on lying flat on her left lateral position then she complained of complete paralysis of Both lower limbs.

By Examination: General condition was good, Tenderness along her both lower limbs and hip joint increase in semi-setting position and decrease on lying flat on her left lateral position.

Full investigations were requested and MRI Imaging of Pelvis was requested also, all investigations were normal except WBCs was 14,000 and CRP was 28, MRI Finding was an Encysted collection likely seroma at sacral promontory 4 × 3 cm. The patient was prepared for exploration after M.D.T decision.

Intra-operatively, through abdominal exploration, there was an ovarian cyst impacted in the back of the uterus on sacral promontory, ovarian cystectomy was done, and then the whole retro peritoneum behind the uterus in the right side was dissected along the way up to the sacral promontory to expose the synthetic mesh.

Then we started to remove the polypropylene sutures that fix the mesh along the sacral promontory and the back of the uterus, and the surprise here that the end of the mesh related to the sacrum was severely infected and pus formation was noticed (**Figure 1** and **Figure 2**).

The valuable notice here that the polypropylene sutures is not properly placed on the sacral promontory but it was replaced in a level below the sacral promontory and near to the sacral plexus.

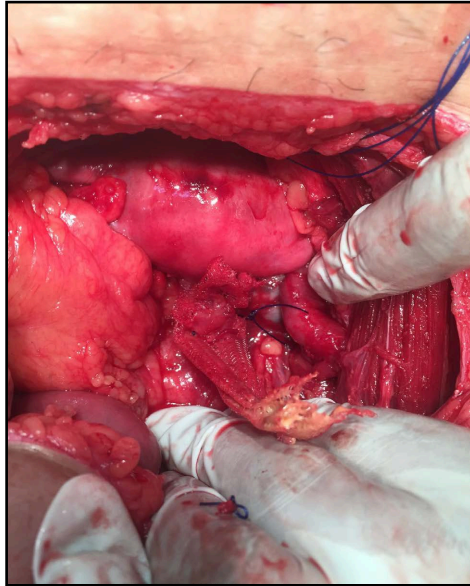


Figure 1. The end of the mesh at sacral promontory after released and show pus formation.

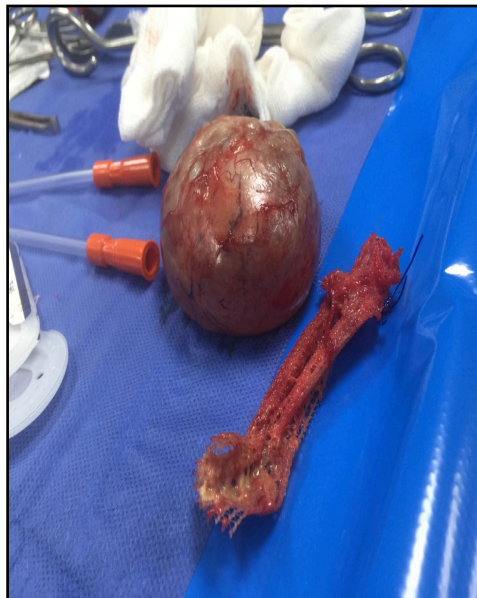


Figure 2. The ovarian cyst that mistaken represented as seroma in MRI report, and the complete mesh after removal.

Removal of the polypropylene synthetic mesh was done and Hystero-PectoPexy was done to fix the uterus in the pectineal ligament to avoid pyogenic Spondylodiscitis.

Four hours after the operation there was a Dramatic response as the patient on her mouth, there was no pain in her legs or hip joints, 8 Hours after the operation, patient started to walk completely by herself and the pain had completely relief, 3 days after operation complete resolution of the patient status was achieved and then she was charged in a good condition.

3. Discussion

According to the literature, we found about 30 cases of spondylodiscitis after laparoscopic colpo pexy or hysteropexy and about 70% of the cases developed pyogenic infection which included bacterial and fungal infections. It was only infection, and not graft rejection [4].

Pyogenic spondylodiscitis can be treated with antibiotics, Antibiotics alone were effective in only 4 cases, that is, 12% of the total cases; thus, showing a low percentage. Like, our case that did not respond to any medical treatment and the surgical approach result in a dramatic response with complete resolution in few days.

Most of the patients needed surgical interventions. Mesh removal and debridement were effective in majority of the cases, while 44% of the cases needed multidisciplinary surgical interventions, mainly orthopedic surgery. Further, 88% of the patients were able to return to normal daily activity, and only 6% of the patients suffered from intermittent LBP.

Surgery is mostly indicated in case of neural compression, neurologic deficit, progressive neurological deformation or instability or in case of medical treatment failure [5]. Surgical approach often includes mesh removal and/or other orthopedic procedures (laminectomy, discectomy etc.) and that what we have done in our case.

A growing number of evidence supports pecto-pexy as an alternative method for apical prolapse repair, with preliminary outcomes and complication rates comparable with Sacro-colpopexy [6]. The procedure was originally described by Noé *et al.* in 2010 for use in obese patients and has since been reported in the international literature for use in other patient populations and compared with Sacro-colpopexy [7].

In our case we had to shift to pecto-pexy as alternative method to fix the uterus as pelvic organ prolapse was the main complain and also to avoid Spondylodiscitis as it is more common with Sacro-Pexy.

4. Conclusions

Spondylodiscitis awareness of symptoms, timely diagnosis, and treatment including surgical removal of synthetic mesh after Sacro-pexy are fundamental to prevent irreversible complications.

The proper placing of proline sutures in sacral promontory to fix the mesh is a very important tip in the procedure to avoid sacral plexus irritation.

Pecto-Pexy is alternative novel effective surgical technique to fix the uterus in the pelvis so, prevent pelvic organ prolapse and pyogenic spondylodiscitis.

Acknowledgements

The authors would like to thank Dr. Ebtihag Shafik (Head of Obstetrics and Gynecology Department in El-Galaa Maternity Teaching Hospital) for her appreciated efforts in this case.

Consent

Written informed consent was obtained from the patient for publication of this case report. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Authors' Contributions

All authors have read and approved the final manuscript.

Conflicts of Interest

The authors declare that they have no competing interests.

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