



Laparoscopic Management of a Vesicouterine Fistula in a Patient with Deep Infiltrating Endometriosis

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ABSTRACT

Objective: Demonstration of how a vesicouterine fistula can be safely managed by laparoscopic approach.

Design: Stepwise demonstration of the laparoscopic surgical technique performed in case of a vesicouterine fistula.

Materials and Methods: We report a case of vesicouterine fistula safely managed by laparoscopic approach in a 39-year-old woman with deep infiltrating endometriosis and two previous caesarean sections.

Results: A total laparoscopic approach of a vesicouterine fistula was performed, with key steps to achieve a minimally invasive strategy.

Conclusion: In this video, we demonstrate the surgical steps to perform an effective and safe minimally invasive laparoscopic approach to a vesicouterine fistula.

Keywords: Endometriosis; Laparoscopy; Vesicouterine fistula

INTRODUCTION

Vesicouterine fistulas are a rare form of urogenital fistulas, representing 1-4% of all urogenital fistulas, and consist of an abnormal communication between the bladder and uterus [1]. They result from iatrogenic causes, most often pelvic surgery; caesarean sections are recognized as the most common cause, due to accidental bladder injury. When unrecognized intraoperatively, bladder injury may persist and lead to fistula formation [2-5]. Due to the growing number of caesarean sections worldwide, the incidence of vesicouterine fistulas is expected to rise, emphasizing the importance of correct diagnosis and management of this complication.

Other causes for vesicouterine fistula formation are placenta percreta with vesical involvement, previous uterine rupture or caesarean section with uterine scar dehiscence. Patients usually present with complaints of voiding difficulties, urinary incontinence or vaginal leakage of urine. Some patients present with Youssef's syndrome (cyclic haematuria, amenorrhea and urinary incontinence). The diagnosis is based on clinical examination and imaging techniques, particularly with the use of contrast techniques. Spontaneous healing of this type of fistula is uncommon and surgical management is required to correct the defect. Historically, vesicouterine fistulas were managed by laparotomy, but there is a shift toward minimally invasive techniques. We report a case of vesicouterine fistula

Received: 16-July-22

Editor assigned: 19-July-22

Reviewed: 27-July-22

Revised: 01-Aug-22

Published: 08- Aug-22

Manuscript No: IPGOCR-22-13950

PreQC No: IPGOCR-22-13950 (PQ)

QC No: IPGOCR-22-13950 (Q)

Manuscript No: IPGOCR-22-13950 (R)

DOI: 10.36648/2471-8165.8.7.32

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Citation: Osório F, Cal M, Sousa F, Tavares M, et al. (2022) Laparoscopic Management of a Vesicouterine Fistula in a Patient with Deep Infiltrating Endometriosis. *Gynecol Obstet Case Rep.* Vol.8 No.7:32.

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Video 1: Laparoscopic excision of a vesicouterine fistula.

safely managed by laparoscopic approach in a 39-year-old woman with deep infiltrating endometriosis and two previous caesarean sections (**Video 1**).

METHODS

Total laparoscopic approach of a vesicouterine fistula, with key steps to achieve a minimally invasive strategy:

- Adhesiolysis of severe vesicouterine adhesions
- Identification of the fistulous tract after injection of blue dye into the vesical catheter
- Bladder partial cystectomy with excision of fistulous tract
- Total laparoscopic hysterectomy with bilateral salpingectomy

There were no post-operative complications.

CASE

We present a stepwise narrated demonstration of the laparoscopic surgery technique performed in this case of a woman with endometriosis and previous caesarean section, to demonstrate how a vesicouterine fistula can be safely managed by laparoscopic approach. Main outcome measures were operative times and fistula resolution.

CONCLUSION

In this video, we demonstrate the surgical steps to perform an effective and safe minimally invasive laparoscopic approach to a vesicouterine fistula.

AUTHOR'S DISCLOSURE

The authors have no conflicts of interest to declare.

The authors received no financial support for the research, authorship, or publication of this article.

AUTHORSHIP CONFIRMATION/ CONTRIBUTION STATEMENT

All co-authors have seen and agree with the contents of the manuscript and certify that the submission is original work and is not under review at any other publication.

DATA AVAILABILITY STATEMENT

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials.

Institutional review board approval was obtained and the patient gave consent for the publication of this video.

ACKNOWLEDGEMENTS

This video was presented at the ESGE 30th Annual Congress, in Rome, on 4th October 2021, during the session of "Best Selected Video Presentation".

The authors would like to express their gratitude to Dr. António Setúbal, Head of Department, for his kind support and motivation.

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