

A CASE REPORT OF A SUBMUCOSAL FIBROID COMPLICATED BY VAGINAL PROLAPSE AND IMPACTION IN A LOW-RESOURCE SETTING.

Innocent Bwire^{1*}, Ibrahim Bwaga^{1,2}, Richard Mwindi¹, Jean Paul Mitengezo¹, Josiah Mkojera¹

¹Department of Obstetrics and Gynecology, Kampala International University-Western campus, Ishaka-Bushenyi, Uganda

²Department of Obstetrics and Gynecology, Hoima Regional Referral Hospital, Hoima City, Uganda

Page | 1

ABSTRACT

Background

The most common female pelvic tumors that originate from the smooth muscle of the myometrium are called leiomyoma. Although leiomyomas are benign when they are Submucosal, they have the potential to prolapse into the vagina. The traditional method of treating pedunculated fibroid is vaginal myomectomy, however, it cannot always be carried out securely. The purpose of this case report is to illustrate the surgical difficulties when dealing with a large prolapsed pedunculated submucous fibroid. Customized surgical methods allow safe and efficient access to the prolapsed pedunculated fibroid stalk during hysterectomy.

Case presentation

This case involves a 53-year-old perimenopausal female with abnormal uterine bleeding. She had a large prolapsed pedunculated submucous fibroid, with anemia and infection. A modified total abdominal hysterectomy was performed, along with a unilateral salpingo-oophorectomy. The lump was determined by the histopathology report to be a benign leiomyoma without any indication of malignancy.

Conclusions

Regardless of its benignant nature, a large pedunculated submucous leiomyoma presents surgical difficulties during abdominal hysterectomy especially when vaginal prolapse is present and vaginal removal cannot be safely and easily performed. Factors such as parity, fertility desire, hemodynamic stability, prolapsed fibroid size, mobility of fibroid in the vagina, visibility, and size of the stalk need to be evaluated when deciding on the choice of surgical procedures.

Recommendations

The management of a submucosal fibroid with vaginal prolapse should be evaluated carefully and surgical difficulties anticipated when a vaginal myomectomy cannot be done. A prolapsed fibroid size greater than 6cm with the invisibility of the fibroid stalk should warrant consideration of customized approaches, however, no single factor can independently predict the operation of choice and its outcomes.

Keywords: case report, pedunculated fibroid, vaginal prolapse, modified hysterectomy.

Submitted: 2024-11-23 **Accepted:** 2024-12-05

Corresponding Author: Bwire Innocent

Email: innocent.bwire@gmail.com

Department of Obstetrics and Gynecology, Kampala International University-Western campus, Ishaka-Bushenyi, Uganda.

Background

Uterine leiomyomas commonly known as fibroids are benign smooth muscle neoplasms that typically originate from the myometrium. About 20 to 30% of all women have one or more leiomyomas present at post-mortem, the majority of these having been asymptomatic [1, 2].

Submucous leiomyomas account for about 15 to 20 percent and the proportion of these fibroids that prolapse through the cervix remains unknown. Prolapsed pedunculated submucous fibroid account for 1.3 percent to 2.5 percent and these can prolapse through the cervix into the vagina in varying degrees [3, 4].

Twisting of a submucosal fibroid with a pedicle results in infarction and on certain occasions, hemorrhagic, gangrenous, or red degeneration occurs due to inadequate blood supply [5].

Individuals who have a prolapsed fibroid via the cervix may exhibit symptoms such as vaginal bleeding, watery discharge, cramping or pain in the pelvis, and vaginal pressure. Due to the decreased blood supply from the pedicle, prolapsed myomas can necrotize and, in the event of an infection, can result in sepsis [6, 7].

The best treatment for uterine prolapsed pedunculated leiomyomas is a simple vaginal myomectomy. The risk of complications during and after a major abdominal surgical procedure in the face of infection and anemia is eliminated [8]. Vaginal myomectomy cannot, however, always be carried out simply and safely. A literature review of case reports on prolapsed pedunculated submucosal fibroids indicates that each presents unique surgical difficulties in management. [9]

The standard surgical procedure for prolapsed pedunculated submucous fibroids is vaginal removal. However, serious stalk hemorrhage, infection, and uterine inversion brought on by excessive traction are among the potential side effects of vaginal myomectomy. Therefore, in certain situations, customized approaches are required. During a myomectomy or hysterectomy, customized surgical techniques offer secure and effective access to the prolapsed pedunculated fibroid stalk. [9]

Case presentation

A 53-year-old African woman presented on the 7th of December 2023 with a three years history of on and off vaginal bleeding. Blood was dark red with clots and was associated with a six-month history of progressive lower abdominal pain, abdominal distension, and a mass that was felt inside the vagina one month ago. There was also painful urination and foul-smelling yellowish vaginal discharge noted one week ago. She had twelve spontaneous vaginal deliveries and two spontaneous miscarriages. She had never undergone cervical cancer screening and never used any contraceptive methods. She reported the use of oral hematinics and tranexamic acid to control bleeding with minimal success, endometrial sampling was also done in August 2023 and results were negative for malignancy.

On physical examination at admission, she was febrile with a temperature of 37.5oC, moderate pallor, and palpable non-tender firm bilateral inguinal lymphadenopathy, her blood pressure was 151/80mmHg, and the abdomen was moderately distended and her uterus was palpable at the umbilicus. A pelvic exam revealed a foul-smelling yellowish vaginal discharge and a palpable firm, smooth, round mass in the vagina.

Investigations revealed anemia with hemoglobin level-4.3g/dl, and leukocytosis with white blood cells – 18 x 10⁹ cells, platelet count of 184 x 10⁹ cells. Sonography findings showed a bulky uterus measuring 17x 10 x13 cm with a hypoechoic mass noted within the uterine cavity, endometrium could not be clearly delineated. Endometrial sampling done in August 2023 showed the proliferation of endometrial stromal cells with no features of malignancy. Transvaginal ultrasound and magnetic resonance imaging could not be done due to the low resource setting.

Examination under anesthesia done on 12th December revealed a palpable firm, smooth round mass with broad pedicle protruding and dilating the cervical canal extending 10cm impacted into the vaginal canal with a width of 8cm and a height of 7cm.

A working diagnosis of abnormal uterine bleeding secondary to a prolapsed uterine fibroid with anemia and sepsis was made and the Patient was started on antibiotics for five days, analgesics, blood transfusion, counseled, and consented to hysterectomy.

Intraoperatively the uterus was grossly enlarged with a left cystic ovary. A modified Total abdominal hysterectomy and left salpingo-oophorectomy were done on 14th December. Opening of the vaginal vault anterolateral and exploration of the fibroid was done before suture ligation of the cardinal and uterosacral ligaments. The cervix could not be freely mobilized. A fibroid was found to originate from the posterior wall of the fundus with abroad pedicle, decision was taken to divide the mass into two halves at the level of the cervix with transabdominal removal of the vaginal prolapsed fibroid aided by a vaginal push. The rest of the steps of total abdominal hysterectomy steps were followed. The post-hysterectomy specimen weighed 550 g.



Figure 1; post-hysterectomy specimen showing the two halves near removed left cystic ovaries



Figure 2 the superior half of the pedunculated fibroid showing cut surface



Figure 3 Lower end of the transected fibroid

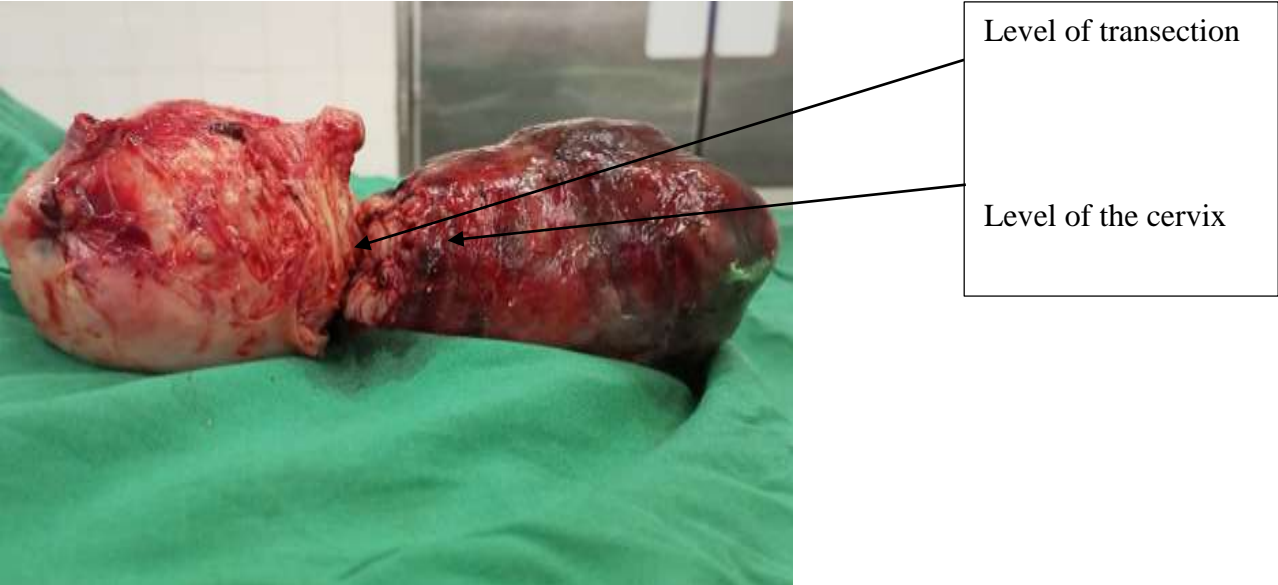


Figure 4 two lateral views showing the level of transection and the cervix



Figure 5 cuts the surface of the lower half of the transected fibroid.

The patient's post-operative recovery was uncomplicated and she was discharged on post-operative day 8. Hematinic, antibiotics, analgesics, and blood transfusion were administered. Continuous bladder drainage was maintained for 14 days. A follow-up complete blood count and abdominal ultrasound scan were done. Histological examination of the hysterectomy specimen confirmed the diagnosis of leiomyoma with no evidence of malignancy. Takeaway lessons from this case include the need to anticipate surgical difficulties when performing a hysterectomy for a submucosal fibroid when a vaginal myomectomy cannot be done especially in low-resource settings.

Discussion

Herein the authors report a case report of abnormal uterine bleeding due to a large prolapsed pedunculated submucous fibroid associated with anemia and infection.

Numerous factors determine whether patients with prolapsed pedunculated submucosal leiomyoma prefer an abdominal hysterectomy or vaginal myomectomy. An association exists between the characteristics of the patient and the surgical management of choice. Vaginal myomectomy is indicated in smaller leiomyoma diameter and volume, lower preoperative hematocrit levels, and younger age and parity, which led to shorter hospitalization and postoperative hospitalization durations. [10].

Lower parity, the lack of a coexisting leiomyoma, the lower volume of the presenting leiomyoma as determined by ultrasound measurement, and severe anemia a sign of less stable hemodynamics were linked to a preference for vaginal myomectomy or hysterectomy. But none of these variables alone can forecast the operation of choice independently. [10]. An abdominal hysterectomy was done in this case based on factors that included tumor size (10 x 8 x 6 cm), Fertility desire, and mobility of the prolapsed fibroid in the vagina. Also high parity, a large

volume of presenting myoma, infection, and anemia influenced the transabdominal approach.

Conversion from vaginal myomectomy to abdominal myomectomy or abdominal hysterectomy has been reported in the literature and the complications of the procedure are rare [11]. There was no such conversion due to the large volume of the fibroid which reduced its mobility and necessitated examination under anesthesia to evaluate the prolapsed fibroid.

Vaginal myomectomy is often performed when a small (<4 cm) prolapsed fibroid is detected. Patient characteristics such as prolapse size larger than 4 cm, >2cm pedicle stalk diameter, the pedicle cannot be visualized or palpated or prolapsed cervical fibroid require management in an operating theater rather than office settings [11]. In this case, the prolapsed fibroid was 10cm with a broad-based stalk (>2cm), pedicle was not visualized making the feasibility of vaginal removal difficult.

The benefits of a hysterectomy include the complete eradication of symptoms and the absence of recurrence risk. Following a hysterectomy, there are also notable and long-lasting improvements in symptoms, psychological function, and quality of life. [12]. Procedure selection is influenced by the woman's age, fertility desire, any accompanying illnesses, and anemia. Younger age, higher income, higher education, and infertility have all reduced the desire for hysterectomy. [13].

The potential risk of recurrence or the development of new leiomyomas has been the drawback of myomectomy. After a myomectomy, the likelihood of a subsequent procedure varies from 11% to 26%. (14, 15). Moreover, the necessity for a hysterectomy is increased by concomitant menstrual problems, uterovaginal prolapse, and a history of previous myomectomy. (16-18). Hysterectomy was preferred in this case as the patient desired symptom relief rather than fertility desire.

The most likely side effects of the removal of a prolapsed pedunculated leiomyoma vaginally are infection, severe pedicle bleeding, and uterine inversion from excess traction. [19]. For other purposes, hysterectomy is associated with a similar but somewhat higher postoperative morbidity. As anticipated, hospital stays following vaginal myomectomy are shorter than those following abdominal surgery. [20, 21]. No postoperative complications were noted in this case.

Conclusions

Regardless of its benignant nature, a large pedunculated submucous leiomyoma may present surgical ambiguities during a hysterectomy when vaginal prolapse and impaction co-exist. Factors such as parity, fertility desire, hemodynamic stability, fibroid size, mobility of fibroid in the vagina, visibility, and size of the stalk need to be evaluated when deciding on the choice of surgical procedures when the standard vaginal myomectomy can't be safely and easily done.

Recommendations

The management of a submucosal fibroid with vaginal prolapse should be evaluated carefully and surgical difficulties anticipated when a standard myomectomy cannot be done. A prolapsed fibroid size greater than 6cm with the invisibility of the fibroid stalk should warrant consideration of customized approaches, however, no single factor can independently predict the operation of choice and its outcomes.

Ethics approval and consent to participate

Not applicable

Consent for publication

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

Availability of data and materials

The authors will avail data upon request.

Funding

There was no financial assistance obtained for this case report.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

BI and IB were involved in the conception and design. IB provided supervision. BI, MR, and MJP in manuscript preparation. BI, IB, MR, MJ in manuscript review. The authors all read the final document and approved the manuscript to be published.

Acknowledgments

The authors wish to thank all staff of the Department of Obstetrics and Gynaecology at Hoima Regional Referral Hospital for their support in the preparation of this article.

References

1. Barbara L. Hoffman, John O. Schorge, Lisa M. Halvorson, Catherine A. Hamid, Marlene M. Corton, Joseph I. Schaffer.: Williams Gynecology, 4th Ed, McGraw-Hill Education.2020 pp 204-2012
2. Whitfield CR (ed) Dewhurst's textbook of obstetrics and gynecology for postgraduates, 5th Edition Blackwell, London, 1996, pp 739-746
3. Baird DD, Dunson DB, Hill MC, et al. High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence. *Am J Obstet Gynecol* 2003; 188:100? <https://doi.org/10.1067/mob.2003.99>
4. Al-Shukri M, Al-Ghafri W, Al-Dhuhli H, Gowri V. Vaginal Myomectomy for Prolapsed Submucous Fibroid: It is Not Only About Size. *Oman Med J*. 2019 Nov; 34 (6):556-559. <https://doi.org/10.5001/omj.2019>.
5. Thompson JD, Rock JA: Leiomyomata uteri and myomectomy. In: Telinde's Textbook Operative Gynecology, 9th edition. Lippincott-Raven, New York, USA, 2003, pp 256-261.
6. Dicker D, Feldberg D, Dekel A, et al. The management of prolapsed submucous fibroids. *Aust N Z J Obstet Gynaecol* 1986; 26:308. <https://doi.org/10.1111/j.1479-828X.1986.tb01595.x>
7. Cramer SF, Patel A. The frequency of uterine leiomyomas. *Am J Clin Pathol* 1990 Oct; 94(4):435-438. <https://doi.org/10.1093/ajcp/94.4.435>
8. Brooks, G. G., & Stage, A. H. The surgical management of prolapsed pedunculated submucous leiomyomas. *Surgery, gynecology & obstetrics*, 1975; 141(3), 397-398, 1162567
9. Hidayah, G. N., Harzif, A. K., Noviani, A., Tantry, H. P., Santoso, B. I., & Situmorang, H. Selecting the best surgical approach in various cases of prolapsed pedunculated submucosal fibroids: A case series. *International journal of surgery case reports*, 2023; 113, 109029. <https://doi.org/10.1016/j.ijscr.2023.109029>
10. Aydın S, Göksever Çelik H, Maraşlı M, Bakar RZ. "Clinical predictors of successful vaginal myomectomy for prolapsed pedunculated uterine leiomyoma". *J Turk Ger Gynecol Assoc*. 2018; 19(3): 146-150. <https://doi.org/10.4274/jtgga.2017.0135>
11. William H Parker: Uterine fibroids (leiomyomas): Prolapsed fibroids in: UpToDate Robert L Barbieri, Howard T Sharp(ed) Wolters Kluwer. <https://www.uptodate.com/contents/uterine->

- fibroids-leiomyomas-prolapsed-fibroids
Accessed on April 21, 2024.
12. Kjerulff KH, Langenberg PW, Rhodes JC, Harvey LA, Guzinski GM, Stolley PD. Effectiveness of hysterectomy. *Obstet Gynecol* 2000; 95: 319-26. [https://doi.org/10.1016/s0029-7844\(99\)00544-x](https://doi.org/10.1016/s0029-7844(99)00544-x)
 13. Borah BJ, Laughlin-Tommaso SK, Myers ER, Yao X, Stewart EA. Association Between Patient Characteristics and Treatment Procedure Among Patients with Uterine Leiomyomas. *Obstet Gynecol* 2016; 127: 67-77. <https://doi.org/10.1097/aog.0000000000001160>
 14. Malone LJ. Myomectomy: recurrence after removal of solitary and multiple myomas. *Obstet Gynecol* 1969; 34: 200-3. 5816311
 15. Acien P, Quereda F. Abdominal myomectomy: results of a simple operative technique. *Fertil Steril* 1996; 65: 41-51. [https://doi.org/10.1016/s0015-0282\(16\)58025-x](https://doi.org/10.1016/s0015-0282(16)58025-x)
 16. Lee DW, Gibson TB, Carls GS, Ozminkowski RJ, Wang S, Stewart EA. Uterine fibroid treatment patterns in a population of insured women. *Fertil Steril* 2009; 91: 566-74. <https://doi.org/10.1016/j.fertnstert.2007.12.004>
 17. Jacobson GF, Shaber RE, Armstrong MA, Hung YY. Changes in rates of hysterectomy and uterine conserving procedures for treatment of uterine leiomyoma. *Am J Obstet Gynecol* 2007; 196: 601. <https://doi.org/10.1016/j.ajog.2007.03.009>
 18. Stovall DW. Clinical symptomatology of uterine leiomyomas. *Clin Obstet Gynecol* 2001; 44: 364-71. <https://doi.org/10.1097/00003081-200106000-00022>
 19. Ben-Baruch G, Schiff E, Menashe Y, Menczer J. Immediate and late outcome of vaginal myomectomy for prolapsed pedunculated submucous myoma. *Obstet Gynecol* 1988; 72:858 <https://doi.org/10.1097/00006250-198812000-00009>
 20. Dicker D, Feldberg D, Dekel A, Yeshaya A, Samuel N, Goldman JA. The management of prolapsed submucous fibroids. *Aust NZ J Obstet Gynaecol* 1986; 26: 308-11. <https://doi.org/10.1111/j.1479-828x.1986.tb01595.x>
 21. Caglar GS, Tasci Y, Kayikcioglu F. Management of prolapsed pedunculated myomas. *Int J Gynaecol Obstet* 2005; 89: 146-7. <https://doi.org/10.1016/j.ijgo.2005.01.018>

PUBLISHER DETAILS:

Student's Journal of Health Research (SJHR)
(ISSN 2709-9997) Online
(ISSN 3006-1059) Print
Category: Non-Governmental & Non-profit Organization
Email: studentsjournal2020@gmail.com
WhatsApp: +256 775 434 261
Location: Scholar's Summit Nakigalala, P. O. Box 701432,
Entebbe Uganda, East Africa

