

Hysteroscopic Management of Myriad Submucosal Fibroids

Kavita Khoiwal*, Polaki Manisha, Vasundhara Yerkade, Jaya Chaturvedi

Department of Obstetrics and Gynaecology, AIIMS, Rishikesh, Uttarakhand, India

A 24-year-old unmarried female presented with irregular heavy menstrual bleeding for 4 years. She received multiple doses of mifepristone tablets for 6 months, followed by norethisterone 10 mg thrice a day for 3 months, and two doses of injection gonadotropin-releasing hormone agonist (GnRH agonist; leuprolide 3.75 mg) for the last 2 months. Despite this, there was no improvement in her symptoms. She had a history of multiple blood transfusions. On examination, she had mild pallor, and her vitals were stable. The uterus was enlarged for ≈ 14 weeks on abdominal examination. Ultrasonography was suggestive of multiple heteroechoic lesions arising from uterine myometrium, the largest of size $3.6 \text{ cm} \times 3.9 \text{ cm} \times 3.2 \text{ cm}$. Magnetic resonance imaging of the pelvis [Figure 1] was advised for fibroid mapping, suggesting a diffusely enlarged uterus with multiple fibroids, ≈ 30 in number, variably sized (largest $3.5 \text{ cm} \times 3.5 \text{ cm}$) in body and fundus of the uterus, in submucosal and intramural locations.

She was planned for a hysteroscopic myomectomy under general anesthesia. Consent was taken for a two-step procedure in view of multiple numbers (≈ 30), size $>3 \text{ cm}$ of largest fibroids, and Grade 2 fibroids. Hysteroscopy revealed multiple Grades 1 and 2 submucosal fibroids in anterior, posterior, and lateral uterine walls, distorting the endometrial cavity [Figure 2 and Video]. Hysteroscopic myomectomy was performed with a standard 10-mm resectoscope and bipolar loop electrocautery. Resection started from the most superficial intracavitary layer of the fibroid, with repetitive and progressive slicing, up to the myometrium (pinkish layer, bleeds easily). Most of the Grade 1 fibroids were removed, and a superficial cut was made over Grade 2 fibroids in a time span of 60 min. The procedure was stopped in view of multiple



Figure 1: T2 sagittal section image showing diffusely enlarged uterus with multiple variably sized uterine fibroids (approximately 30 in number) <http://www.apagemit.com/page/video/show.aspx?num=333&kind=2&page=1>

complexities (multiple uterine fibroids, large size, and Grade 2 fibroids) and to avoid fluid overload. The patient was reviewed after 6 weeks. She still had on-and-off episodes of vaginal bleeding. Ultrasonography in the outpatient department was suggestive of residual uterine fibroids. She was taken for a second sitting of hysteroscopic myomectomy under general anesthesia. On diagnostic hysteroscopy, multiple Grade 1 submucosal fibroids were seen, which were removed with the same technique described in the first sitting. All submucosal uterine fibroids were removed. The patient had an uneventful postoperative recovery. She resumed her normal menstrual cycles, and her symptoms subsided completely.

Article History:

Submitted: 06-Feb-2024

Revised: 02-May-2024

Accepted: 10-May-2024

Published: 13-Dec-2024

Access this article online

Quick Response Code:



Website:
<https://journals.lww.com/gmit>

DOI:
10.4103/gmit.gmit_14_24

Address for correspondence: Dr. Kavita Khoiwal,
Department of Obstetrics and Gynaecology, AIIMS, Rishikesh,
Uttarakhand, India.
E-mail: kavita.kh27@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Khoiwal K, Manisha P, Yerkade V, Chaturvedi J. Hysteroscopic management of myriad submucosal fibroids. *Gynecol Minim Invasive Ther* 2025;14:98-100.

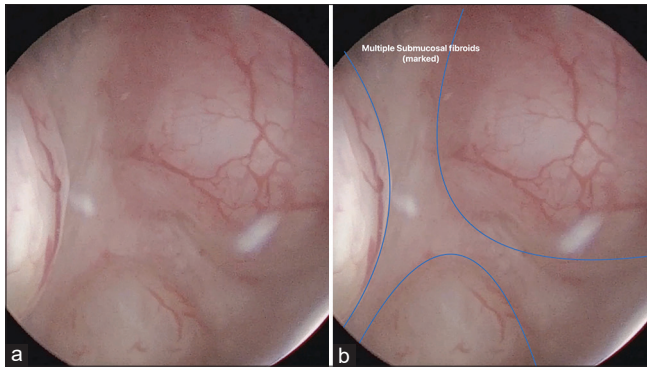


Figure 2: (a) Hysteroscopic image showing multiple submucosal fibroids; (b) Fibroids are demarcated with blue lines. The blue line is to demarcate the boundaries of different fibroids.

Submucous fibroids are prevalent in 5%–10% of cases and are mostly presented with menstrual symptoms.^[1] The European Society for Gynecological Endoscopy classified submucosal fibroids according to the proportion of the fibroid protruding into the uterine cavity (Grade 0-completely submucosal, Grade 1-mostly submucosal with <50% myometrial involvement, and Grade 2-with >50% myometrial involvement).^[2]

Hysteroscopic myomectomy is the gold standard management for submucosal fibroids. Bipolar resection is the most preferred technique.^[3,4] Its success depends on the number, grade, and size of the fibroids. Multiple submucosal fibroids, Grade 2, and larger fibroids (fibroids pose technical challenges during surgery).^[1,3,5,6] A two-step procedure is more promising in such cases to avoid fluid overload and intrauterine adhesions and ensures complete resection of fibroids.^[1,7,8]

Bettocchi *et al.*^[8] described a two-step hysteroscopic technique ($n = 59$) for symptomatic submucous fibroids >1.5 cm of Grades 1 and 2. The first step consists of an incision on the pseudo capsule of the fibroid to facilitate protrusion of the myometrial portion of the fibroid into the uterine cavity in an outpatient setting. These patients were then taken up for resectoscopic surgery with bipolar energy after 2 months in an inpatient setting. They found that 93% of fibroids were converted to Grade 0 or 1 and removed safely in the second sitting. We also followed the same technique and, therefore, could completely resect the fibroids in the second sitting without any complication. Our case was challenging due to the myriad number of fibroids.

Haimovich *et al.*^[1] documented a two-step hysteroscopic myomectomy in an outpatient setting without anesthesia ($n = 43$). However, the success reported was 79%, and 20% of cases required a third surgical procedure. Fibroids size >3 cm and/or located in the fundus or lateral walls were attributed to a higher failure rate than smaller

fibroids and those located in the anterior/posterior walls. Therefore, they recommended this technique in patients with submucosal fibroids of <3 cm in diameter and located in the anterior and/or posterior walls.

The use of the continuous wave laser in the hysteroscopic management of symptomatic submucous fibroids has also been described in the literature. However, its role is not well defined, and the results were based on a small population study.^[9]

The patient received GnRH agonists before the procedure, which is recommended for preoperative preparation before myomectomy to minimize intraoperative blood loss.^[10] We performed both procedures in an inpatient setting under anesthesia as the patient was not sexually exposed and was not willing for any vaginal procedure without anesthesia. In addition, the myriad number of fibroids with large sizes and Grade 2 variety were the compelling reasons for an inpatient two-step procedure. Our case is unique as the patient had 30 submucosal fibroids, which were successfully removed hysteroscopically. To the best of our knowledge, such a high number of submucosal fibroids has not yet been reported in the literature.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Author contributions

Khoiwal K - Case management, Manuscript writing/editing; Manisha P - Manuscript writing/editing; Yerkede V - Case management, Manuscript editing; Chaturvedi J - Manuscript editing, Expert guidance. All authors have read and agreed to the final version of the manuscript.

Data availability statement

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Haimovich S, Mancebo G, Alameda F, Agramunt S, Solé-Sedeno JM, Hernández JL, *et al.* Feasibility of a new two-step procedure for office hysteroscopic resection of submucous myomas: Results of a pilot study. *Eur J Obstet Gynecol Reprod Biol* 2013;168:191-4.
2. Camanni M, Bonino L, Delpiano EM, Ferrero B, Migliaretti G, Deltetto F. Hysteroscopic management of large symptomatic submucous

- uterine myomas. *J Minim Invasive Gynecol* 2010;17:59-65.
3. Piecak K, Milart P. Hysteroscopic myomectomy. *Prz Menopauzalny* 2017;16:126-8.
 4. Hoshino T, Yanagawa M, Matsubayashi AU, Yoshioka S. Useful technique for submucous myomectomy under direct transcervical resectoscope observation. *Gynecol Minim Invasive Ther* 2017;6:120-2.
 5. Maheux-Lacroix S, Mennen J, Arnold A, Budden A, Nesbitt-Hawes E, Won H, *et al.* The need for further surgical intervention following primary hysteroscopic morcellation of submucosal leiomyomas in women with abnormal uterine bleeding. *Aust N Z J Obstet Gynaecol* 2018;58:570-5.
 6. Polena V, Mergui JL, Perrot N, Poncelet C, Barranger E, Uzan S. Long-term results of hysteroscopic myomectomy in 235 patients. *Eur J Obstet Gynecol Reprod Biol* 2007;130:232-7.
 7. Di Spiezio Sardo A, Mazzon I, Bramante S, Bettocchi S, Bifulco G, Guida M, *et al.* Hysteroscopic myomectomy: A comprehensive review of surgical techniques. *Hum Reprod Update* 2008;14:101-19.
 8. Bettocchi S, Di Spiezio Sardo A, Ceci O, Nappi L, Guida M, Greco E, *et al.* A new hysteroscopic technique for the preparation of partially intramural myomas in office setting (OPPIuM technique): A pilot study. *J Minim Invasive Gynecol* 2009;16:748-54.
 9. Chen CH, Lee WL, Wang IT, Yen YK, Chiu LH, Tzeng CR, *et al.* Hysteroscopic myomectomy using a two-micron continuous wave laser (RevoLix). *Gynecol Minim Invasive Ther* 2013;2:89-92.
 10. Ito M, Yoshino O, Hiraoka T, Ono Y, Tanaka K, Iwahata S, *et al.* Oral gonadotropin-releasing hormone antagonist relugolix has the same effect as gonadotropin-releasing hormone agonist injections in terms of preparation for transcervical resection myomectomy. *Gynecol Minim Invasive Ther* 2022;11:238-41.