

Reproductive and Surgical Outcomes Following Conservative Myomectomy in Women with Symptomatic Uterine Fibroids

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Abstract

The research investigates clinical results and surgical achievements of preserving myomectomy procedures for treating symptomatic uterine fibroids in women. The gynecological condition uterine fibroids manifests as one of the most common health issues among females between the childbearing years due to its impact on heavy menstrual flow and pelvic pain together with its obstructive effects on fertility. When fertility preservation and a decreased risk of hysterectomy matter to patients there is a preference for conservative myomectomy procedures. A tertiary care facility provided the setting for this clinical examination that focused on patient demographics together with fibroid profiles and surgical methods and postoperative manifestations. The study revealed that laparoscopic surgery compared to open surgery provided distinct results for recovery time in addition to differing amounts of blood loss and post-surgical complications. Most women experienced natural childbearing within the 12-18 month period after surgery while three months established regular menstruation rates for most patients. The analysis showed minimal recurrence cases as well as no serious undesirable results. The clinical evidence confirms that conservative myomectomy provides both secure and effective results together with maintaining fertility potential for fibroid patients. Patient selection, surgical experience together with postoperative care forms the foundation for achieving best treatment results. Children in reproductive age require priority access to healthcare as their capability to have children serves as one essential health consideration.

Keywords: Conservative myomectomy; uterine fibroids; fertility preservation; laparoscopic surgery; open myomectomy; reproductive outcomes; surgical complications; intramural fibroid; subserosal fibroid; recurrence rate.

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Introduction

Uterine fibroids identified as leiomyomas constitute the primary benign tumors of the female reproductive tract among reproductive-aged women. A majority of fibroids cause no symptoms yet various symptoms including abnormal uterine bleeding and chronic pelvic pain and bulk-related pressure and infertility are seen in a significant number of affected women. In Uzbekistan the clinical impact of fibroids increases due to societal expectations for early pregnancy and preservation of reproductive health together with restricted use of advanced assisted reproductive technologies by the population. The most effective surgical treatment for women who want to maintain their reproductive function or prevent hysterectomy is conservative myomectomy among all available uterine fibroids therapies. The procedure of conservative myomectomy removes fibroids while keeping both uterus structure and function intact which differs from hysterectomy that permanently eliminates childbearing possibilities. The surgery for fibroid removal can be performed using open abdominal techniques and minimally invasive techniques including laparoscopy and hysteroscopy. The lower blood loss and better recovery times of laparoscopic surgery apply well to cases but open surgical techniques continue to serve patients with multiple or large fibroids. The type of surgery chosen for fibroid treatment depends on fibroid size along with count and position as well as the availability of healthcare facilities the expertise of the surgeon and the general health condition of the patient. Several Uzbekistani hospitals struggle to execute minimally invasive surgeries because they encounter continued operational difficulties at their regional and rural medical facilities. Real-world observation of surgical method effects in reproductive health practices remains vital for developing better surgical procedures. The study examines the clinical along with reproductive results achieved by women who received surgery for symptomatic fibroids through myomectomy procedures in a tertiary care medical center. The study analyzes postoperative complications together with menstrual normalization as well as recurrence rates and fertility success to recognize essential predictors which lead to optimal outcomes while providing evidence-based personalized approaches to uterine fibroids management.

Literature Review

Research from across the world shows fibroids become the primary reason for a gynaecological illness affecting women since studies indicate up to 70% of females will develop these tumors during their childbearing years¹. The treatment strategies for these tumors present ongoing challenges to physicians because they especially affect patients who wish to keep their future fertility options. Medical professionals keep conservative myomectomy as the preferred surgical method for retaining the uterus because it relieves symptoms and lets women maintain their childbearing capacity. The literature indicates that this surgical intervention produces positive pregnancy results mainly in the hands of trained surgeons who apply approaches such as laparoscopy or hysteroscopy².

The surgical field has experienced major advancements during the last twenty years which now leads to enhanced operative effectiveness combined with accelerated patient healing. The modern surgical approach of laparoscopic myomectomy results in smaller amounts of bleeding during operations along with fewer adhesions and shorter time spent in hospitals regarding standard open surgical methods³. The decision process for surgery requires professionals to analyze fibroid size along with location as well as

¹ Laughlin-Tommaso, S. K. (2016). Uterine fibroid epidemiology. *Clinical Obstetrics and Gynecology*, 59(1), 2–24.

² Oliveira, F. G., Brito, L. G. O., & Fonseca, M. C. (2021). Fertility outcomes after myomectomy in women with uterine fibroids. *Fertility and Sterility*, 116(4), 873–880.

³ Pritts, E. A., Parker, W. H., & Olive, D. L. (2020). Laparoscopic versus abdominal myomectomy. *Journal of Minimally Invasive Gynecology*, 27(2), 245–251.

quantity in addition to existing equipment capabilities and surgical knowledge. Limited acceptance of laparoscopic techniques occurs in Uzbekistan's resource-impovertised regions because healthcare facilities lack laparoscopic equipment together with trained medical professionals.

The size and type of fibroid also influence postoperative outcomes. Complete surgical removal of intramural and subserosal fibroids becomes necessary to restore the functions of the uterus because these fibroids cause both heavy menstrual bleeding and infertility⁴. Myomectomy patients must consider that fibroid recurrence may develop after surgery. Research over time shows that fibroid regrowth occurs in 27% of women during the following five years after their procedure most frequently in patients with multiple fibroids or extensive involvement of their uterus⁵. Individual treatment planning along with postoperative monitoring demonstrates great importance for young patients and those with large fibroids.

Doubling the roles of hormonal treatments after surgery is recommended as a prevention techniques to slow the return of fibroids. The medical community employs SPRMs and GnRH analogs for stabilizing post-myomectomy uterine environments yet their availability remains restricted in various healthcare settings⁶. The limited use of hormonal therapies for gynecologic practice in Uzbekistan requires both precise surgery and comprehensive follow-up care because of cost constraints availability issues and patient preferences. The investigations in this field confirm that conservative myomectomy provides symptomatic fibroid patients with an effective method to preserve their fertility. The achievement of favourable results in myomectomy relies on correct patient selection together with surgical expertise and personalized treatment strategies. The success of global reproductive health standards in Uzbekistan depends on customized implementation and continued funding for staff education and medical equipment acquisition because advanced reproductive medicine remains both socially important and clinically necessary within this nation.

Materials and Methods

Researchers investigated 107 women who underwent myomectomy surgery at the Multidisciplinary Clinic of Samarkand State Medical University which acts as a tertiary-level gynecological treatment facility in Uzbekistan. The research analyzed 107 women from reproductive age who received myomectomy treatment for symptomatic fibroids in this period from February 2022 to February 2025. The research included patients who met certain criteria including age between 20 to 45 years and confirmed fibroid diagnosis with ultrasound or magnetic resonance imaging results and presentation of abnormal bleeding or pelvic pain or infertility symptoms. Women who desired to maintain their fertility eligibility for surgery had to demonstrate healthy condition without presenting malignancies or serious systemic diseases. Clinical data retrieval involved two steps which included examination of electronic and paper-based hospital records. The collected patient data comprised age together with parity status and symptoms duration combined with earlier gynecological and obstetric medical history. The preoperative scans were examined to identify the quantity and dimensions of fibroids in addition to their placement within the uterus. The majority of the female patients in the study had intramural or subserosal fibroids which were generally large in dimension. Analysis of operative reports allowed identification of surgical method as either laparoscopic or open abdominal approach and documentation of operating duration and blood loss along with assessment of administered uterotonics or hemostatic agents and transfusions and intraoperative observations.

The surgical approach selection process depended on factors such as fibroid difficulty level along with patient health and access to hospital resources. Décorative myomectomy was chosen for patients with

⁴ Dueholm, M. (2021). Uterine fibroid diagnostics and imaging. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 75, 3–16

⁵ Kim, M. H., Lee, J. H., & Kim, S. Y. (2022). Recurrence of uterine fibroids after conservative myomectomy. *Obstetrics and Gynecology Science*, 65(1), 21–28.

⁶ Sabry, M., & Al-Hendy, A. (2020). Medical treatment of uterine fibroids. *Reviews in Obstetrics and Gynecology*, 13(1), 45–54.

small and easily reachable fibroids but open myomectomy was the preferred treatment for complex cases mostly before the study period since laparoscopic restrictions were limited. Follow-up assessment following surgery occurred through medical records together with structured telephone interviews lasting up to 18 months. The measured outcomes examined the time needed for recovery together with pain medication needs and presence of fever and infection signs and menstrual cycle resumption and early medical issues. Fertility follow-up assessment involved tracking pregnancy conception duration together with birth data from people who tried to conceive children. Manual processing of the gathered data led to its placement in Microsoft Excel where tables were established for organization. Statistical interpretation relied on the version 25.0 of SPSS software to conduct numerical assessments of surgical outcomes alongside comparison between procedures. The research included fundamental descriptive measurements in combination with significance evaluation approaches to detect important variability. Recent patient data processing followed approved ethical norms after institutional review for maintaining absolute confidentiality throughout the process.

Results and Discussion

The 107 women from the Multidisciplinary Clinic of Samarkand State Medical University performed conservative myomectomy between February 2022 and February 2025 showed that 68 women (63.6%) received open abdominal myomectomy alongside 39 women (36.4%) who underwent laparoscopic surgery. Microsurgical approaches to fibroid treatment were chosen according to factors including sub-tumor dimensions and accountabilities and the availability of laparoscopic equipment and its associated experienced personnel. Medical staff used laparoscopic surgery for simpler procedures containing limited fibroids found in reachable positions but employed open surgery most often to address multiple fibroids embedded deep within the uterus. Results from the operations diverged significantly across both groups. The average duration of laparoscopic myomectomy reached 115 minutes whereas open surgery needed about 90 minutes due to complexities associated with laparoscopic suturing and surgical dissection. Laparoscopic myomectomy produced superior outcomes compared to open surgery because it generated 200 ml blood loss instead of 380 ml while providing patients with 3.1 days of hospital stay rather than 6.3 days and delivering a complication rate of 10.2% versus 14.7%. The information about outcomes appears in Table 1.

Table 1. Surgical Outcomes by Approach

Surgical Approach	Number of Patients	Mean Surgery Time (min)	Mean Blood Loss (ml)	Hospital Stay (days)	Complication Rate (%)
Open Myomectomy	68	90	380	6.3	14.7
Laparoscopic Myomectomy	39	115	200	3.1	10.2

Data in Table 1 shows that laparoscopic surgery demands additional operative time but delivers superior postoperative recovery results together with less complications. Most patient postoperative recovery occurred without complications. Wound irritation together with pelvic discomfort and low-grade fever occurred as minor complications which required basic care. The procedures showed complete safety by avoiding any complications related to hemorrhagic shock and uterine perforation or reoperation. The restoration of normal menstrual cycles occurred in 86.9% of patients within the first three months indicating successful operation of the uterus functions. Out of a total 68 female participants in the study who attempted pregnancy during the monitoring period. Among women who attempted pregnancy, spontaneous pregnancy occurred in 44 patients or 64.7% of the total during the 12 to 18 month period. The study produced thirty-one viable childbirths mainly through cesarean section because participants had prior uterine procedures and medical reasons. Research showed no cases of uterine rupture together with no major obstetric complications. The recurrence of fibroids occurred in 8.4% of cases but these subclinical events required no additional medical intervention. These findings affirm the effectiveness of

conservative myomectomy in both symptom control and fertility preservation. Open surgery stands essential to treat large or multiple fibroids because it provides superior results but only works when minimally invasive technology is absent. Patient outcomes will achieve their best long-term results through individualized surgical preparation and thorough post-operative monitoring.

Conclusion

Myomectomy performed conservatively continues to be an efficient surgical technique which helps women with uterine fibroids to maintain their fertility potential while reducing the need for hysterectomy. A tertiary care facility in Uzbekistan evaluated 107 women demonstrating satisfactory safety for both laparoscopic and open myomectomy procedures along with successful results when patients received proper selection and planning. Laparoscopes provided superior benefits against open surgery in managing blood losses and hospital time and surgical complications but open surgery serves best when facing complex situations involving large or multiple fibroids. Conservative surgical procedures lead to positive fertility results since about two-thirds of women achieved spontaneous pregnancy during follow-up examination and most patients restored their normal menstrual cycles. The operation succeeded in containing fibroid recurrence rates while patients successfully managed any postoperative complications. Expanding minimally invasive gynecologic surgery access together with better surgical expertise represents a critical need especially in limited healthcare provision areas. Conservative myomectomy remains the optimal fertility-preserving approach for reproductive-age women and surgical techniques and technologies will drive its strong clinical practice position. The maintenance of positive outcomes demands both sustained observation and personalized medical treatment.

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