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Original Research Article

LAPAROSCOPIC VERSUS OPEN MYOMECTOMY FOR LARGE FIBROIDS: PERIOPERATIVE OUTCOMES AND SHORT-TERM RECOVERY

Juhi Gupta[1], Poonam Bhojwani[2], Deepika Nagarwal[3]

[1]Assistant Professor, Department of Obstetrics and Gynecology, National Institute of Medical Sciences and Research (NIMS University), Jaipur, India.
[2]Associate Professor, Department of Obstetrics and Gynecology, National Institute of Medical Sciences and Research (NIMS University), Jaipur, India.
[3]Assistant Professor, Department of Obstetrics and Gynecology, National Institute of Medical Sciences and Research (NIMS University), Jaipur, India.

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Corresponding Author:
Dr. Juhi Gupta,
Assistant Professor, Department of Obstetrics and Gynecology, National Institute of Medical Sciences and Research (NIMS University), Jaipur, India
Email: drjuhigoyal@gmail.com

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ABSTRACT

Background: Uterine fibroids are among the most common benign gynecologic tumors, frequently requiring surgical removal when associated with significant symptoms. Myomectomy remains the standard fertility-preserving treatment, and with advances in minimally invasive surgery, laparoscopic myomectomy has become an increasingly favored option. However, its safety and effectiveness for large fibroids continue to be debated, particularly in resource-limited tertiary care settings. Evaluating perioperative outcomes and early recovery can help determine the optimal surgical approach for women with large symptomatic fibroids. **Aim:** To compare perioperative outcomes and short-term postoperative recovery between laparoscopic myomectomy (LM) and open myomectomy (OM) in women presenting with large uterine fibroids at a tertiary care hospital.

Materials and Methods: This comparative observational study included 84 women, with 42 undergoing LM and 42 undergoing OM. Only women with symptomatic intramural, subserosal, or transmural fibroids ≥7 cm were included. Preoperative assessment included clinical evaluation and imaging to document fibroid characteristics. Operative variables analyzed were operative time, blood loss, intraoperative complications, and need for transfusion. Postoperative outcomes assessed included hemoglobin drop, pain scores, time to bowel recovery, ambulation, hospital stay, and short-term complications.

Results: Laparoscopic myomectomy was associated with significantly lower blood loss (148.57 ± 40.44 vs. 260.21 ± 52.36 mL; $p < 0.001$), lower hemoglobin drop (1.09 ± 0.34 vs. 1.82 ± 0.48 g/dL; $p < 0.001$), and reduced transfusion requirements (2.38% vs. 14.29%; $p = 0.04$). Although operative time was longer in LM (128.62 ± 18.24 vs. 112.31 ± 20.15 minutes; $p < 0.001$), postoperative recovery was significantly faster, with earlier ambulation, quicker return of bowel sounds, and shorter hospital stay (1.76 ± 0.42 vs. 4.24 ± 0.71 days; $p < 0.001$). Regression analysis identified surgical approach, blood loss, operative time, fever, and hemoglobin drop as significant predictors of hospital stay.

Conclusion: Laparoscopic myomectomy offers superior perioperative and short-term recovery outcomes compared to open myomectomy for large fibroids, despite longer operative duration. It is a safe and effective approach in appropriately selected patients and should be considered the preferred surgical option in tertiary care settings.

Keywords: Laparoscopic myomectomy, Open myomectomy, Large fibroids, Perioperative outcomes, Postoperative recovery.

INTRODUCTION

Uterine fibroids are the most common benign tumors of the female reproductive tract and represent a major cause of gynecologic morbidity worldwide. They are often diagnosed during the reproductive years and may be present in up to 70–80% of women by the age of 50, although only a subset become clinically significant.[1,2] Symptomatic fibroids can lead to heavy menstrual bleeding, anemia, pelvic pressure, chronic pelvic pain, subfertility, and adverse pregnancy outcomes, all of which substantially impair quality of life and impose a considerable economic and healthcare burden.[1,3] Population-based data demonstrate both a high cumulative incidence of uterine leiomyomas and marked racial and ethnic disparities, with Black women affected earlier, more severely, and more frequently than White women.[2] These patterns highlight uterine fibroids as a major public health issue rather than a purely surgical diagnosis. The burden of fibroid-related symptoms extends beyond physical health to social and occupational functioning. Downes et al. reported that women with fibroids in five European countries experienced higher rates of work absenteeism, impaired productivity, and increased healthcare utilization compared with controls, underscoring the societal costs of this condition.[1] Heavy menstrual bleeding requiring iron therapy or transfusion, recurrent clinic visits, and repeated imaging further amplify resource use. In many low- and middle-income settings, women often present late with large uteri and multiple fibroids, partly because of limited access to screening and specialist gynecologic services, which makes the choice of optimal surgical management even more critical. Management of symptomatic fibroids depends on symptom severity, fibroid size, number and location, patient age, comorbidities, and fertility desire.[3] Medical therapies (such as gonadotropin-releasing hormone analogues, selective progesterone receptor modulators, and newer oral GnRH antagonists) can provide temporary symptom control, but are often limited by cost, side-effects, and symptom recurrence after discontinuation.[3,4] Uterine-sparing procedural options include myomectomy via various routes (hysteroscopic, laparoscopic, mini-laparotomic, or open abdominal), uterine artery embolization, and more recently radiofrequency ablation.[3,4] Among these, myomectomy remains the standard fertility-preserving surgical treatment when durable symptom relief and uterine conservation are desired.[3] Epidemiologic and clinical reviews emphasize that, as women increasingly delay childbearing and seek uterus-sparing approaches, the demand for myomectomy has grown steadily.[3,4] ACOG and other professional societies explicitly recommend myomectomy as an appropriate option for women with symptomatic leiomyomas who desire uterine preservation or future pregnancy, and further note that a minimally invasive approach should be considered whenever feasible.[4] This guidance reflects accumulating evidence that minimally invasive myomectomy offers important advantages over traditional open abdominal myomectomy for selected patients, particularly in terms of postoperative recovery and perioperative morbidity. Laparoscopic myomectomy (LM) has therefore emerged as a preferred technique for many women with intramural or subserosal fibroids, offering smaller incisions, reduced postoperative pain, faster mobilization, and shorter hospital stays compared with open myomectomy (OM).[3,5] However, the adoption of LM for large fibroids remains debated. Concerns include longer operative times, increased technical complexity, the need for advanced laparoscopic suturing skills, potential limitations on the number or size of fibroids that can be safely removed, and ongoing discussions around morcellation techniques.[5] Observational data and randomized studies suggest that, despite longer operating times, LM is associated with less intraoperative blood loss, lower analgesic requirements, and more rapid convalescence than open procedures, but these benefits may be attenuated in cases with very large or numerous fibroids.[5,6]

MATERIALS AND METHODS

This comparative observational study was conducted at a tertiary care hospital, evaluating perioperative outcomes and short-term recovery following laparoscopic and open myomectomy in women presenting with large uterine fibroids. Eligible patients were allocated into two groups based on the surgical approach performed: the laparoscopic myomectomy (LM) group and the open myomectomy (OM) group. A total of 84 women were included, with 42 patients in each group. All procedures were performed by consultant gynecologic surgeons experienced in minimally invasive and open uterine surgery.

Methodology

All women diagnosed with symptomatic uterine fibroids requiring surgical removal were screened for eligibility. Inclusion criteria comprised reproductive-age women with intramural, subserosal, or transmural fibroids ≥7 cm in largest diameter confirmed on transvaginal or pelvic ultrasonography or MRI. Patients were included if they elected surgical management and were medically fit for anesthesia. Exclusion criteria consisted of suspected or confirmed malignancy, coexisting pelvic pathology requiring additional major procedures, significant cardiopulmonary comorbidities precluding laparoscopy, previous extensive abdominal surgery leading to severe adhesions, and cases converted from laparoscopy to open surgery.

Preoperative Assessment

All patients underwent a standardized preoperative evaluation including detailed history, physical and pelvic examination, hemoglobin and hematocrit

measurement, coagulation profile, renal function tests, and imaging studies documenting fibroid number, size, and location. Preoperative optimization included anemia correction when necessary and counseling regarding the surgical route, potential risks, and expected postoperative course. Prophylactic antibiotics and thromboembolism prevention protocols were applied according to hospital guidelines.

Surgical Technique

Laparoscopic myomectomy was performed under general anesthesia using a standard multiport technique. Uterine manipulators were routinely used, and vasopressin was injected into the myometrium to minimize blood loss. Fibroids were enucleated through a serosal incision, and the myometrial defect was repaired in multiple layers using barbed or delayed-absorbable sutures. Specimens were removed via contained morcellation. Open myomectomy was performed through a Pfannenstiel or midline incision depending on uterine size and surgeon preference. Myometrial defects were repaired in layers following fibroid enucleation. Hemostasis was achieved with electrosurgery, compression sutures, and uterotonics as needed in both groups.

Perioperative and Postoperative Management

All patients received standardized perioperative monitoring. Intraoperative parameters included estimated blood loss, operative time, intraoperative complications, and need for blood transfusion. Postoperative management followed enhanced recovery protocols. Patients were encouraged to ambulate early, and pain control was provided using a multimodal analgesic regimen. Postoperative parameters assessed included hemoglobin drop, postoperative pain scores, need for additional analgesia, return of bowel function, time to ambulation, duration of hospital stay, febrile morbidity, wound-related complications, and readmission within 30 days. Short-term recovery was evaluated during follow-up visits by assessing return to daily activities, subjective pain improvement, and early postoperative complications.

All clinical, operative, and postoperative data were recorded prospectively on standardized forms and later verified through hospital electronic records. Fibroid characteristics such as number, type, and largest dimension were documented from preoperative imaging and operative findings. Outcomes were anonymized prior to entry into the data analysis software to ensure patient confidentiality.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics version 26.0. Continuous variables were expressed as mean ± standard deviation or median with interquartile ranges, depending on distribution assessed through the Shapiro–Wilk test. Categorical variables were presented as frequencies and percentages. Comparisons between the laparoscopic and open groups were performed using the independent samples t-test or Mann–Whitney U test for continuous variables, and the chi-square or Fisher's exact test for categorical variables. A p-value of <0.05 was considered statistically significant, and all tests were two-tailed.

RESULTS

Table 1: Baseline Characteristics

The baseline demographic and clinical characteristics of the two groups were comparable. The mean age of patients in the laparoscopic myomectomy (LM) group was 33.45 ± 4.82 years, while that of the open myomectomy (OM) group was 34.12 ± 5.10 years, with no statistically significant difference ($p = 0.52$). Similarly, BMI values were comparable between the LM (26.18 ± 2.90 kg/m²) and OM groups (26.85 ± 3.12 kg/m²), with no significant difference ($p = 0.38$). Parity distribution showed that 42.86% of LM patients and 47.62% of OM patients had parity ≥1, which was not statistically different ($p = 0.66$). Prior pelvic surgery was reported in 14.29% of LM cases and 16.67% of OM cases ($p = 0.76$), indicating a similar past surgical risk profile. The mean largest fibroid size (LM: 8.74 ± 1.12 cm vs. OM: 8.81 ± 1.25 cm; $p = 0.79$) and the mean number of fibroids (LM: 2.38 ± 1.14 vs. OM: 2.51 ± 1.22; $p = 0.61$) were also statistically comparable between the two groups. These findings confirm that both groups were homogenous at baseline, enabling a fair comparison of surgical and postoperative outcomes.

Table 2: Intraoperative Outcomes

Significant differences were observed in intraoperative parameters between the two surgical approaches. The mean operative time was significantly longer in the LM group (128.62 ± 18.24 minutes) compared to the OM group (112.31 ± 20.15 minutes), with a highly significant p-value (<0.001). Despite longer operative duration, the laparoscopic approach resulted in substantially lower estimated blood loss (148.57 ± 40.44 mL) compared to the open approach (260.21 ± 52.36 mL), also highly significant ($p < 0.001$). Intraoperative complication rates were low in both groups, occurring in 4.76% of LM cases and 11.90% of OM cases, although the difference was not statistically significant ($p = 0.23$). However, blood transfusion was significantly more frequent in patients undergoing open myomectomy (14.29%) compared to the laparoscopic group (2.38%), with a p-value of 0.04. Importantly, no laparoscopic case required conversion to open surgery, indicating feasibility and safety of the minimally invasive technique for large fibroids in this cohort.

Table 3: Postoperative Outcomes

Postoperative outcomes strongly favored the laparoscopic approach. The mean hemoglobin drop was significantly lower in the LM group (1.09 ± 0.34 g/dL) compared with OM (1.82 ± 0.48 g/dL), indicating reduced surgical trauma and blood loss ($p < 0.001$). Pain scores at 24 hours post-surgery were

significantly lower in the LM group (3.21 ± 0.78) compared to OM (5.14 ± 1.02), with $p < 0.001$, demonstrating clear analgesic and recovery benefits of laparoscopy. Functional recovery parameters also showed significant differences: return of bowel sounds occurred earlier in LM patients (8.62 ± 2.15 hours) compared to OM patients (14.48 ± 3.26 hours), while time to ambulation was notably shorter in LM (9.43 ± 2.81 hours) than OM (18.29 ± 4.10 hours), both with $p < 0.001$. Postoperative fever was more frequent in the OM group (16.67%) than in the LM group (7.14%), but the difference did not reach statistical significance ($p = 0.18$). Overall, laparoscopic myomectomy demonstrated superior early postoperative recovery.

Table 4: Recovery and Hospital Stay

Recovery indicators showed marked advantages in favor of laparoscopic surgery. The mean duration of hospital stay was significantly shorter for LM patients (1.76 ± 0.42 days) compared to OM patients (4.24 ± 0.71 days), with a highly significant relationship ($p < 0.001$). Wound infection occurred in only 2.38% of LM patients, while it was noted in 14.29% of OM cases, showing a statistically significant difference ($p = 0.04$), reflecting the reduced wound exposure in minimally invasive surgery. Readmission within 30 days was slightly higher in the OM group (7.14%) compared to the LM group (2.38%), although the difference was not statistically significant ($p = 0.30$). Return to normal daily activities occurred much faster after laparoscopic surgery, with LM patients resuming routine activities in 10.81 ± 2.19 days versus 19.48 ± 3.62 days in the OM group ($p < 0.001$). These results clearly emphasize that laparoscopic myomectomy significantly enhances short-term postoperative recovery and reduces morbidity.

Table 5: Multiple Linear Regression Analysis for Predictors of Postoperative Hospital Stay

Multiple regression analysis identified several independent predictors of prolonged hospital stay. Surgical approach was the strongest predictor, with open myomectomy associated with a significantly longer hospital stay ($\beta = 2.48$, $p < 0.001$), confirming the robust impact of surgical technique on recovery. Increased estimated blood loss was also a significant predictor; for every 100 mL increase in blood loss, hospital stay increased by 0.42 days ($p = 0.004$). Longer operative time contributed modestly but significantly, with each additional 10 minutes of surgery increasing hospital stay by 0.11 days ($p = 0.03$). Clinical complications such as postoperative fever strongly predicted prolonged stay ($\beta = 0.94$, $p = 0.002$). Hemoglobin drop was another significant predictor, with greater drops being associated with longer recovery ($\beta = 0.58$, $p = 0.03$). In contrast, patient age and BMI did not significantly influence hospital stay ($p = 0.32$ and $p = 0.44$, respectively). The model explained 61% of the variance in hospital stay ($R^2 = 0.61$), with an adjusted R^2 of 0.57, and the overall model was highly significant ($p < 0.001$). These findings demonstrate that both surgical and physiological factors contribute to recovery duration, but the type of surgical approach remains the most influential determinant.

Table 1: Baseline Characteristics of Patients Undergoing Laparoscopic vs. Open Myomectomy (n = 84)

Variable	Laparoscopic Myomectomy (LM) n=42	Open Myomectomy (OM) n=42	p-value
Mean Age (years)	33.45 ± 4.82	34.12 ± 5.10	0.52
BMI (kg/m²)	26.18 ± 2.90	26.85 ± 3.12	0.38
Parity ≥1	18 (42.86%)	20 (47.62%)	0.66
Prior Pelvic Surgery	6 (14.29%)	7 (16.67%)	0.76
Mean Largest Fibroid Size (cm)	8.74 ± 1.12	8.81 ± 1.25	0.79
Mean Number of Fibroids	2.38 ± 1.14	2.51 ± 1.22	0.61

Table 2: Intraoperative Outcomes

Parameter	LM (n=42)	OM (n=42)	p-value
Mean Operative Time (min)	128.62 ± 18.24	112.31 ± 20.15	<0.001*
Estimated Blood Loss (mL)	148.57 ± 40.44	260.21 ± 52.36	<0.001*
Intraoperative Complications	2 (4.76%)	5 (11.90%)	0.23
Blood Transfusion Required	1 (2.38%)	6 (14.29%)	0.04*

Table 3: Postoperative Outcomes

Parameter	LM (n=42)	OM (n=42)	p-value
Hemoglobin Drop (g/dL)	1.09 ± 0.34	1.82 ± 0.48	<0.001*
Mean Pain Score at 24 hrs (VAS)	3.21 ± 0.78	5.14 ± 1.02	<0.001*
Return of Bowel Sounds (hours)	8.62 ± 2.15	14.48 ± 3.26	<0.001*
Time to Ambulation (hours)	9.43 ± 2.81	18.29 ± 4.10	<0.001*
Postoperative Fever	3 (7.14%)	7 (16.67%)	0.18

Table 4: Recovery and Hospital Stay

Parameter	LM (n=42)	OM (n=42)	p-value
Mean Hospital Stay (days)	1.76 ± 0.42	4.24 ± 0.71	<0.001*
Wound Infection	1 (2.38%)	6 (14.29%)	0.04*
Readmission within 30 days	1 (2.38%)	3 (7.14%)	0.30
Return to Normal Activities (days)	10.81 ± 2.19	19.48 ± 3.62	<0.001*

Table 5: Multiple Linear Regression Analysis for Predictors of Postoperative Hospital Stay
Dependent Variable: Duration of Hospital Stay (days)

Predictor Variable	β Coefficient	Standard Error	95% Confidence Interval	p-value
Surgical Approach (LM = 0, OM = 1)	2.48	0.31	1.87 – 3.09	<0.001*
Estimated Blood Loss (per 100 mL increase)	0.42	0.14	0.14 – 0.70	0.004*
Operative Time (per 10 min increase)	0.11	0.05	0.01 – 0.21	0.03*
Postoperative Fever (No = 0, Yes = 1)	0.94	0.29	0.36 – 1.52	0.002*
Hemoglobin Drop (g/dL)	0.58	0.26	0.06 – 1.10	0.03*
Age (years)	0.02	0.02	−0.02 – 0.06	0.32
BMI (kg/m²)	0.03	0.04	−0.05 – 0.11	0.44

Model Summary: $R^2 = 0.61$, Adjusted $R^2 = 0.57$, Overall Model $p < 0.001$*

DISCUSSION

The present study compared laparoscopic and open myomectomy in a well-matched cohort of women with large fibroids, allowing a fair assessment of perioperative and short-term recovery outcomes. The two groups were comparable in age (33.45 ± 4.82 vs 34.12 ± 5.10 years), BMI (26.18 ± 2.90 vs 26.85 ± 3.12 kg/m²), parity and prior pelvic surgery, as well as fibroid size (8.74 ± 1.12 vs 8.81 ± 1.25 cm) and number (2.38 ± 1.14 vs 2.51 ± 1.22). This mirrors the baseline similarity reported by Anusha and Reddy, who in a prospective cohort of 120 women found no significant differences in age (31.8 vs 32.5 years), BMI (24.6 vs 25.1 kg/m²), parity or previous abdominal surgery between laparoscopic and open myomectomy groups, thereby supporting that differences in outcomes are attributable to the surgical route rather than patient selection.[7]

Intraoperatively, we observed a significantly longer operative time with laparoscopic myomectomy (128.62 ± 18.24 vs 112.31 ± 20.15 minutes) but markedly lower estimated blood loss (148.57 ± 40.44 vs 260.21 ± 52.36 mL) and fewer transfusions (2.38% vs 14.29%). These findings closely align with the systematic review and meta-analysis by Chen et al., which pooled 12 RCTs (1783 women) and showed that laparoscopic myomectomy is associated with significantly reduced blood loss (mean difference −29.78 mL), shorter postoperative ileus (−10.91 hours) and shorter hospital stay (−1.57 days), at the expense of a longer operative time (+16.10 minutes) compared with abdominal myomectomy.[8] Notably, the magnitude of operative time prolongation in our cohort (~16 minutes) is almost identical to that meta-analytic estimate, whereas the reduction in blood loss in our large-fibroid population (difference ≈111 mL) is more pronounced, suggesting that the hemostatic advantages of laparoscopy may be particularly important when dealing with bulky uteri.

Postoperative blood loss and pain outcomes in our study further favored laparoscopy: the mean hemoglobin drop was 1.09 ± 0.34 g/dL in the laparoscopic group versus 1.82 ± 0.48 g/dL after open myomectomy, and 24-hour pain scores were substantially lower (VAS 3.21 ± 0.78 vs 5.14 ± 1.02). Holzer et al., in a prospective double-blind trial of 40 women comparing laparoscopic and open myomectomy, also demonstrated significantly lower postoperative pain scores up to 72 hours after surgery in the laparoscopic group, despite similar baseline characteristics.[9] Our VAS difference of nearly 2 points at 24 hours is consistent with this study and supports the concept that reduced incision size and tissue trauma contribute both to less hemoglobin decline and a clinically meaningful reduction in early postoperative pain.

Recovery of bowel function and early mobilization were markedly better after laparoscopy in our cohort, with earlier return of bowel sounds (8.62 ± 2.15 vs 14.48 ± 3.26 hours) and shorter time to ambulation (9.43 ± 2.81 vs 18.29 ± 4.10 hours). The incidence of postoperative fever was lower after laparoscopy (7.14% vs 16.67%), although this difference did not reach statistical significance. These patterns are in line with the Cochrane review by Bhave Chittawar et al., which found that minimally invasive myomectomy is associated with significantly lower early postoperative pain, about a 50% reduction in postoperative fever (OR 0.44), and a shorter hospital stay compared with open myomectomy.[10] Our data extend those findings by quantifying the functional benefits in terms of bowel recovery and mobilization, which are key elements of enhanced recovery protocols.

Hospital stay and convalescence outcomes in this study strongly favored laparoscopic myomectomy, with mean length of stay of 1.76 ± 0.42 days versus 4.24 ± 0.71 days and earlier return to normal activities (10.81 ± 2.19 vs 19.48 ± 3.62 days). Wound infection was also significantly less frequent (2.38% vs 14.29%). These results are particularly notable given that our cohort included large fibroids (≥7 cm). Seracchioli et al., in a randomized trial of women with large myomata, reported that laparoscopic myomectomy yielded comparable fertility and obstetric outcomes to abdominal myomectomy but with shorter hospitalization and better early recovery, despite longer operating times.[11] Taken together, these data suggest that for appropriately selected women with large fibroids, laparoscopy confers substantial perioperative and recovery benefits without compromising reproductive potential.

Our complication profile and conversion rate further support the safety of laparoscopic myomectomy in this setting. Intraoperative complications were low and comparable (4.76% in LM vs 11.90% in OM, p = 0.23), with no conversions from laparoscopy to open and fewer postoperative wound infections and readmissions in the laparoscopic group. Tamang's

comprehensive review of comparative studies between laparoscopic and open myomectomy similarly concluded that laparoscopy is associated with less intraoperative blood loss, shorter hospital stay, lower postoperative pain, and generally fewer complications, while noting that operative time may be longer and that conversion risk rises with larger or multiple myomas and less experience.[12] Our absence of conversions and low complication rates likely reflect stringent case selection (fibroids ≥7 cm but limited co-pathology) and performance by experienced surgeons in a tertiary centre.

The multiple linear regression analysis in our study showed that surgical approach was the strongest independent predictor of hospital stay (β = 2.48 days longer for open surgery), followed by estimated blood loss, operative time, postoperative fever and hemoglobin drop, whereas age and BMI were not significant. This pattern underscores that factors reflecting surgical trauma and perioperative morbidity drive prolonged hospitalization more than baseline demographics. A similar emphasis on procedural and myoma-related factors emerges from the work of de la Cruz et al., who examined "Size, type and location of myoma as predictors for successful laparoscopic myomectomy" and found that increasing myoma size was associated with longer operative time and greater postoperative hemoglobin drop, and that posteriorly located myomas were linked to higher blood loss.[13] Our findings complement theirs by demonstrating, via multivariable modelling, that the downstream clinical consequence of greater intraoperative blood loss and postoperative fever is a quantifiable prolongation of hospital stay.

Case selection and surgical expertise are central to optimizing outcomes after laparoscopic myomectomy. Our cohort, with mean fibroid size around 8.8 cm and mean number of fibroids about 2.5 in both groups, fits within the upper range of complexity where laparoscopy remains feasible. Contemporary evidence syntheses of laparoscopic myomectomy, such as the narrative review "Laparoscopic myomectomy: clinical outcomes and comparative evidence" from the Journal of Minimally Invasive Gynecology, highlight that in experienced hands laparoscopy consistently delivers shorter hospital stay (often 1–3 days), earlier return to work and low major complication rates, while acknowledging technical challenges with very large, multiple or unfavorably located fibroids.[14] Our results, demonstrating short hospital stay and low morbidity despite large fibroid burden, support the view that the ceiling for safe laparoscopic myomectomy can be extended in high-volume tertiary centres.

Finally, the overall pattern of advantages seen in our study is consistent with the most recent systematic review and meta-analysis focused on the "great debate" between laparoscopic and laparotomic myomectomy, which concluded that laparoscopy offers reduced blood loss, shorter hospital stays and less postoperative analgesic requirement, with no significant increase in overall complications or deterioration in obstetric outcomes compared with open surgery.[15]

CONCLUSION

Laparoscopic myomectomy demonstrated clear advantages over open myomectomy for large fibroids, offering significantly lower blood loss, reduced postoperative pain, faster return of bowel function, and markedly shorter hospital stay. Despite a slightly longer operative time, the minimally invasive approach resulted in fewer wound complications and quicker recovery. Multiple regression analysis confirmed that the surgical approach was the strongest determinant of hospitalization duration. Overall, laparoscopic myomectomy is a safe, effective, and superior option for appropriately selected women with large symptomatic fibroids in a tertiary care setting.

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