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Evaluation of the Clinical Outcome of Laparoscopic Myomectomy in the Management of Patients with Uterine Fibroids

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Abstract: *Objective:* This paper aims to evaluate the effectiveness of laparoscopic myomectomy in managing patients with uterine fibroids. *Methods:* This time, 78 patients with uterine fibroids were randomly selected from the hospital from January 2023 to December 2023 for analysis and study. The 78 patients were divided into two groups, the control group contained 39 patients who were treated with traditional open myomectomy, while the study group also contained 39 patients who were treated with laparoscopic myomectomy. The two groups were analyzed and studied in terms of treatment effect, surgery-related indexes and complications. *Results:* The therapeutic effect of the patients in the study group was remarkable, and the incidence of complications in the treatment process was lower. The study group also performed better than the control group in terms of surgical-related indexes, with $P < 0.05$, which is of research value. *Conclusion:* For patients with uterine fibroids, treatment with laparoscopic myomectomy is an effective means of intervention. This treatment method can achieve precise clinical results and shows significant advantages in reducing patient trauma, which is worth utilizing.

Keywords: Laparoscopy; Complications; Open surgery; Myomectomy

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1. Introduction

Uterine fibroids, also known as uterine fibroids or smooth muscle tumors, are a common benign tumor in the field of gynecology. Typical clinical manifestations include uterine bleeding and leukorrhea. In recent years, given the evolution of lifestyle and environmental factors, the incidence of this disease has continued to increase, which harms the health of the female population and cannot be ignored [1]. The incidence of the disease is particularly high in women of childbearing age, especially in the 20 to 50 age group. Studies have shown that the occurrence and development of uterine fibroids are closely associated with changes in human estrogen levels. At present, the traditional treatment for uterine fibroids is open surgery. Although this method can achieve the therapeutic effect to a certain extent, it will bring more significant physical trauma to the patient, which will have an adverse effect on the quality of life, and the prognosis is also unsatisfactory. However, with

the continuous progress of modern medical technology, laparoscopic surgery has gradually been widely used to treat uterine fibroids and has won the general recognition of doctors and patients [2,3]. Because of this, this study included 78 patients with uterine fibroids in the hospital to investigate the application value of laparoscopic uterine myomectomy, which is now reported as follows.

2. Data and methods

2.1. General information

This time, 78 patients with uterine fibroids in the hospital were randomly selected from January 2023 to December 2023 for analysis and study. The disease duration of these patients was 1–9 years, with a mean of (5.12 ± 1.2) years. The number of uterine fibroids per patient was 1–5, with a mean of (3.21 ± 1.03). Seventy-eight patients were randomly divided into two groups. Among them, the control group contained 39 patients, all of whom were treated by traditional open myomectomy, aged 26–55 years, with a mean of (40.52 ± 2.32) years. The study group contained 39 patients, all treated with laparoscopic myomectomy, aged 27–54 years, mean (40.64 ± 2.63) years. The study data $P > 0.05$ to start the study.

2.2. Methods

Thirty-nine patients with uterine fibroids in the control group were treated with traditional open uterine myomectomy, and after the anesthesia and disinfection procedures were completed, a longitudinal incision operation was performed in the patient's lower abdomen at the midline. Then, the abdominal cavity was opened layer by layer to assess the size and exact location of the fibroids comprehensively. Based on the exact condition of the leiomyoma, exclusion measures were taken, the uterus was sutured, then the abdominal incision was sutured, and hemostasis and analgesia were applied to the patients.

Thirty-nine patients in the study group were treated with laparoscopic myomectomy. Patients first received general anesthesia, were placed in the cystotomy position, standardized disinfection measures were taken, and the surgical site was thoroughly disinfected. A sterile towel was also laid out. Subsequently, a transverse incision was made through the patient's abdomen, about 1 cm in length, and an appropriate amount of carbon dioxide gas was injected to construct a pneumoperitoneum environment. The patient's right peritoneum was opened, the right ureter was freed, and the uterine artery was treated using electrocoagulation and electrocautery techniques. The same steps were performed on the left side with the same operational criteria [4,5]. Subsequently, the laparoscope was precisely placed. Accurate puncture maneuvers were performed at the anti-Mac's point, Mac's point, and 5 cm to the left of the flat umbilicus and Tocar instruments were placed to define the exact number and location of fibroids. Next, the pseudoepithelium was precisely incised at the protruding area of the fibroid using a monopolar electric hook and further penetrated the interior of the tumor. After the successful completion of the fibroid excision, the uterine rotary cutter was applied to finely fractionate the tumor and remove it completely [6,7]. After completing all the operation steps, absorbable sutures were used to close the abdominal cavity, and irrigation was performed to eliminate intra-abdominal gas. After the operation, an intramuscular injection of serotonin was carried out for the patient, and corresponding anti-infection and pain relief treatment was carried out [8].

2.3. Observation indicators

Through statistical analysis of the treatment effects of the two groups of patients (After treatment, the patient's uterine size has returned to the normal range, the myometrium nucleus has completely disappeared, and the symptoms of uterine bleeding and leukorrhea have been eliminated, these obvious improvements

can be regarded as the treatment of obvious effects. If the size of the myometrium nucleus has been shrunk by more than 60% based on the original after the treatment, it is regarded as the manifestation of the treatment's effectiveness. If the patient's treatment results do not meet any of the criteria mentioned above, then the treatment will be regarded as effective. criteria, then the treatment will be regarded as ineffective), surgery-related indexes (including intraoperative bleeding, operation time, time of the first exhaustion and hospitalization time), and complication rates (involving postoperative infection, pelvic adhesion, abdominal discomfort and bleeding, etc.) were compared. They were taken as the objectives of this observation, and were presented in the form of a table.

2.4. Statistics and methods

All research data were analyzed by the SPSS 23.0 system. The count data were expressed by mean ± standard deviation (SD) and the differences between the two groups were compared by t and χ^2 tests. If $P < 0.05$, it indicates that the experiment has significant value.

3. Results

After analysis, the seminar showed that the treatment effect of the patients in the research group was higher than that of the control group, and its effect was better. There was a significance value of $P < 0.05$. See **Table 1**.

Table 1. Comparison of the treatment effect of the two groups of patients (%)

Group	Number of cases	Remarkable effect	Effective	Ineffective	Total effective rate (cases/%)
Control group	39	15 (38.46)	17 (43.58)	7 (17.94)	32 (82.05)
Study group	39	20 (51.28)	19 (38.46)	0 (0.00)	39 (100.00)
P-value					$P < 0.05$

After analysis, the seminar showed that the surgery-related indexes of the patients in the research group were better than those of the control group. Its effect was better, and there was a discussion value of $P < 0.05$, see **Table 2**.

Table 2. Comparison of surgery-related indexes between the two groups of patients (mean ± SD)

Group	Number of cases	Intraoperative bleeding (mL)	Operating time (min)	Time of first exhaustion (h)	Hospitalization time (d)
Control group	39	3.42 ± 2.71	3.42 ± 2.71	41.42 ± 5.71	7.42 ± 1.71
Study group	39	2.03 ± 1.35	2.03 ± 1.35	28.03 ± 3.35	2.03 ± 1.35
P-value		$P < 0.05$	$P < 0.05$	$P < 0.05$	$P < 0.05$

After analysis, the seminar showed that the complication rate of patients in the research group was lower than that of the control group, its effect was better, and there was a discussion value of $P < 0.05$, see **Table 3**.

Table 3. Comparison of the complication rate of patients in the two groups (%)

Group	Number of cases	Postoperative infection	Pelvic adhesion	Abdominal discomfort	Bleeding	Total incidence (cases/%)
Control group	39	1 (2.56)	2 (5.12)	3 (7.69)	3 (7.69)	9 (15.38)
Study group	39	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.56)	1 (2.56)
P-value						$P < 0.05$

4. Discussion

According to relevant research results, the incidence of uterine fibroids, a common clinical female disease, is showing a gradually increasing trend, which poses a serious threat to women's health and safety. The main pathogenesis of uterine fibroids is closely related to hormone secretion, especially the high sensitivity of fibroid tissues to estrogen, which is a key factor in its development. Most patients may be accompanied by reproductive system symptoms such as abnormal leukorrhea and irregular menstruation, as well as significant physical discomfort such as back pain [9,10].

The treatment methods for uterine fibroids are diverse and cover a wide range of approaches, such as drug control and surgical treatment. However, although these methods have shown some efficacy in controlling fibroids, they still have many shortcomings. In particular, medication can only control the growth of fibroids but cannot achieve a radical cure. The traditional open surgery is more damaging to the patient's body. It may cause many complications, which is not only detrimental to the patient's postoperative recovery but also increases the length of hospitalization. This is especially true for total hysterectomies, which are more extensive, causing more obvious damage to the patient's body and taking longer to recover. In addition, such surgeries may also bring a heavy psychological burden to patients [11,12].

With the continuous progress of medical technology in China, laparoscopic technology has been widely integrated into clinical medical practice and has become one of the important medical means. After the fine operation of laparoscopic surgery, the specific location and number of uterine fibroids can be accurately identified and removed to ensure the accuracy and reliability of the surgery, as well as to ensure the safety of patients in the treatment process. Laparoscopic technology, with the help of its advanced magnification system, is able to realize the detailed observation and precise operation of the internal tissues of the patient's abdominal cavity [13]. The application of this technology not only greatly improves the clarity and accuracy of the operation, ensuring that fibroids can be completely removed, but also significantly reduces the trauma caused to the patient during the operation. This advantage is crucial for the postoperative recovery process. Laparoscopic technology has significant advantages over traditional open surgery. It can effectively reduce intraoperative bleeding by skillfully applying uterine contraction drugs during the treatment process, thus simplifying the operation steps and further enhancing the safety of the surgery. At the same time, laparoscopic technology has relatively little impact on uterine function, providing more favorable conditions for patients' postoperative recovery [14,15].

5. Conclusion

In summary, laparoscopic myomectomy has been clinically verified to demonstrate excellent efficacy in treating patients with uterine fibroids. This surgical method not only has a high degree of safety but also significantly improves the indicators related to surgery and significantly reduces the incidence of complications, which is worthy of clinical popularization and application.

Disclosure statement

The authors declare no conflict of interest.

Reference

[1] Wang Q, Li J, Mu J, 2023, Effect of Laparoscopic Myomectomy on Patients' Ovarian Reserve Function and Pregnancy Outcome. Chinese Journal of Family Planning, 31(10): 2322–2326.

[2] Cheng L, Cheng X, 2023, Analysis of the Effectiveness and Safety of Laparoscopic Myomectomy and Traditional Open Surgery for Uterine Fibroids. Chinese and Foreign Medical Treatment, 42(30): 40–43 + 60.

[3] Wu X, Sheng Y, 2023, Effects of Laparoscopic Resection on Ovarian Function, Endocrine Status and Sex Hormones in Patients with Uterine Fibroids. Shenzhen Journal of Integrative Chinese and Western Medicine, 33(20): 78–81.

[4] Deng Y, Luo Y, Zhang X, 2023, Clinical Comparison of Transabdominal Myomectomy and Laparoscopic Myomectomy for Uterine Fibroids. Chinese and Foreign Medical Treatment, 42(31): 65–68.

[5] Chen L, Zhou S, Zhou L, et al., 2023, Efficacy of Laparoscopic Myomectomy Versus Open Surgery for Uterine Fibroids and Its Effect on Patients' Sexual Function, Uterine Microcirculation, and Recurrence Rate. China Maternal and Child Health Care, 38(22): 4509–4512.

[6] Jia R, 2023, Effect of Laparoscopic Myomectomy in the Treatment of Patients with Uterine Fibroids. Zhongguo Nguo Kang Medicine, 35(21): 44–46.

[7] An Y, 2023, Comparison of Clinical Effects Between Transabdominal Myomectomy and Laparoscopic Myomectomy for Uterine Fibroids. Electronic Journal of Practical Gynecological Endocrinology, 10(32): 28–30.

[8] Huang Z, Pan C, Zuo W, 2023, Analysis of Factors Affecting Distant Pregnancy After Laparoscopic Myomectomy in Infertile Patients. Chinese Journal of Family Planning, 31(10): 2472–2476 + 2481.

[9] Xie F, 2023, Causes of Complications and Nursing Progress of Laparoscopic Uterine Myomectomy. China Urban and Rural Enterprise Health, 38(10): 26–29.

[10] Zhao X, Wang M, 2023, Analysis of Recent Efficacy of Laparoscopic Uterine Myomectomy and Its Effect on Patients' Recurrence Rate and Sex Hormones. Heilongjiang Medical Science, 46(05): 72–73, 76.

[11] Lou X, 2023, Clinical Efficacy Analysis of Laparoscopic Myomectomy and Transabdominal Myomectomy for the Treatment of Uterine Fibroids. Practical Gynecological Endocrinology Electronic Journal, 10(29): 79–81.

[12] Zhang J, Ye J, 2023, Risk Factors for Post-Traumatic Stress Disorder in Patients Undergoing Laparoscopic Myomectomy. Medical Equipment, 36(18): 136–139.

[13] Chen L, Chen Y, Li P, 2023, Clinical Efficacy and Safety of Laparoscopic-Assisted Negative Total Hysterectomy, Subtotal Hysterectomy, and Myomectomy for the Treatment of Uterine Fibroids. Medical Information, 36(18): 124–127 + 139.

[14] Li Y, 2023, Effectiveness of Laparoscopic Myomectomy in the Treatment of Uterine Fibroids and Its Effect on Ovarian Function. Wisdom Health, 9(23): 180–183.

[15] Zhang M, 2023, Analysis of the Efficacy of Laparoscopic Myomectomy for the Treatment of Uterine Fibroids and Its Effect on Patients' Immune Function. Practical Gynecological Endocrinology Electronic Journal, 10(21): 51–53.