

A Study on Laparoscopic Ovarian Cystectomy

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ABSTRACT

Introduction: A regular complexity of endometriosis is the improvement of a cyst on an ovary which is called endometriomas cyst. Patients in endometriomas cyst manage pressure, swelling, and pain in the abdomen, torment amid intercourse and irregular or bizarrely painful periods. Many drug and surgical procedure are pursued to treat these patients. Among numerous medical procedures, cystectomy is utilized now a day's a surgical procedure amid which the ovarian cyst is evacuated with laparoscopy.

Aim: The target of this examination is to assess the efficacy of laparoscopic ovarian cystectomy versus fenestration and coagulation for the management of endometriomas and ovarian reaction after laparoscopic ovarian treatment.

Method: In this investigation, grouping of study populace were separated into 2 groups such as group 1 (inner lining of the cysts was dissected from the ovary) and group 2 (1.5 × 1.49 cm biopsy was performed).

Results: After factual examination result demonstrates that recurrence of symptoms (%) in fenestration and coagulation is higher than laparoscopic ovarian cystectomy treatment and median rAFS score (range) where infertile patients group1,

cystectomy is 31 and in group 2, fenestration and coagulation is 28.

Conclusion: From numerous outcomes and examination it demonstrates that laparoscopic ovarian cystectomy was valuable for management in endometriomas pimple than fenestration and coagulation.

Keywords: Endometriomas Cyst, Laparoscopic Ovarian Cystectomy, Fenestration, Coagulation.

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INTRODUCTION

Ovaries are the almond shaped organs found one on each side of the uterus, when a month, amidst the menstrual cycle, a follicle frames on ovary. A follicle is a fluid filled sac that contains an egg. Normally, follicle discharges develop egg from the ovary (ovulation). At times, if the follicle neglects to rupture and release an egg, the fluid remains in the follicle and structures a cyst. Ovarian cysts are little fluid-filled sacs that create on the ovaries. A few ladies may encounter pressure, swelling, pain in the abdomen, torment amid intercourse and abnormal or bizarrely painful periods. Most ovarian cysts will resolve alone with no treatment.

Anti-conception medication pills might be prescribed to decrease the development of new ovarian cysts. Endometriotic cysts are among the most well-known ovarian cysts experienced at surgery. Medical procedure is a choice if the cyst does not leave, bigger in size, or causes torment and furthermore in menopausal women or who are nearing menopause. Cystectomy is a surgical procedure amid which the ovarian cyst is expelled with laparoscopy.

A laparoscopic cystectomy procedure is an insignificantly invasive surgery amid which a laparoscope is utilized. The methodology is normally done under general anesthesia and a small incision is typically made in the underbelly. A laparoscope is embedded through this cut to see within patient's pelvis and mid-region. Carbon dioxide gas is acquainted into the abdominal cavity with make more space to work.

Patients' specialist distinguishes the cyst through the scope and evacuates the cyst. This procedure is typically used to evacuate little cysts.

A laparoscopic cystectomy expels just the cyst leaving the ovaries unblemished. In any case, if the cyst is excessively large or associated with ovarian tissue, specialist evacuates all or part of the ovary.

Laparotomy is an open surgical consideration of the belly to look at the organs of the abdomen. Patients will be regulated general anesthesia and a solitary, enormous slice is made through the abdominal wall.¹

The main point of this examination to assess the viability between laparoscopic ovarian cystectomy versus fenestration and coagulation for the administration of endometriomas and ovarian response after laparoscopic ovarian cystectomy for endometriotic cysts in observed cycles.

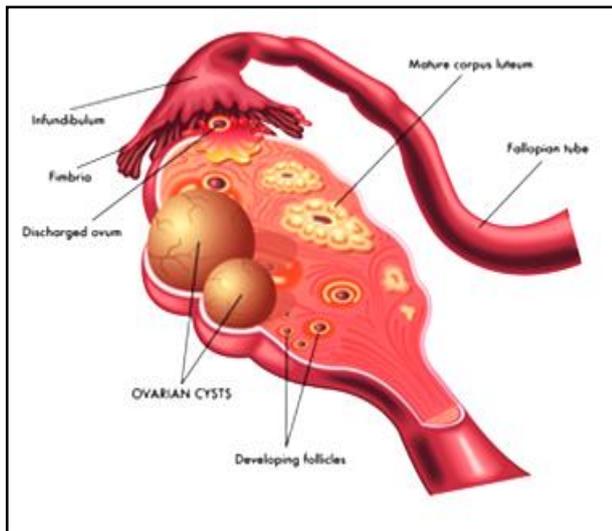


Figure 1: Endometriotic cysts during laparoscopy Cystectomy

OBJECTIVES

General Objective

- To compare between laparoscopic ovarian cystectomy versus fenestration and coagulation in management of endometriomas cyst to examine the effectiveness of laparoscopic ovarian cystectomy for treatment of endometriomas cyst.

Specific Objective

- To recognize the usefulness of laparoscopic ovarian cystectomy.
- To observe the clinical characteristics of endometriomas cyst patients.

METHODOLOGY

Study Type

This study is a cross sectional study.

Study Area and Period

The study performed in the department of obstetrics and gynaecology of Government and Private Hospital of Patuakhali. The study period was from January 2015 to December 2017.

The patients with endometriotic cysts ≥ 3 cm had laparoscopic ovarian cystectomy where some patients were seen for the problem of infertility and had undergone subsequent transvaginal ultrasound follicular monitoring. Clinical characteristics of 120 patients with endometriomas, where group 1 divided to 65 with endometriomas in the cystectomy group and group 2 divided to 55 patients with fenestration and coagulation group.

Exclusion Criteria

The exclusion criteria for the samples were patients who had previously undergone surgical treatment of endometriosis, and Patients who had received estrogen-suppressing drugs, such as oral contraceptive pills, danazole, or decapeptyl, in the last 6 months.

Grouping of Study Population

Group 1 : The inner lining of the cysts was dissected from the ovary by two atraumatic grasping forceps that were pulled in opposite directions.

Group 2 : A 1.5 × 1.49 cm biopsy was performed and sent for histologic examination followed by bipolar coagulation of the inner lining.

Statically Analysis

- SPSS 11.5 were used for appropriate statistical tests which were then used for comparison, including Fisher's exact test, 2 test, and t test was done;
- Applicable statistical methods were used to compare the 2 groups, including the Mann-Whitney U-test which was used for nonparametric analysis;
- For the subgroup of pair data, Wilcoxon rank-signed test was used in order to test for statistical significance.

Table 1: Clinical characteristics of 120 patients with endometriomas

Variable	Group 1, cystectomy n=55	Group2, fenestration and coagulation n=45	P value
Mean (\pm SD) age (y)	28.4 \pm 5.79	28.5 \pm 5.6	\approx .86
No. of patients with infertility (%)	33 (61.49)	29 (62.6)	\approx .92
No. of patients with dysmenorrhea (%)	38 (71.1)	31 (62.6)	\approx .36
Mean diameter of cyst (range) (cm)	5.07 (3–9)	4.05 (3–5)	\approx .052
Mean diameter of cyst in infertile patients (range) (cm)	4.46 (3–7)	3.84 (3–7)	\approx .021
Mean diameter of cyst in patients with dysmenorrhea and pelvic pain (range) (cm)	5.39 (3–11)	4.26 (3–5)	<.001

Table 2: Median rAFS score (range) of the patient

Median rAFS score (range)	Group 1, cystectomy (n = 55)	Group 2, fenestration and coagulation (n =45)
In all patients	31 (16–134)	28 (16–136)
In infertile patients	42.6 (16–125)	25 (16–69)
In patients with dysmenorrhea and pain	40 (16–134)	26 (16–136)

Table 3: Recurrence of signs and symptoms of endometriomas and rate of reoperation after 2 years

Variable	Cystectomy	Fenestration and Coagulation	P
Recurrence of cyst (%)	9/51 (17.6)	15/47 (31.9)	.16
Recurrence of symptoms (%)	6/37 (16.2)	17/30 (56.6)	.001
Reoperation (%)	3/50 (.6)	11/49 (22.4)	.003

RESULTS

Mean ages of Group 1 and 2 are 28.4 ± 5.79 and 28.5 ± 5.6 where P value is $\approx .86$. The table-1 gives a description on each group with associated details.

Patients are with identified rAFS (revised AFS score) stage (%), wherein stage 3 and stage 4 rAFS stage were 63.3% and 36.7%. (Figure 2) Median rAFS (revised AFS score) range where infertile patients from Group 1, cystectomy is 31 and group 2, fenestration and coagulation is 28. (Table 2) Recurrence of signs and symptoms of endometriomas and rate of reoperation after 1 year

shows where recurrence of symptoms (%) highest percentage in Fenestration and coagulation 19.90%. The figure 3 shows the scenario after reoperation. Number of patients with indicated cyst diameter (%), wherein group 1 Number of patients with cyst diameter (%) is 55.89% and for group 2 is 43.81% where P value is $\approx .32$. Recurrence of signs and symptoms of endometriomas and rate of reoperation after 2 years is shown in table 3 with description of variables. Here, recurrence of symptoms (%) in Fenestration and coagulation is highest.

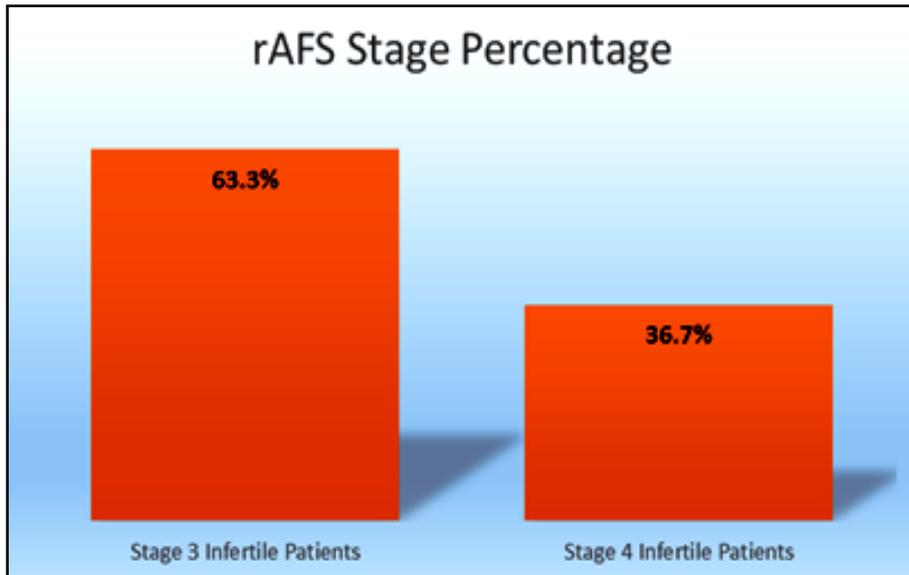


Figure 2: Patients indicated with rAFS stage (%).

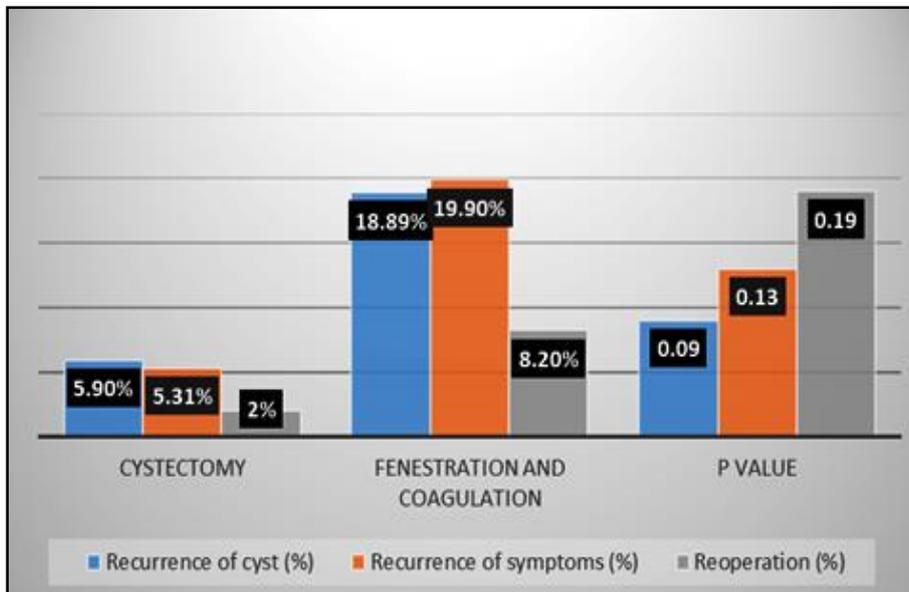


Figure 3: Recurrence of signs and symptoms of endometriomas and rate of reoperation after 1 year

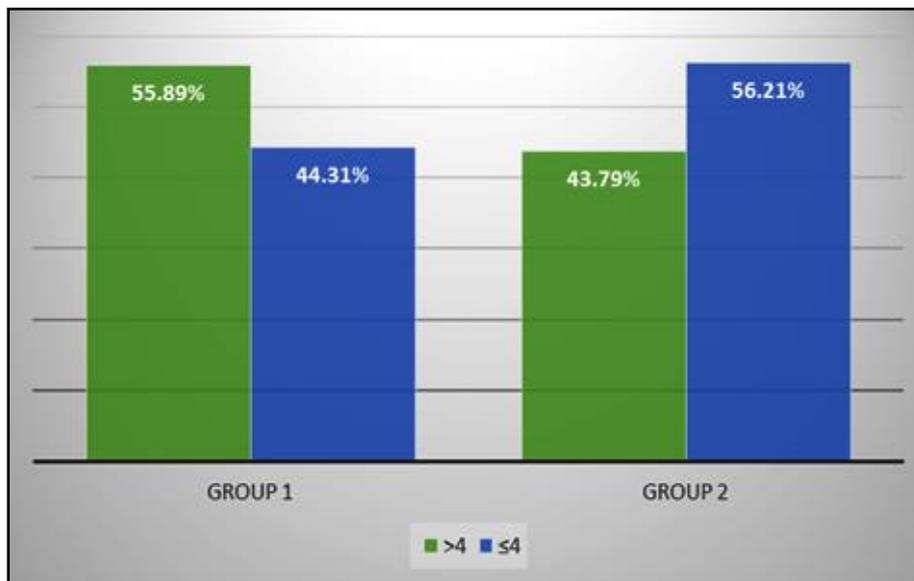


Figure 4: No. of patients with indicated cyst diameter (%)

DISCUSSION

A typical complexity of endometriosis is the improvement of a cyst on an ovary. This blood-filled development is called an ovarian endometrioma or an endometrial cyst. Utilizing laparoscopic ovarian cystectomy the ovarian cyst is evacuated with laparoscopy.^{2,3} In this investigation, randomized preliminary, the agony recurrence was lower in the cystectomy gathering (15.7%) than in the fenestration and coagulation group (56.8%) (p.001); Moreover, patients stayed asymptomatic longer in the first group. This is like other investigation, in which cystectomy group had a lower recurrence rate of deep dyspareunia, dysmenorrhea, and non-menstrual pelvic pain in two years than the fenestration and coagulation group.⁴

In our investigation, symptom recurrence following 1 year in the cystectomy group was lower than in the fenestration and coagulation group. In any case, this distinction was statistically insignificant. One conceivable clarification is that endometriosis is a chronic disease and that a large portion of its recurrences occur over quite a while period. In our investigation, the span of the cysts in the cystectomy bunch was greater than in the fenestration and coagulation group, and this distinction was statistically significant. In any case, the recurrence of symptoms in the cystectomy group, regardless of greater cysts, was lower, which demonstrates that the cystectomy is a superior alternative. In other examination demonstrated that there was no statistically significant contrast in recurrence rate among the three groups who underwent fenestration and coagulation, laparoscopic cystectomy, and cystectomy by laparotomy.⁵ In our investigation, we utilized ultrasound to recognize the recurrence of cysts.

Various articles have been distributed that bear witness to the security and estimation of laparoscopic surgery amid pregnancy.¹ Laparoscopic ovarian cystectomy and oophorectomy are normally performed intracorporeally.⁶⁻⁸ This technique, when all is said in done, requires a somewhat longer operative time and lengthier co2 insufflation, notwithstanding the more extended general anesthesia.⁶⁻⁸ Other researcher exhibited that transvaginal ultrasound had a 88% precision rate in the diagnosis of endometriomas.⁹ The most significant bit of leeway got with cystectomy of endometriomas is the pregnancy rate, which was

significantly higher in the cystectomy group than in the fenestration and coagulation group following 1 year. The greater part of the patients who underwent cystectomy conceived in 1 year after the operation. One of the theoretical points of interest of the cystectomy of endometriomas contrasted and fenestration and coagulation could be that the diagnosis of ovarian lesions, as endometrioid cancer, is increasingly accurate in this technique, in spite of the fact that we found no malignancy in the majority of the histological samples got amid cystectomy or fenestration and coagulation or in the follow-up.

A few agents demonstrated that cystectomy can cause reduced follicular response in controlled ovarian hyperstimulation cycles.^{2,3,10} But in numerous other report recommend that, by utilizing laparoscopic ovarian cystectomy for removal of cyst may cause fever, abdominal pain, torment amid urination or bowel movements to the patients.¹¹

CONCLUSION

From factual investigation and examination is practically evident that for management and better treatment of endometriotic cysts laparoscopic ovarian cystectomy is a superior choice than fenestration and coagulation.

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