

Coagulation Effect on Ovarian function in Laparoscopic Ovarian cyst Excision

Jianjuan Gu¹, Hongxia Cheng²

¹Department of gynaecology and obstetrics, Subei People's Hospital of Jiangsu province, China

²Department of clinical laboratory, Subei People's Hospital of Jiangsu province, China

Email: gujianjuan088@163.com

Abstract: Objective: To investigate the laparoscopic ovarian cyst excision coagulation effect on ovarian function. **Methods:** From January 2009 to December 2011 80 cases of ovarian cysts were collected among which were divided into were randomly divided into study group and the control group. 40 patients taking hemostasis were study group and 40 patients taking coagulation bleeding were observed application effect. **Results:** The comparative analysis of the two groups, the study group operative time and blood loss were (35.7 ± 12.3) min, (13.3 ± 7.4) mL; control group operative time and blood loss were (77.6 ± 23.5) min, (135.2 ± 12.3) mL; difference between the two groups was statistically significant data (P < 0.05). Preoperative study group and the control group E2, FSH, LH, and P and T indicators showed no significant difference (P > 0.05). After 1 month and 3 months after the P and T groups than before treatment did not have any change, the difference was not statistically significant (P > 0.05); postoperative January E2, FSH, LH than before treatment significant improvement, the difference was statistically significant (P < 0.05), but no difference between the two groups was statistically significant (P > 0.05), both groups 3 months after return to normal levels. Study group after menstrual abnormalities was 12.0% in the control group after menstrual abnormalities was 10.0%, compared two groups of data showed no significant difference (P > 0.05). **Conclusions:** The clinical effective method is to grasp coagulation little effect on ovarian function, long-term effects are more obvious, and can effectively shorten the operation time and reduce blood loss, worthy of clinical application and promotion.

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Key words: laparoscopy; ovarian cyst excision; coagulation; hemostasis; ovarian function

Ovarian cysts are a common gynecological diseases, serious impact on women's health, clinical treatment is often taken to laparotomy, this surgical trauma is relatively large, the amount of bleeding, postoperative recovery result is not very satisfactory. With the continuous development of medical standards, the application of laparoscopic techniques gradually clinic, trauma, shorter operative time, worthy of clinical application [1]. But how effectively improve ovarian function is operative physicians focus. In this study, our hospital included nest cysts ovarian cyst laparoscopic myomectomy application coagulation method to explore and analyze its impact on ovarian function, detailed analysis is as follows.

1 Materials and Methods

1.1 Clinical data of this study in our hospital from January 2009 to December 2011 among 80 cases of ovarian cysts, it randomly divided into control in accordance with and study groups. The control group 40 cases, the patient's age was 22-38 years, mean age (33.1 ± 2.1) years of age. Simple cyst in 18 cases, 12 cases of ovarian teratoma, ovarian endometrioid cyst in 10 cases. Ovarian cyst diameter of 52.0-75.0mm, the average diameter was (63.8 ± 12.8) mm. Study group of 40 patients, the patient's age was 21-37 years, mean age (32.6 ± 2.0)

years of age. Simple cyst in 16 cases, 12 cases of ovarian teratoma, ovarian endometrioid cyst in 12 cases. Ovarian cyst diameter of 55.0-78.0mm, the average diameter was (64.5 ± 12.3) mm. Two groups of patients with basic information and pathological types and size of the cyst showed no significant difference (P > 0.05), statistically insignificant, comparable.

1.2 The object of study inclusion criteria shall comply with the following [2]: ① age was 40 years of age, and the unilateral benign ovarian cysts in patients with no previous history of infertility; ② preoperative gynecological examination and B-ultrasound and tumor markers material inspection and exclude malignant or suspected malignant conditions; ③ informed consent of the patients in this study.

1.3 Exclusion criteria ① incomplete or can not be judged for safety of patients; ② associated with cardiovascular disease and kidney disease in patients with primary; ③ do not agree with the clinical study patients.

1.4 haemostasis this study two groups of patients underwent laparoscopic myomectomy for treatment of ovarian cysts and ovarian cysts stripped of its effective wound in the control group of 40

patients treated implementation of hemostasis, the wound can be absorbed catgut for giving padlock continuous suture. Study group of 40 patients, the implementation of coagulation treatment, take PK bipolar electric knife, and twist the knob to the coagulation of the state, the output power control in the 40.0-60.0W. Then, take the electric condenser burning ovarian dissection surface and peel off the surface after burning natural roll into the shape of the ovaries, and a comprehensive examination of the wound without bleeding. Finally, place the original location ovary [3].

1.5 OUTCOME MEASURES main observation in this study the clinical indicators are: ① operative time; ② blood loss; ③ ovarian function changes (E2, FSH, LH, and P and T); ④ menstrual abnormalities.

1.6 Determination of ovarian function indexes were in preoperative and postoperative 1 month and 3 months after the first 3-5 days of the menstrual cycle for venous blood, and take chemiluminescence measured estradiol (E2), luteinizing hormone (LH),

progesterone (P), testosterone (T), follicle stimulating hormone (FSH), taking the German DiaSorin Deutschland GmbH company chemiluminescence analyzer and ancillary reagents, and strictly in accordance with the operating instructions [4].

1.7 The statistical data for this study were taken SPSS18.0 statistical software for data analysis and processing, measurement data taken as mean \pm standard deviation ($\pm s$) for that two independent samples taken to test t, counting Data taken X² inspection, P<0.05, the difference was statistically significant.

2 Results

2.1 The two operative time and blood loss through comparative analysis of the two groups were operative time and blood loss, a comparative analysis of operative time and blood loss were significantly lower than the control group operative time and blood loss the amount of data the two groups was statistically significant difference (P<0.05). Data analysis in Table 1 below:

Table 1 Comparison of operative time and blood loss in patients with comparative analysis of ($\pm s$)

Group	Number of cases	Operative time(min)	Blood loss (mL)
Control group	40	77.6 \pm 23.5	35.2 \pm 12.3
Study group	40	35.7 \pm 12.3	13.3 \pm 7.4
X ²	-	22.3816	12.2411
P	-	<0.05	<0.05

2.2 Comparison of ovarian function before and after treatment by two groups of patients before and after surgery a month and 3 months after the comparative analysis of ovarian function index, preoperative study group and the control group E2, FSH, LH, and P and T indicators showed no significant difference (P> 0.05). After 1 month and 3 months after the P and T groups than before treatment did not have any change, the difference was

not statistically significant (P> 0.05); postoperative January E2, FSH, LH than before treatment significant improvement, the difference was statistically significant (P <0.05), but no difference between the two groups was statistically significant (P> 0.05), both groups 3 months after return to normal levels. Comparison of the data groups in Table 2 below:

Table 2 groups of patients before and after treatment of ovarian function index comparative analysis ($\pm s$)

group	time	E2(pmol/L)	FSH(U/L)	LH(U/L)	P(nmol/L)	T(nmol/L)
Control (40cases)	preoperative	160.3 \pm 13.6	5.1 \pm 1.4	6.2 \pm 1.4	2.2 \pm 0.5	0.3 \pm 0.1
	Post operative 1month	101.3 \pm 11.5*	9.2 \pm 1.4*	9.1 \pm 1.2*	2.1 \pm 0.5	0.3 \pm 0.2
	Post operative 3months	161.4 \pm 14.1#	5.2 \pm 1.3#	6.1 \pm 1.5#	2.2 \pm 0.6	0.3 \pm 0.2
Study group (40cases)	Preoperative	160.7 \pm 12.8	5.2 \pm 1.4	6.1 \pm 1.7	2.1 \pm 0.7	0.3 \pm 0.2
	Postoperative 1month	103.5 \pm 11.8*	9.1 \pm 1.3*	9.0 \pm 1.7*	2.1 \pm 0.6	0.3 \pm 0.1
	Postoperative 3months	162.4 \pm 12.6#	5.2 \pm 1.5#	6.1 \pm 1.6#	2.2 \pm 0.5#	0.3 \pm 0.2

Note: compared with the preoperative, * P <0.05, statistically significant; and after 1 month, # P <0.05, statistically significant.

2.3 postoperative menstrual abnormalities by comparing two groups of patients after 3 months of follow-up observation study group, menstrual abnormalities was 12.0% in the control group after

menstrual abnormalities was 10.0%, respectively, of the data the difference was not statistically significant (P> 0.05). 3 shown in the table below:

Table 3 postoperative comparative analysis of menstrual abnormalities

group	cases	Normal menstruation	Menstrual abnormalities
Control group	40	36(90.0)	4(10.0)
Study group	40	35(87.5)	5(12.5)
X ²	-	0.23	0.17
P	-	>0.05	>0.05

3 Discussion

Ovarian cysts are common in gynecology diseases, in clinical practice has a higher incidence of clinical treatment is often taken to laparotomy, this treatment trauma, postoperative complications are more often lead to patients slow recovery. With the continuous development of medical standards, the application of laparoscopic techniques gradually clinic, trauma, shorter operative time, worthy of clinical application [5]. But laparoscopic ovarian cyst excision operation, how to select effective hemostatic method becomes the focus of physicians.

Through this analysis of clinical studies, clinical laparoscopic ovarian cyst excision taken coagulation effect with conventional suture hemostasis is quite similar, and the impact on ovarian function is relatively small, and the entire operation, the operation time is relatively shorter, less the amount of bleeding. The group's data show that preoperative study group and the control group E2, FSH, LH, and P and T indicators showed no significant difference ($P > 0.05$). After 1 month and 3 months after the P and T groups than before treatment did not have any change, the difference was not statistically significant ($P > 0.05$); postoperative January E2, FSH, LH than before treatment significant improvement, the difference was statistically significant ($P < 0.05$), but no difference between the two groups was statistically significant ($P > 0.05$), both groups 3 months after return to normal levels. This analysis, coagulation in the near future has little influence on ovarian and 3 months after surgery were able to reach normal levels. In addition, the data also show that the study group was 12.0% after abnormal menstruation, menstrual abnormalities after the control group was 10.0%, compared two groups of data showed no significant difference ($P > 0.05$). Further analysis, as long as a reasonable grasp of the clinical coagulation method has little influence on ovarian function, and the impact on postoperative period is also smaller, safe treatment [6]. This treatment focuses on methods to stop bleeding than hemostasis operation easier and effectively shorten the operation time, reduce the

suffering of patients [7-8]. At the same time, effectively reducing blood loss.

In summary, laparoscopic ovarian cyst excision taken coagulation is feasible, as long as clinically effective method is to grasp coagulation little effect on ovarian function, long-term effects are more obvious, and can effectively shorten the operative time and reduce blood loss, worthy of clinical application and promotion.

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