LAPAROSCOPIC CERVICAL MYOMECTOMY: FIVE YEARS OF EXPERIENCE

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Objective
This retrospective case series evaluated the feasibility and safety of laparoscopic cervical myomectomy.

Methods
Sixty-five patients with cervical myoma who underwent laparoscopic cervical myomectomy were included in this study.

Results
The mean age of the patients was 39.2 ± 6.0 years. The marriage rate was 67.7%, and the mean parity was 1.09. The most common symptoms in the patients were increased myoma size (41.5%) and menorrhagia (13.8%), while 20% of patients were asymptomatic. The average diameter of the myomas treated was 72.68 ± 20.28 mm, and the mean number of myomas per patient was 1.41 ± 0.88. Laparoscopic cervical myomectomy required a mean time of 63.25 ± 20.34 minutes. The difference between preoperative and postoperative hemoglobin levels was 2.01 ± 0.73 g/dL, and no patient required transfusion or conversion to laparotomy.

Conclusion
Sixty-five procedures of laparoscopic cervical myomectomy were performed safely. Operation time and complications were minimal. With correct understanding of pelvic anatomy, laparoscopic cervical myomectomy can be carried out safely and easily, and represents a minimally invasive treatment choice for symptomatic cervical myoma.

Keywords: Laparoscopy; Cervical myoma; Laparoscopic cervical myomectomy

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Laparoscopic myomectomy is considered to be at the cutting-edge of minimally invasive surgery for patients who have symptomatic myoma. Myomas are usually located on the uterine corpus, but 5% of myomas occur in the uterine cervix [4]. The uterine cervix is adjacent to the uterine arteries, ureters, rectum, and bladder. Therefore, cervical myomyectomy has the surgical limitations of poor operative field, difficulties in suturing and handling of equipment, and vulnerability of the neighboring organs to injury. Thus, laparoscopic cervical myomectomy may be difficult and may be associated with a greater frequency of complications than other procedures [5]. In this study, we retrospectively analyzed data from 5 years of experience in performing laparoscopic cervical myomectomy.

Materials and Methods

From March 2007 to June 2011, 65 patients underwent laparoscopic cervical myomectomy at Cheil General Hospital. All patients had surgically proven cervical myoma, either preoperatively or during operation. All myomas were pathologically proved to be benign tumors. The medical records of these 65 patients who were treated in our department were retrospectively reviewed. If required, we also reviewed a video of the operation. Our selection criteria for laparoscopic myomectomy are symptomatic fibroids under 12 cm sized in reproductive aged women and no more than four fibroids. Data were collected on the general characteristics of the subjects; such as symptoms, age, body mass index, and parity. All patients were evaluated for fitness for general anesthesia. Preoperative gynecologic sonogram was underwent to record dimension, number and location of fibroids. Gonadotropin-releasing hormone agonist (GnRH) agonist was not used generally, but in the cases of severe anemia or other medical condition, we used GnRH agonist to delay the procedure. The operative time was defined as the time from umbilical incision to skin closure. To assess the changes of hemoglobin level after surgery, preoperative and postoperative hemoglobin levels were evaluated. Data were analyzed with SPSS ver. 16.0 (SPSS Inc., Chicago, IL, USA). All data are shown as mean standard deviation unless stated otherwise. A P-value of below 0.05 was considered statistically significant.

1. Surgical procedures for laparoscopic cervical myomectomy

All operations were performed under general anesthesia with endotracheal intubation. With the patient in the lithotomy position, a Rumi uterine manipulator was inserted. A vertical incision of approximately 10 mm was made in the infraumbilical skin, according to the standard technique. An 11-mm infraumbilical trocar was introduced into the abdominal cavity under laparoscopy; subsequently, the patient position was changed to the Trendelenburg position. After this, 2 lateral trocars and 1 suprapubic trocar were inserted. We used 10-mm, 30-degree fore-oblique telescopes in all procedures. First, we inspected the pelvic and abdominal cavity, and if there were any other diseases present (e.g., endometriosis and adhesions), we operated on these lesions before myomectomy. Next, myoma number, location, and size were assessed. Vasopressin was infiltrated subcapsularly to suppress bleeding during the operation. Up to 30 mL of vasopressin diluted to 10 IU in 100 mL of normal saline was injected into fibroids at several points. The myoma was then incised using monopolar scissors until the correct surgical plane was secured. After this, the incision was expanded until it was large enough to pull out the fibroids. Myoma enucleation was carried out with a suction tip and biopsy and Allis forceps. In most cases, a myoma screw was unnecessary. Bleeding at the operative site was coagulated with bipolar electrocoagulation. If necessary, we sutured the myomectomy site with a continuous running suture using Vicryl 1-0 or tied it up using an endo-loop. After hemostasis was achieved, the right-hand side trocar was dilated to 15 mm, and a 15-mm trocar was inserted. The specimen was removed with an electric mechanical morcellator via the 15-mm trocar.

Results

The baseline characteristics of the patients are listed in Table 1. The mean age of the patients was 39.2 ± 6.0 years. The marriage rate was 67.7%, and the mean parity was 1.09. Mean weight and body mass index were 56.85 ± 6.47 kg and 22.02 (2.61) kg/m², respectively. GnRH agonist was used in 12 cases only once before surgery. In 2 cases, GnRH agonist was used twice to correct severe anemia. 57% of cases had posterior cervical myoma, and 77.8% of myomas were subserosal type. The most common symptoms in the patients were increased myoma size (41.5%) and menorrhagia (13.8%) as listed in Table 2, while 20% of patients were asymptomatic. Fourteen patients were treated with preoperative GnRH agonists to reduce size of fibroids. Fifty-one patients (70%) received no preoperative management.