

Laparoscopic Hysterectomy and Bilateral Salpingo-oophorectomy Using Multifire GIA Surgical Stapler

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ABSTRACT

A laparoscopic hysterectomy and bilateral salpingo-oophorectomy was performed on a 42-year-old patient with pelvic pain and long-standing endometriosis. A prototype titanium Multifire GIA Stapler, which was designed for use in operative laparoscopy, was used for the first time on this patient, with excellent results. (J GYNECOL SURG 6:287, 1990)

INTRODUCTION

LAPAROSCOPIC HYSTERECTOMY HAS BEEN REPORTED RECENTLY, using bipolar cautery desiccation and laparoscopic scissors or lasers to transect all major pedicles.¹⁻² Our experience in operative laparoscopy (videolaseroscopy)² led us to use of a titanium Multifire GIA Stapler, similar to bowel surgery clip applicators (GIA), in order to expedite management of pedicles.

CASE REPORTS

A 42-year-old female, gravida 2, para 2, had pelvic pain and endometriosis that was unresponsive to conservative therapies, including medical management, laparoscopy, and laparotomy. Informed consent included a statement to the patient that laparoscopic hysterectomy was not, at the present time, the standard medical practice for her condition and that new instrumentation would be used in her case.

The patient underwent an uneventful surgical procedure (Sept. 24, 1990) and recovery and was discharged from the hospital on the second postoperative day.

OPERATIVE TECHNIQUE

Following induction of general endotracheal anesthesia, a 10 mm infraumbilical laparoscope with laser channel was placed. Five millimeters left and right, suprapubic trocar sleeves were introduced to allow insertion of a suction/irrigation cannula and a grasping forceps, respectively. A midline 12 mm suprapubic trocar sleeve was then placed, and the specially designed clip applicator was inserted. Pelvic organs and abdomen were inspected.

The right ovary was grasped and lifted, to straighten the infundibula-pelvic ligament, and the Multifire GIA Stapler was placed along the ligament, below and parallel to the fallopian tube and ovary. In one motion, the pedicle was clamped and cut. A second application, from medial to lateral, was required to completely remove this adnexa. The left adnexa was managed similarly, but only one application was necessary to completely

remove the adnexa. The broad ligaments were each transected with the clip applicator down to the level of the uterine vessels in one side and beyond the vessels in the other side. The Multifire GIA Stapler placed six rows of small titanium staples along the pedicle to be transected and divided the pedicle simultaneously, leaving three rows of staples on each side. Hemostasis was excellent.

Uterine vessels in the other side were triply clamped using large, individual titanium clips, placed perpendicular to the artery. The CO₂ laser was then used to transect the artery, leaving one medical clip on the uterine specimen and two lateral clips on the artery. Hemostasis was again excellent.

Anterior and posterior colpotomy incisions were created abdominally, using the CO₂ laser.³ A ring forceps was placed in the vagina and was used to distend the vaginal apex. The uterosacral ligaments were clamped, incised, and sutured from the vagina, as in a standard vaginal hysterectomy, and the uterus was then removed. The peritoneum was sutured closed, again in the standard manner, but inspection through the laparoscope ensured that no organs were prolapsed during closure. Total estimated blood loss was 10–15 ml, which occurred essentially during the vaginal portion of the procedure. The case was completed in 90 minutes.

DISCUSSION

Laparoscopic hysterectomy is now being investigated as an alternative to abdominal hysterectomy in women with benign disease, such as endometriosis, myoma, and adhesions, where vaginal hysterectomy would be contraindicated. In a small series of laparoscopic hysterectomies, found that blood loss, length of hospitalization, and recovery period were all reduced when compared to abdominal hysterectomies,¹ yet time of procedure was longer for the laparoscopic cases.

By adapting a titanium Multifire GIA Stapler, similar to those used to transect bowel without spillage, laparoscopic oophorectomy and hysterectomy pedicles were managed rapidly and easily. Two steps, bipolar cautery desiccation and laser transection, were eliminated, and one less complicated step was substituted. The Multifire GIA Stapler was easily maneuvered, and immediate, complete hemostasis of the pedicles was achieved. This Multifire GIA Stapler can be added to the technologic advances available with the evolution of operative laparoscopy. One major disadvantage is the cost of the instruments.

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