

No Scalpel, No IV, No Stitch, Microendoscopic Office Laparoscopy Under Local Anesthesia

Beverly Ray Love, MD, Roosevelt McCorvey, MD

ABSTRACT

Background: The medical literature is replete with articles verifying the usefulness of laparoscopic procedures under local anesthesia. Recent research has examined the efficacy of microendoscopy with local anesthesia. In this series of patients, we focused on new technology to determine if microendoscopy could be utilized in an office setting.

Methods: Between July 1994 and April 1995, we performed 51 microendoscopic office laparoscopy under local anesthesia (MICRO-OLULA) using the 1.5 mm Pixie laparoscope by Origin, a 1.7 mm laparoscope by Optimed and 5 mm laparoscope by Jarit. All cases were performed in an office operating room at the Women's Medical Plaza in Montgomery, Alabama. Only one patient was unable to have the procedure completed due to intolerance under local anesthesia.

Results: Fifty-one micro-olulas were performed on these patients who had an average age of 31 years and an average weight of 157 pounds. Intraoperative abdominal time averaged 3 minutes. One case was done with a 5 mm laparoscope and five cases with the 1.7 mm Optimed laparoscope. The 1.5 mm Pixie laparoscope was used in 45 patients.

Conclusions: Our patients seemed to like the idea of a small device to view their pelvic cavities. The small laparoscopes provide excellent cosmesis, and laparoscopes deserve further development and clinical trial to determine their most advantageous use in the office setting.

Key Words: Microendoscopic office laparoscopy, Local anesthesia, Microendoscopes, Diagnostic laparoscopy.

INTRODUCTION

The medical literature is replete with articles verifying the usefulness of laparoscopic procedures under local anesthesia.^{1,2} Recent research has examined the efficacy of microendoscopy with local anesthesia.⁴⁻⁸ In this series of patients, we focused on new technology to determine if microendoscopy could be utilized in an office setting and to evaluate the patient's pain responses to various aspects of micro-olula.³

Between July 1994 and April 1995, we performed 51 microendoscopic office laparoscopy under local anesthesia (MICRO-OLULA) using the 1.5 mm Pixie laparoscope by Origin, a 1.7 mm laparoscope by Optimed and 5 mm laparoscope by Jarit. All cases were performed in an office operating room at the Women's Medical Plaza in Montgomery, Alabama. In a previous publication, we have already demonstrated the efficacy and the economic benefits of office laparoscopy. Only one patient was unable to have the procedure completed due to intolerance under local anesthesia.

All patients were evaluated preoperatively with a complete history and physical exam, viewed a video on laparoscopy under local anesthesia and given the Belly test.^{1,9} Basic operative technique was similar to our previously published office laparoscopy cases: i.e., intramuscular preop meds, field block anesthesia at the umbilicus and a paracervical block.^{1,9} Intravenous access was not used in this group of patients. IV fluids, however, were in the operating room if needed. Carbon dioxide gas was used to insufflate all patients.

RESULTS

Fifty-one micro-olulas were performed on these patients who had an average age of 31 years and an average weight of 157 pounds. Intraoperative abdominal time averaged 3 minutes. One case was done with a 5 mm laparoscope and five cases with the 1.7 mm Optimed laparoscope. We used the 1.5 mm Pixie laparoscope in 45 patients. See **Table 1** for the various pathologies found in these micro-olula cases. Several patients had multiple pathologies.

We obtained pain data in 29 patients using the pain survey

Address reprint request to: Beverly Ray Love, MD, 3090 Rosa L. Parks Avenue, Montgomery, AL 36105, USA.

Table 1.
Micro-olula pathology.

PATHOLOGY	NUMBER OF PATIENTS
Fibroids	17
Pelvic adhesions	10
Benign ovarian cysts	7
Endometriosis	5
PCO	4
PID	3
Fitz-Hugh-Curtis Syndrome	1

by Fishburne from an earlier paper. Similar to Fishburne's original work, we evaluated our patient's pain response to six parts of the procedure using a scale from 0 to 4 (0 = no pain, 1 = slight pain, 2 = moderate pain, 3 = severe pain, 4 = extremely severe pain). For this study we evaluated the patient's response to the paracervical block, skin evaluation, CO₂ gas insufflation, trocar insertion, uterine motion and Fallopian tube pain (**Table 2**). Most of the surveyed patients had minimal postoperative complaints of nausea, vomiting, syncope and other difficulties (**Table 3**).

DISCUSSION

The small laparoscope seemed to appeal to patients. Only two patients of this series said that they would not recommend micro-olula to a friend. The remainder of the patients said that they would highly recommend micro-olula to their friends. Fishburne's pain survey suggested that the most painful aspect of micro-olula was movement of the uterus. It is possible, however, that painful uterine motion may be related to anxiety or pelvic pathology. From our small series of patients it appears that the pain associated with micro-olula is minimal. From our initial experiences with microendoscopes, we believe that clinicians can readily utilize diagnostic laparoscopy in an office setting. In the near future, we plan to do more micro-olula with two punctures to assess pelvic pain patients, adhesiolysis and patients needing assisted reproductive technology (ART).¹⁰⁻¹³

Ultimately, micro-olula technique may permit us to evaluate pelvic pain patients in the office with little preparation of the patient. We do not believe that patient safety is compromised by using a no IV technique since we had IVs available in the office operating room and had extensive experience in performing office laparoscopy. The no IV technique is not recommended for those beginning their experience with office laparoscopy. There are disadvan-

Table 2.
Patients' Responses.

	Average response
Uterine motion	2.5
Skin elevation	2.0
Insufflation	1.68
Paracervical block	1.2
Fallopian tube pain	0.63
Trocar insertion	0.52

Table 3.
Postoperative complaints.

	Yes	No
Nausea	14%	86%
Vomiting	7%	93%
Syncope	7%	93%

tages associated with micro-olulas including a small field of view and decreased magnification with small laparoscopes. The Pixie laparoscope has potential for use in an office setting but may be limited due to cost concerns. Our patients seemed to like the idea of a small device to view their pelvic cavities. The small laparoscopes provide excellent cosmesis. Microendoscopes deserve further development and clinical trials, to determine their most advantageous use in the office setting.

References:

1. Love BR, McCorvey R, McCorvey M. Low-cost office laparoscopic sterilization. *J Am Assoc Gynecol Laparosc.* 1994;1:379.
2. Love BR, McCorvey R, McCorvey M. Office laparoscopy and local anesthesia update in laparoscopy. *Infert Reprod Med Clin N Amer.* 1997;8(3)449-462.
3. Fishburne J. Office laparoscopic sterilization with local anesthesia. *J Reprod Med.* 1977;18:223.
4. Molloy D. The diagnostic accuracy of a microlaparoscope. *J Am Assoc Gynecol Laparosc.* 1995;2:203-206.

5. Risquez F, Pennehart G, Fernandez R, et al. Microlaparoscopy: preliminary report. *Hum Reprod.* 1993;(8)1701-1702.
6. Dingfelder J, Brenner W. The needlescope and other small diameter laparoscopy for sterilization and diagnostic procedures. *Int J Gynecol Obstet.* 1976;14:53-58.
7. Feste J. Outpatient diagnostic laparoscopy using the optical catheter. *Contemp Obstet Gynecol.* 1995;40:54.
8. Feste J. Use of optical catheters for diagnostic office laparoscopy. *J Reprod Med.* 1996;41:307-312.
9. Hulka J, Reich H. Textbook of Laparoscopy. Philadelphia: WB Saunders; 1997:383-389.
10. Palter S, Olive O. Office microlaparoscopy under local anesthesia for chronic pelvic pain. *J Am Assoc Gynecol Laparosc.* 1996;3:359-364.
11. Steege J. Repeated clinic laparoscopy for treatment of pelvic adhesions: a pilot study. *Obstet Gynecol.* 1994;83:276.
12. Steinleitner A. The safety and efficiency of microlaparoscopy for office-based gift and lift [abstract]. Second international symposium and hands on workshop on office microendoscopy and endoscopic microsurgery in gynecology. San Francisco. The American Association of Gynecology Laparoscopy. 1996;130.
13. Waterson J, Bolton V, Wren M, et al. Laparoscopic zygote intra-fallopian transfer using augmented local anesthesia. *Fertil Steril.* 1992;57:442-444.