CLINICAL SUMMARIES

OPIOID USE AFTER SURGERY:

► **Evidence to support the need and opportunity for opioid reduction or elimination after laparoscopic surgery**

Peer reviewed literature show the high rate of new persistent opioid use after surgery, even for minor surgery. Additional peer reviewed literature has demonstrated that a multimodal approach, focused on reducing the impact of laparoscopic intervention, can reduce or eliminate need for opioids in recovery.

MICROLAPAROSCOPY:

► **Evidence to support its use as part of your multimodal approach to opioid reduction.**

Microlaparoscopy, also known and minilaparoscopic and needlescopic surgery was first reported in the literature in 1997. Since that time, over 200 articles have been written on these techniques. The research findings support the safety and efficacy of these techniques as compared to conventional laparoscopic surgery and consistently demonstrates improved outcomes related to post-operative pain and pain management.

SMART TAPER TECHNOLOGY:

► **Resolves the limitation of traditional microlaparoscopy while using standard microlaparoscopic trocars.**

Previously, the use of microlaparoscopy has been limited in scope and required patient selection criteria based on body habitus. SmartTaper can help you bring the benefits of microlaparoscopy to all patients.

SMART TAPER

TU-MIS-C35-EN-2020-034

JAMA Surgery | Original Investigation

New Persistent Opioid Use After Minor and Major Surgical Procedures in US Adults

Chad M. Brummett, MD; Jennifer F. Waljee, MD, MPH, MS; Jenna Goesling, PhD; Stephanie Moser, PhD; Paul Lin, MS; Michael J. Englesbe, MD; Amy S. B. Bohnert, PhD, MHS; Sachin Kheterpal, MD, MBA; Brahmajee K. Nallamothu, MD, MPH

JAMA Surg. 2017;1512(6):e170504

RESULTS

A total of 36 177 patients met the inclusion criteria, with 29 068 (80.3%) receiving minor surgical procedures and 7109 (19.7%) receiving major procedures. The rates of new persistent opioid use were similar between the 2 groups, ranging from 5.9% to 6.5%.

CONCLUSIONS

In a cohort of previously opioid-naive patients, approximately 6% continued to use opioids more than 3 months after their surgery, and as such, prolonged opioid use can be deemed the most common postsurgical complication. New persistent opioid use is not different among patients who underwent minor and major surgical procedures, thereby suggesting that prolonged opioid use is not entirely due to surgical pain.

PEDIATRICS
OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Persistent Opioid Use Among Pediatric Patients After Surgery

Calista M. Harbaugh, Jay S. Lee, Hsou Mei Hu, Sean Esteban McCabe, Terri Voepel-Lewis, Michael J. Englesbe, Chad M. Brummett and Jennifer F.Waljee

PEDIATRICS 2018;141

RESULTS

Among eligible patients, 60.5% filled a postoperative opioid prescription (88 637 patients). Persistent opioid use was found in 4.8% of patients (2.7%–15.2% across procedures) compared with 0.1% of those in the nonsurgical group. Cholecystectomy (adjusted odds ratio 1.13; 95% confidence interval, 1.00–1.26) and colectomy (adjusted odds ratio 2.33; 95% confidence interval, 1.01–5.34) were associated with the highest risk of persistent opioid use. Independent risk factors included older age, female sex, previous substance use disorder, chronic pain, and preoperative opioid fill.

CONCLUSIONS

Persistent opioid use after surgery is a concern among adolescents and young adults and may represent an important pathway to prescription opioid misuse. Identifying safe, evidence-based practices for pain management is a top priority, particularly among at-risk patients.

ANZ JOURNAL OF SURGERY

Needlescopic versus laparoscopic cholecystectomy: a meta-analysis

Muhammad S. Sajid, Munir A. Khan, Kausik Ray, Elizabeth Cheek and Mirza K. Baig
Department of Colorectal Surgery, Worthing Hospital, Worthing, West Sussex UK

ANZ J SURG 79 (2009)

RESULTS

Sixteen trials on NC versus LC encompassing 1549 patients were retrieved from electronic databases. Only six randomized controlled trials on 317 patients qualified for the meta-analysis according to inclusion criteria. NC was associated with longer operative time and higher conversion rate as compared with LC. There was statistically significant heterogeneity among trials. Intraoperative complications, postoperative complications and total stay in hospital were not significantly different. NC was superior to LC in terms of less post-operative pain and better cosmetic outcomes.

"Several studies have demonstrated that NC holds the advantage of eliciting a reduced level of wound pain, a reduced requirement of postoperative analgesia compared with LC."

ARCHIVOS ESPAÑOLES DE UROLOGÍA

Arch Esp Urol. 2012 Apr;65(3):366-83.

Minilaparoscopy, needlescopy and microlaparoscopy: decreasing invasiveness, maintaining the standard laparoscopic approach.

Pini G[1], Porpiglia F, Micali S, Rassweiler J.

Arch Esp Urol. (2012)

RESULTS

258 manuscripts were found, 14 of them review, 126 about general surgery, 86 gynecology, 55 urology, 31 thoracic surgery. Minilaparoscopy is the main topic in 169 papers, Needlescopy in 58 and Microlaparoscopy in 32. No clinical randomized trials are available in urology. Most significant articles are 4 prospective non-randomized match-case control.

CONCLUSIONS

We are facing a Minilaparoscopy of second-generation with superior performance granted by new endoscopes and most effective instruments. Up to date, Minilaparoscopy has demonstrated in almost all urologic indication to be feasible, safe and able to improve cosmetic and postoperative pain control. Anyway, clinical randomized trials are still lacking and only studies from other discipline can corroborate this trend.

EVIDENCE BASED SOLUTIONS - GYN

SURGICAL INNOVATION

Mini-Laparoscopic Gynecological Surgery Using Smaller Ports Minimizes Incisional Pain and Postoperative Scar Size: A Paired Sample Analysis

Aysen Boza, MD, Et al.

Surgical Innovation 2020, Vol. 0(0) 1–6

OBJECTIVE

The aim of this study was to assess postoperative incisional pain and cosmetic scores in mini-laparoscopic gynecological surgeries undertaken with different port sizes. Material and Method. In this prospective study, all women who underwent mini-laparoscopic gynecological surgery with 2.4-, 3-, and 5-mm lateral ports for benign gynecological conditions between March 2017 and April 2019 were included. The primary outcome was postoperative incisional pain at rest, walking, and after a provoked Valsalva maneuver assessed by numeric rating scale scores at 6 hours, 12 hours, 24 hours, and 3 days and 7 days after surgery. Secondary outcome measures included cosmetic scores of each port site (evaluated by using patient-observer scar assessment scale [POSAS]), operation time, and intra- and postoperative complications.

RESULTS

A total of 330 lateral port sites in 110 patients who underwent benign gynecological surgery via mini-laparoscopy were assessed for pain and cosmetic appearance. Pain scores at each time point were significantly lower for 2.4- and 3-mm ports than those for 5-mm ports; however, no significant difference was detected between 2.4mm and 3-mm port sites (P = .6). The difference was more evident at 24 hours when routine analgesic drugs were stopped (P = .004). For POSAS scores, both 2.4-mm and 3-mm ports were superior to 5-mm port sites (P = .002); however, there was no significant difference between 2.4-mm and 3-mm port sites (P = .2). There were 2 port-related complications: one subcutaneous emphysema and one bleeding from a 5-mm trocar site 1 hour after surgery.

CONCLUSION

Mini-laparoscopic gynecologic surgery using smaller ports resulted in decreased postoperative incisional pain and superior cosmetic appearance.

The Journal of Reproductive Medicine®

Economic and clinical outcomes of microlaparoscopic and standard laparoscopic sterilization: A comparison.

Garcia, F.A.R., Steinmetz, I., Barker, B., Huggins, G.R.

The Journal of Reproductive Medicine, Volume 45, Issue 5, 2000

RESULTS

Both techniques were comparable in cost effectiveness. There was no significant difference in operating room time, average operating room costs, average ancillary department costs, instrument and supply costs, or length of stay. Postoperative discomfort was significantly less with microlaparoscopy (P = .05), and patient satisfaction was higher in the microlaparoscopy group. .

CONCLUSIONS

Microlaparoscopy and the standard laparoscopic approach for surgical sterilization are associated with similar hospital charges. Postoperative pain and overall patient satisfaction were significantly better with microlaparoscopy than standard laparoscopy.

JMIG The Journal of Minimally Invasive Gynecology

Minilaparoscopic Versus Single-Port Total Hysterectomy: A Randomized Trial

Francesco Fanfani, MD *, Et al.

JMIG (2013) 20, 192–197

RESULTS

Measurements and Main Results: Sixty-eight patients met the inclusion criteria and were enrolled in the study. The baseline characteristics of the 2 groups were comparable. Median operative time was longer in LESS with respect to M-LPS (120 minutes vs 90 minutes; p 5 .038). There were no differences between the 2 groups for median estimated blood loss, ileus, and postoperative stay. Additional 5-mm port insertion was needed in 1 case (2.9%) in the M-LPS group and in 2 cases (5.9%) in the LESS group, respectively (p 5 .311). No patient had development of intraoperative or early postoperative complications. Patients in the M-LPS group experienced a minor pain at each evaluation, compared with patients who underwent LESS. The rescue analgesic requirement was similar in the 2 groups.

CONCLUSIONS

Laparoscopic hysterectomy can be safely performed by M-LPS and LESS. M-LPS is associated with significantly lower operative time and less postoperative pain than LESS. Advantages of M-LPS hysterectomy than LESS have no noteworthy impact on the patients' early postoperative management.

EVIDENCE BASED SOLUTIONS- LOW IMPACT

Updates in Surgery

The protocol of low-impact laparoscopic cholecystectomy: the combination of mini-laparoscopy and low-pressure pneumoperitoneum.

Nicola de'Angelis, Niccoló Petrucciani, Giusy Giannandrea, Francesco Brunetti

Updates in Surgery (2018)

ABSTRACT

Low-impact laparoscopic (LIL) cholecystectomy is an innovative surgical protocol that combines the use of mini-laparoscopic instruments (3-mm ports) under a low- and stable-pressure pneumoperitoneum (8 mmHg), with the aim of minimizing the surgical invasiveness and the risks related to CO 2 insufflation on the peritoneal environment. In day-surgery settings, LIL may contribute to increase the surgical success due to several potential benefits in terms of postoperative pain intensity and time to full recovery. In 14 consecutive patients requiring cholecystectomy for uncomplicated cholelithiasis, LIL was carried out uneventfully. No conversion, intra-operative or postoperative complications occurred. All patients were discharged the same day of surgery. Postoperative pain was well tolerated with no need of prolonged opioid therapy. Technical aspects and indications for LIL cholecystectomy are detailed.

Low-impact laparoscopic cholecystectomy is associated with decreased postoperative morbidity in patients with sickle cell disease

Nicola de'Angelis, Et al.

Surgical Endoscopy (2017)

METHODS

Thirty-five consecutive SCD patients admitted between November 2015 and March 2017 for cholelithiasis requiring surgery were compared with an historical cohort of 126 SCD patients who underwent LC for the same indication. Operative variables, postoperative outcomes, patient and surgeon satisfaction, and costs were evaluated.

CONCLUSIONS

MLC + LSPP in SCD patients appears to be safe and feasible. Compared with LC, MLC + LSPP in SCD patients is associated with a significantly reduced incidence of postoperative SCD-related morbidity and more rapid ambulation and return to regular diet without increasing the total costs per patient.

"A significant decrease in pain scores was observed at 12 h postoperatively ($p = 0.001$) and continued at 24 h ($p = 0.053$), 48 h ($p < 0.0001$), and discharge ($p < 0.0001$)."