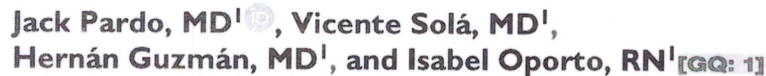
The American Journal of Cosmetic Surgery
1–6
© The Author(s) 2021
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/07488068211066161
journals.sagepub.com/home/acs
SAGE

Cosmetogynecological Surgery With Local Anesthesia: Preliminary Experience



Jack Pardo, MD[1], Vicente Solá, MD[1], Hernán Guzmán, MD[1], and Isabel Oporto, RN[1] [GQ: 1]

Abstract

Introduction: Although cosmetic gynecological procedures have been reported since antiquity, recent expansion made the cosmetogynecology becomes a recognized subspecialty. Presently, minimally invasive surgeries allow some of them to be performed under local anesthesia (LA). We present our preliminary experience using LA, highlighting safety and advantages.
Methods: A total of 246 surgeries under local anesthesia on 185 median age patients, 39 years old (range: 14-80) between July 2020 and July 2021 in a Chilean aesthetic gynecology center, were retrospectively reviewed.
Results: The most common surgery was Labiaplasty Type I, covering 40% (n = 99). Twenty percent of all patients (n = 38) underwent multiple surgeries in one surgical act. Minor complications were observed in 8% (n = 20) of surgeries, with satisfactory resolutions, without complications inherent to the use of LA or vasoconstrictors. Patients reported high degree of satisfaction, even in cases followed by labiaplasty repair or minor complication. Labiaplasty-related costs were considerably reduced compared with usual anesthetic procedure in more complex centers.
Conclusion: This is the first South American report of various aesthetic genital procedures carried out under local anesthesia. In our experience, local anesthesia provided safe and effective results.

Keywords

cosmetic gynecology, local anesthesia, labiaplasty, vaginoplasty, perineoplasty, anal skin tags

Introduction

Nonsurgical and surgical aesthetic genital procedures for beautification, rejuvenation, sexual enhancement, and improved self-esteem are the fastest growing area in aesthetic medicine. Cosmetic alteration of female genitalia is not new. In the first century AD, Soranus of Ephesus from Greece performed partial amputations of clitoris to treat hypertrophy. In the seventh century AD, Paulus of Aegenia did labia minoraplasties to manage elongated labia.[AQ: 2] In the 11th century, Trotula di Ruggiero of Salerno used various vaginal constriction substances to reduce the vaginal caliber to create "pseudo virgins." Surgical vaginoplasty was reported by Ambrosio Pare and Jacques Guillemeau from France in the 16th century, and later refined in the 19th and 20th centuries by Lawson Tait in England, Marion Sims and Thomas Addis in the United States.[1][AQ: 3]

The modern era of cosmetic genital surgery began in 1975, when Radman performed the first two labiaplasties on young women, followed by Hodgkinson and Hait and Pelosi in 1984.[2-4] A demand for all types of cosmetic surgery began in the 1990s, including widespread popularity of labiaplasty and vaginoplasty. By 2002, a full range of cosmetic gynecological procedures was offered by a growing number of cosmetic surgeons. The first elective vaginal tightening procedure to correct wide vagina sensation was reported by Pardo et al in 2006.[5] Due to the expanding number of women requesting genital aesthetic procedures, the ever-widening variety of treatments introduced and the increasing number of physicians seeking training into this new field, in 2004 Pelosi II and Pelosi III created the infrastructure of a new subspecialty for gynecologists and cosmetic surgeons to provide comprehensive genital cosmetic services. They called this new subspecialty Cosmetogynecology. Same year they founded the International Society of Cosmetogynecology (ISCG), the world's first and largest association of specialists in genital cosmetic medicine.[2] On the other hand, traditional scientific societies, such as IUGA, formed the Special Interest Group in Cosmetic gynecology in 2017.[AQ: 4]

[1]Clinica Ginestetica, Santiago, Chile

Corresponding Author:
Jack Pardo, Clinica Ginestetica, Av. Pdte. Kennedy Lateral 5118, Vitacura, Región Metropolitana 7630000, Chile.
Email: drjackpardo.s@gmail.com[AQ: 1]

At the present time, cosmetogynecology has proved to be a solid subspecialty and it is practiced worlwide.[6,7] There is a large number of nonsurgical and surgical cosmetic genital procedures involving the mons pubis, labia minora, labia majora, perineum, hymen, vagina, and perianal area. [AQ: 5] Common procedures are labia minora reduction, clitoral hood reduction, labia majora reduction and augmentation, and surgical and nonsurgical vaginal rejuvenation/tightening. Removal of anal skin tags is also frequently performed.

Cosmetogynecology surgery can be performed local anesthesia (LA) under, conscious sedation or general anesthesia.[AQ: 6] We present our preliminary experience in female cosmetic surgery using LA. The objective of this study is not a detailed technical description of each procedure, but rather to present types of surgery performed under LA, to show its advantage in terms of allowing almost immediate discharge at home.

Patients and Methods

All surgeries under LA between July 2020 and June 2021 in an aesthetic and gynecology clinical center in Santiago, Chile (Clinica Ginestetica), were retrospectively reviewed.

Preoperative Protocol and LA Administration

Prior to surgery, patients are recommended a light and liquid regimen, followed by at least 2 hours of fasting period. Admission takes place 1 hour before surgery, at which time we administer antibiotic (ciprofloxacin 500 mg orally) and analgesia (ketoprofen 200 mg orally). Anxiolytic (midazolam 7.5 mg) is exceptionally administered in some patients, only if they leave the center accompanied. Preventive heparin is not administered.

In the case of vulvar surgeries, like labiaplasties, all patients are shaved. In all cases, at least half an hour before surgery, anesthetic cream (Lidocaine base 25%, tetra Caine base 4%, Prilocaine base 4%, Aloe Vera 5% Ointment 100mg) is applied on the area to be treated, vulva, vagina, perineum, or anus, to allow the LA injection to be practically painless.

Patient is then positioned on the leg rest surgical table and the operative field is prepared. Subsequently, the surgeon makes a drawing and marking of the operation. Immediately, infiltration of the anesthetic solution (composed of 10 mL of 2% lidocaine, 10 mL of physiological serum, 0.1 mg of epinephrine and 1 mL of 8.4% sodium bicarbonate) is carried out with a syringe, which varies according to the area to be treated.[AQ: 7] Generally, no more than 20 mL is used in each surgery. When several surgeries are performed on same patient, we never exceed 50 mL total (5 ampoules of lidocaine).

LA in Specific Surgical Protocol

In labia minora labiaplasty, we first infiltrate the side that will be operated, including the base of the labia minora and the clitoral hood, if applicable (mainly in type II Labiaplasty). Contralateral infiltration is only performed at the end of first-side surgery. As we have previously reported, our technique is based on a linear resection with diode laser or radiofrequency device .[8,9]

Same LA administration protocol is used in labia majora lifting, infiltrating the entire area to remove the skin and a depth of 0.5 to 1 cm.[AQ: 8] Suture is made on cellular and skin layer with 4-0 and 5-0 Vicryl polyglactin in labia minora and 3-0 and 4-0 in labia mayora, respectively.[10][AQ: 9]

In vaginoplasty, the Lone Star Vaginal Retractor anchoring sites are marked before administering LA at those points. Subsequently, LA is infiltrated into rectovaginal space. So far, we have reserved LA in vaginoplasty, only for posterior compartment treatment cases, excluding grade III-IV rectocele. Cases that require treating anterior compartment (vesicovaginal) and/or suburethral sling are performed according to usual procedure in hospital centers, using regional or general anesthesia and considering hospitalization.

For perineoplasty, the infiltration is done throughout the perineum and taking care to cover the bulbocavernous and the superficial transverse muscles. After perineum skin excess resection, it is dissected with laser and/or radiofrequency or Metzembaum scissors. Sutures depend on each case, although 2-0 and 3-0 Vicryl polyglactin are generally used, while 3-0 or 4-0 are used on skin. Continuous suture of vaginal plane is performed, including rectovaginal fascia in the two thirds of caudal, taking the mucosa and fascia with same stitch, about 1.5 cm down from the upper stitch and pulling to achieve significant narrowing of vaginal canal.

Perineoplasty is performed with 2-0 Vicryl, taking the superficial transverse and bulbocavernous muscles medially. The rest is closed with 3-0 and 4-0 Vicryl.

Anal skin tags are considered for treatment, only once proctologist rules out anorectal pathology. Anesthesia is performed with infiltration of the base anal skin tag. Surgical excision is done from the base without using sutures in most of cases, unless the open plane were greater than 1 to 2 cm².

Clinical Security Protocol

This clinic has a minor surgery operating room registered and authorized by local health authorities for the performance of low-risk surgeries using LA.

Absence of cardiovascular risk factors is considered as inclusion criteria to perform these surgeries under LA. During surgery, the blood pressure, heart rate, and oxygen saturation are continuously monitored through digital monitor. Even in low-risk patients, we have protocol to handle unexpected serious complications that may require resuscitation, blood transfusions, hospital transfer, and so on. For

these cases, we have a fast transfer and admission options in at least 4 nearby highly complex centers.

Discharge and Follow-up Protocol

Once the surgery is finished, the patient goes to a recovery room with a comfortable, semi-seated couch. After 45 minutes, the patient is examined and if there is no bleeding, discharge is indicated with detailed written instructions with medication dosages, rest measures (including sexual abstinence for 6 weeks), and intimate hygiene care. We prescribe meloxicam 15 mg orally once a day for 7 days, ketoprofen 100 mg 3 times a day for 3 days, ciprofloxacin 500 mg twice a day for 7 days, and application of Madecassol cream (*Centella asiatica*) for 3 weeks. We also recommend the application of intermittent local ice during the first 24 hours. In case of possible complications, all patients can directly contact the treating surgeon on their mobile phone.

Our follow-up protocol considers a control at first and sixth weeks, when discharge is granted. All patients report their status in relation to surgery between 2 and 3 months later.

Statistics

Continuous variables were reported through medians and range, while categorical variables were described by percentages.

Patient satisfaction with surgical result was evaluated through ordinal categorical scale (very satisfied, satisfied, indifferent, dissatisfied, or very dissatisfied), applied 2 months after surgery.

Comparative cost evaluation was carried out in the case of labiaplasty, comparing the cost of same surgery performed under traditional anesthesia in a medium-complexity health center.

Ethical Aspects

All patients, or the responsible adult in the case of minors (18 years), were previously informed about surgical and anesthetic technique to be used and all signed an informed consent.

Results

Patients and Surgeries

Information from 185 patients was collected, with a median age of 39 years old (range: 14-80), all healthy women, without risk factors or cardiovascular disease. A total of 246 total interventions were performed, including multiple elective surgeries and re-interventions, due to revisions or complications (Table 1).

Table 1. Surgeries Distribution.

Surgery	n (%)	Median age (range)
Type I Labiaplasty	99 (40.2)	35 (14-68)
Type II Labiaplasty	34 (13.8)	35.5 (18-60)
Vaginoplasty	32 (13.0)	38 (30-55)
Anal skin tag removal	27 (11.0)	42 (30-68)
Perineoplasty	16 (6.5)	44.5 (30-80)
Labia mayora lifting	14 (5.7)	45.5 (30-60)
Labiaplasty revisions	9 (3.7)	39 (18-54)
Type III Labiaplasty (restorative)	7 (2.8)	41 (25-43)
Pubic liposuction	3 (1.2)	34 (28-38)
Resuture	3 (1.2)	36 (31-51)
Haematoma post labiaplasty	1 (0.4)	14 (-)
Perineal abscess	1 (0.4)	43 (-)
Total	246 (100)	39 (14-80)

Labiaplasty was the most common surgery (n = 140), covering 57% of all surgeries performed under LA. The most frequent was type I labiaplasty, which consists of labia resection and, in some cases, includes partial removal of clitoral foreskin. Type II labiaplasty, which considers wide resection of clitoral hood, was the second most performed surgery in this series (Figure 1). All cases of restorative labiaplasties (type III) were patients previously operated in other centers.

Multiple elective surgeries in the same surgical act (as combinations of labia minora labiaplasty, vaginoplasty, perineoplasty (Figure 2) labia majora lifting and anal skin tag removal) were performed in 20% of patients (n = 37): 2 surgeries in 27 patients, 3 surgeries in 8 patients, and up to 4 elective surgeries in 2 patients.

Complications

All patients attended follow-up visits. Dehiscence was the most frequent complication in our series, observed in 4% of all surgeries performed (n = 10); of which, 90% presented spontaneous resolution. Resuture due to bleeding or dehiscence was performed in 5 cases. (Table 2)

Surgery checking is considered when a small part of the original surgery is corrected, generally with aesthetic purpose and usually carried out by the same surgeon (unlike reoperation) and always without additional medical charges. In case of labiaplasties performed at our center, unsatisfactory result leading to subsequent revision and repair was observed in 2.9% (n = 4) of all 140 labiaplasties: 2 cases after a type I, 1 case after a type II, and 1 case after a type III labiaplasty.

As potential complications of any vulva/vagina-perineum surgery, hematoma or abscess were observed in 2 cases. Vulvar hematoma secondary to unilateral labia minora reduction in a 14-year-old patient was drained under LA, and

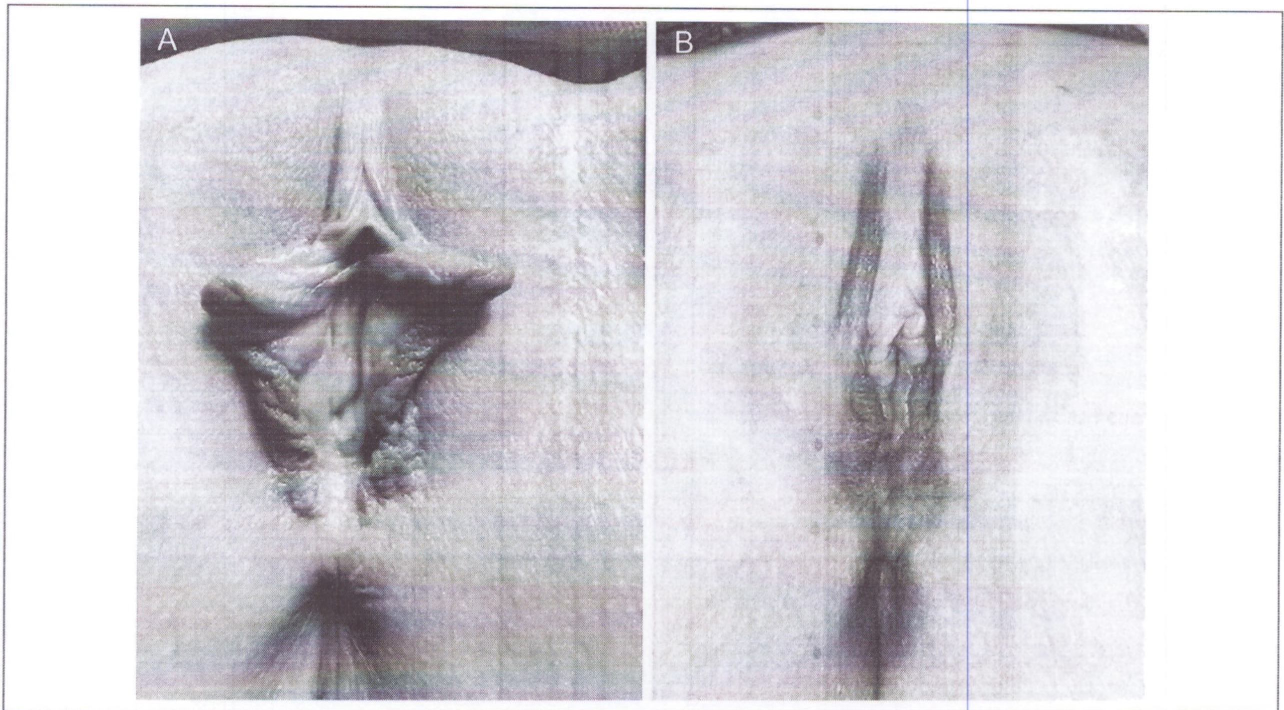


Figure 1.[AQ: 10] (A) Before and (B) after labiaminoraplasty.

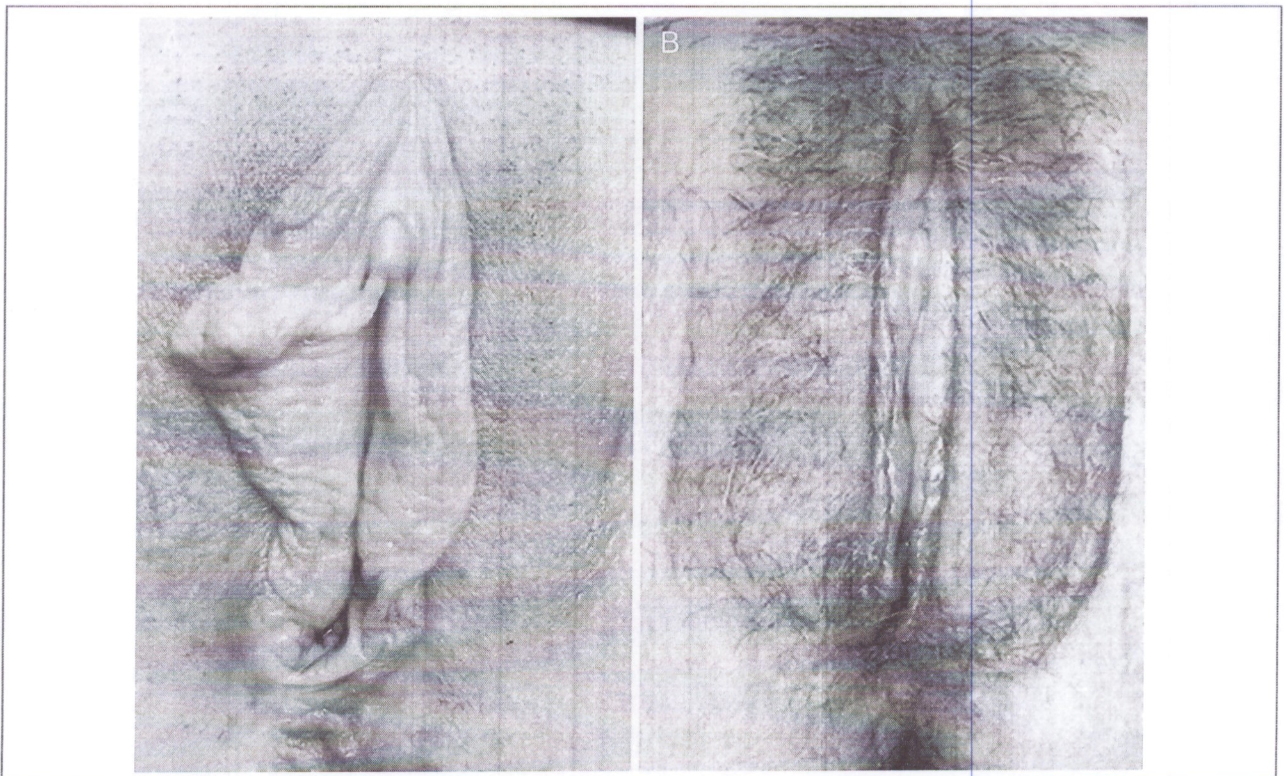


Figure 2.[AQ: 11][AQ: 12] (A) Before and (B) after labiaminoraplasty.[AQ: 13]

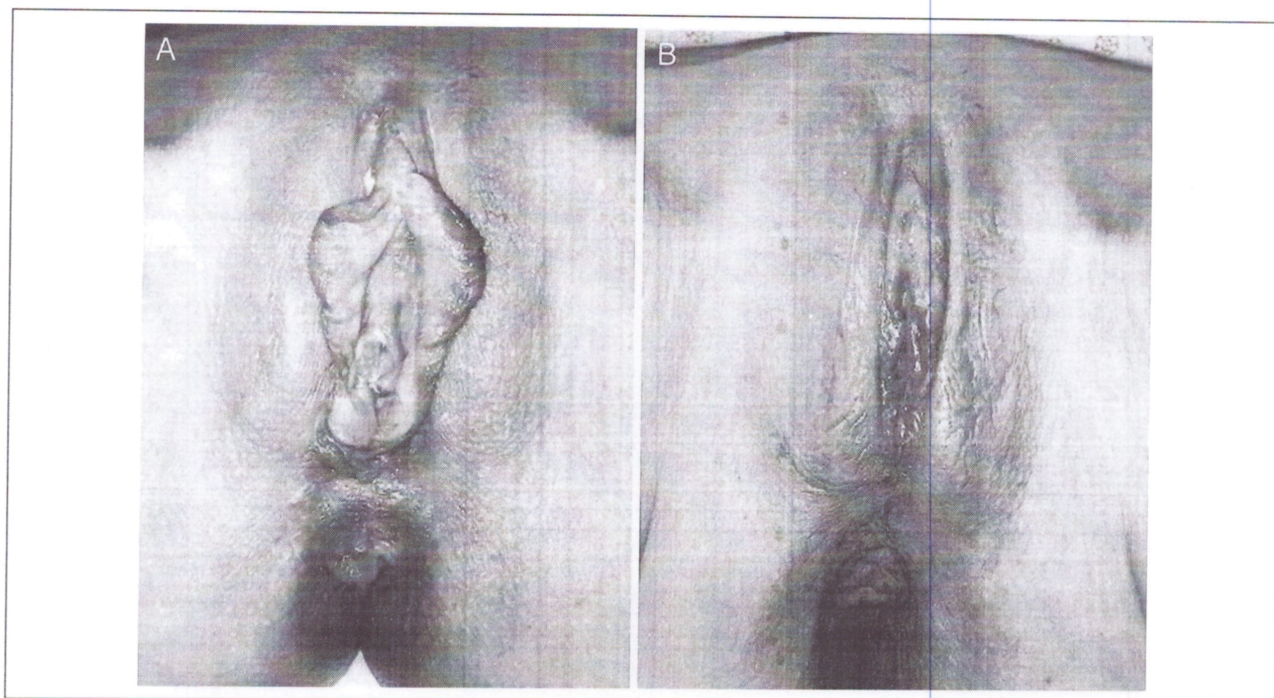


Figure 3.[AQ: 14][AQ: 15] (A) Before and (B) after colpoperineoplasty & labiaminoraplasty.

Table 2. Surgical Complications.

Complication	n (%)[a]
Wound dehiscence with spontaneous resolution	9 (3.6)
Post-surgical bleeding requiring suturing	4 (1.6)
Surgical revision and suturing	4 (1.6)
Wound dehiscence requiring suturing	1 (0.4)
Perineal abscess	1 (0.4)
Vulvar hematoma	1 (0.4)
Total	20 (8.1)

[a]Complication as percentages of total surgeries.

applied hemostatic suture, resolving with satisfaction of patient and her parents. A vaginoperineal abscess was observed after one of our colpoperineoplasties resolved through drainage and antibiotic treatment.

No complications inherent to the use of LA, such as lidocaine toxicity, or the use of vasoconstrictors, were observed.

Patient satisfaction

Satisfaction evaluation carried out 2 months after surgery showed high satisfaction level with technique used in all patients: 89.2% (n = 165) of patients responded "very satisfied" on the ordinal scale used; while the remaining 10.8% were "satisfied," corresponding to patients who underwent labiaplasty revision / repair or who had any of the complications described. There were no reports of dyspareunia or decreased sensation. None regretted not having chosen a more complex anesthetic procedure or clinical center.

Cost Comparison

Without considering surgeon's fees, labiaplasty performed with LA in our center has approximate price of US$800, including the cost of operating room (OR) and medical supplies. We estimated a labiaplasty performed in a low complexity hospital center (including recovery room and a stay of at least 6 hours) reaches a minimum price of US$1200. In case of a highly complex hospital, the price can easily exceed US$2500, including at least $400 the professional fees of an anesthesiologist (or more if more than one surgery is performed). Thus, labiaplasty with LA implies a saving of between US$400 and US$1700 for patients.

Discussion

To our knowledge, this is the first series report including several cosmetic gynecology surgeries performed under LA. Lista et al in 2015 have published a retrospective series of 113 patients with primary aesthetic labia minora reduction, where patient is given the choice to have surgery performed under local or general anesthesia, but only one patient chose to have surgery with sedation and LA.[11] Recently, Nwaoz et al has retrospective compared results of central wedge labiaplasty, performed under general anesthesia versus under LA anesthesia on a total of 32 women, reporting that

postoperative asymmetry and dehiscence were the most common complications in both groups; with similar outcomes regarding asymmetry, dehiscence, scarring, and the need for revision surgery, without cases of infection, hematoma, decreased sensation, or dyspareunia.[12]

In our experience, the most frequent complication was wound dehiscence. We believe this is due to the use of polyglactin in the internal suture of the labia minora. We have recently switched to the use of poliglecaprone (Monocryl), and we have already seen a favorable evolution without this complication. We hope to present these results in a future publication.

In these series, there was no significant increase in complications and these were resolved satisfactorily in all cases, without requiring hospitalizations or increased costs for patient, and there were no complications inherent to the use of LA.

These surgeries with local anesthesia and minimally invasive techniques allow greater accessibility, given the significant cost reduction for patients, which led to them becoming more massive in the last 10 years. In our opinion, only surgeons with a very solid experience and training in this field should perform these surgeries with LA.

Declaration of Conflicting Interests[GQ: 2]

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD[GQ: 3]

Jack Pardo https://orcid.org/0000-0002-5290-4947

References

1. Pelosi MA III, Pelosi MA II. Cosmetogynecology. In: Sheth SS, ed. *Vaginal Hysterectomy*. 2nd ed. New Delhi, India: Jaypee Brothers Medical Publishers; 2014:320.
2. Radman HM. Hypertrophy of the labia minora. *Obstet Gynecol*. 1976;48:78-80.
3. Hodgkinson DJ, Hait G. Aesthetic vaginal labiaplasty. *Plast Reconstr Surg*. 1984;74(3):414-416.
4. Pelosi MA. Cosmetogynecology. In: Jain N, ed. *State of the Art Atlas of Endoscopic Surgery in Infertility and Gynecology*. 2nd ed. St. Louis, MO: Jaypee Brothers Medical Publishers; 2010:422-439.
5. Pardo J, Solà VD, Ricci PA, Guiloff EF, Freundlich OK. Colpoperineoplasty in women with a sensation of a wide vagina. *Acta Obstet Gynecol Scand*. 2006;85(9):1125-1127.
6. Goodman MP, Placik O, Matlock D, et al. *Female Genital Plastic and Cosmetic Surgery*. Goodman MP editor. 1st ed., London, England. Wiley & Sons; 2016.
7. Hamori CA, Banwell PE, Alinsod R, eds. *Female Cosmetic Genital Surgery*. 1st ed. New York, NY: Thieme Publishers; 2017.
8. Pardo J, Solá V, Ricci P, Guilloff E. Laser labiaplasty of the labia minora. *Int J Gynec Obst*. 2005;93:38-43.
9. Pardo J, Solá V, Galán G, Contreras L. Labioplastía genital, experiencia y resultados en 500 casos consecutivos. *Rev Chil Obstet Ginecol*. 2015;80(5):394-400.
10. Pardo J, Solá V, Ricci P. Labia Mayora Lifting: aesthetic and functional solution for hypertrophy and/or flaccidity of the labia mayora. *Am J Cosmetic Surg*. 2012;29(2):128-132.
11. Lista G, Bhavik M, Singh Y, Ahmad J. The safety of aesthetic labiaplasty: a plastic surgery experience. *Aesthetic Surg J*. 2015;35(6):689-695.
12. Nwaoz B, Sinnott CJ, Kuruvilla A, Natoli NB. Outcomes after central wedge labiaplasty performed under general versus local anesthesia. *Ann Plast Surg*. 2021;87(1s suppl 1):S17-S20.

Author Biographies[AQ: 16]

Jack Pardo, Gynecologist & Cosmetic Gynecologist MD, Clinica Ginestetica, Santiago, Region Metropolitana, Chile.

Vicente Solá, Gynecologist & Cosmetic Gynecologist MD, Clinica Ginestetica, Santiago, Region Metropolitana, Chile.

Hernán Guzmán, Proctologist MD, Clinica Ginestetica, Santiago, Region Metropolitana, Chile

Isabel Oporto, Clinica Ginestetica, Santiago, Region Metropolitana, Chile.