

Postoperative Cosmetic Expectations for Patients Considering Labiaplasty Surgery: Our Experience with 550 Patients

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ABSTRACT

Vulvar cosmetic surgery is becoming an increasingly requested and performed surgical procedure in women. Though there are many beliefs as to the desires of the patient's postoperative expectations, scientific research is lacking. The current paper evaluates patients' preoperative perceptions and postoperative expectations of cosmetic vulvar surgery. This is a retrospective analysis of 550 patients who are considering labia minora reduction. Preoperative questionnaires that address patients' preoperative perceptions of their labia as well as their postoperative expectations were reviewed and analyzed.

Mean age was 36 (range 12 to 65) and parity 1.52 (range 0 to 8). On examination, 99.5% (547/550) of patients had labia minora protruding beyond the distal edge of the majora. Patients' postoperative desires included: 97.8% preferred the labia minora to be "at" or "below" the level of the labia majora compared with 2.2% preferring it to be "at" or "just above" the labia majora; 96.9% preferred "pink" edges compared with 3.1% desiring "dark" edges.

Women presenting for vulvar cosmetic surgery have preoperative perceptions and postoperative expectations that should be considered with regard to surgery. Understanding a patient's postoperative labiaplasty expectations should be considered prior to engaging in surgery. Doing so could possibly alter the surgeon's labiaplasty technique and reduce the need for subsequent revision surgeries.

INTRODUCTION

An increasing number of healthy women are considering surgery to create morphological changes to their normal vulva.¹ Specifically, more women are seeking a surgical reduction of their labia minora. As with all other patients who seek cosmetic surgery to modify normal anatomy, many women are looking to improve their functional quality of life as well as to improve their aesthetics.² Usually women and men undergoing cosmetic surgery are asked by their surgeon to give input as to their postoperative aesthetic desires. The three characteristics of the labia that can be changed by a surgeon at the time of surgery are the labia's length, symmetry, and skin edge color. It is intuitive that patients considering labiaplasty desire symmetrical labia; however, the

length of the labia and skin edge color are a matter of personal preference and should be investigated.

Though the authors truly believe that all labia are "normal" in size, there is a range that is more acceptable to the patients considering labiaplasty based on function and aesthetics. This is not different from patients who are considering cosmetic surgery for any other body parts such as the breast, nose, earlobe, and penis. For example, all penises are considered normal in size, but thousands of men get penile enlargements yearly. Conversely, all labia are normal in size, but thousands of women yearly prefer to reduce the size of their labia. Though some literature suggests that patients want their vulvas to be flat with no protrusion beyond the labia majora, no study has ever investigated this statement.³⁻⁵

The woman's self-concept of her

beauty and sexuality is a complex psychological concept of her body image and self-esteem.⁶ It is important to understand a woman's perception of her anatomy as well as her postoperative cosmetic desires, which lead her to seek cosmetic surgery. In an attempt to achieve a high level of patient satisfaction and minimize the need for secondary surgeries, surgeons should strongly consider a patient's postoperative desire before embarking on an irreversible cosmetic surgery. Surgical theories as to women's postoperative cosmetic labiaplasties desires up until this point have been just theories. The authors believe the surgeons who perform labiaplasties should consider a patient's postoperative expectations, emphasizing skin edge color as well as length, and choose their surgical technique accordingly.

Labiaplasty Questionnaire

(Medical Illustration Attached)

- 1) Are you here for labia reduction surgery? Yes ☐ No ☐
- 2) Does your labia minora protrude past the labia majora? (see medical illustration) Yes ☐ No ☐
- 3) What color are your labia minora skin edges? pink ☐ dark ☐
- 4) Have your labia minora skin edges changed in color over time? Yes ☐ No ☐
- 5) At what point did your skin edge color change from pink to dark ?
Adolescence ☐ Pregnancy ☐ Other _____
- 6) Have you always had enlarged labia minora? Yes ☐ No ☐
- 7) If "No" to question #6 then when did the enlargement occur?
Adolescence ☐ Pregnancy ☐ Other _____
- 8) If you decide on labia minora reduction (labiaplasty), would you prefer that your labia reduced so that the edge :
a) Still protrudes past the labia majora ☐
b) To the level of the labia majora ☐
c) Below the level of the labia majora ☐
- 9) If you decide on labia minora reduction (labiaplasty), would you prefer that your labia skin edges are : Pink ☐ Dark ☐

Patient Name _____ Date of Birth _____

Date of Exam _____

MATERIAL AND METHODS

A retrospective chart review was performed on all patients considering labia minora reduction surgery who presented for evaluation from August 1, 2007 to July 19, 2011 at our specialty center. Each patient was given our standard new patient questionnaire for all patients considering labia minora reduction surgery (Fig. 1) with an accompanying medical illustration of "normal" female external genitalia (Fig. 2). The questionnaire addresses the patient's current preoperative perception as to the appearance of her labia minora as well as the patient's desired postoperative aesthetic expectations. In an attempt to limit medical professional bias, questionnaires are completed prior to nurse or surgeon contact. All patients underwent standard examination of the labia and vulvar region. IRB approval was obtained to complete the analysis.

RESULTS

The retrospective review yielded 550 patients who were evaluated in our clinic for labia minora reduction surgery. The patients' mean age was 36 (range 12 to 65) and the mean parity was 1.52 (range 0 to 8). The review also revealed that 89.5% (492/550) of

Figure 1. Labiaplasty intake questionnaire.

the patients considered themselves Caucasian; 5.0% (27/550) African American; 3.1% (17/550) Hispanic; 0.7% (4/550) Asian; and 0.9% (5/550) as "other" as their answer for race.

The preoperative perception assessment revealed: 98.7% (541/548) responded "yes" for being at the office for labia reduction surgery and 1.3% (7/548) responded "no." However, all patients were evaluated during their office visit for potential labia reduction surgery, and no patient refused or changed their minds about the evaluation. Also 93.7% (503/537) of patients felt their labia minora protruded beyond the edge of the labia majora, and 6.3% (34/537) did not. On examination, 99.5% (547/550) of patients desiring evaluation for labiaplasty were found to have the minora protruding beyond the distal edge of the majora. Preoperatively, 70.8% (378/534) considered their skin edges were dark versus 29.2% (156/534) who thought otherwise. When asked if they thought their labia minora skin edges have changed in color (pink to dark) over time, 66.2% (347/524) of patients said "yes," and 33.8% (177/524) answered "no." Patients with labial skin edge color changes chose adolescence 36.4% (122/335), pregnancy 43.9% (147/335), and other 19.7% (66/335) as the time when the change occurred. When asked if they had always had enlarged labia minora: 46.2% (249/539) of patients answered "yes"; 53.8% (290/539) said "no." Of the 273 patients who answered "no" to the previous question, 260 patients answered the question "When did the enlargement occur?" And 53.5% (147/275) answered that it had occurred "during pregnancy," 32.0% (88/275) "during adolescence," and 14.5% (40/275) responded "at other times."

The final two questions focused on the patients' postoperative desired cosmetic expectations. When using the labia majora as a point of reference for labia minora length: 51.9% (262/505) preferred the minora edge below the majora edge; 35.8% (181/505) preferred the minora even with the majora edge; 10.1% (51/505) circled both (to the edge of the labia majora as well as below the edge of the labia majora); 1.6% (8/505) chose beyond the edge of the majora is still protruding; and 0.6% (3/505) patients circled both a) past the majora and b) to the level of the majora.

Finally, 97% (507/523) desired pink labia postoperatively, 3% (16/523) desired dark edges. An ethnic subdivision of postoperative desired labia color results was also tabulated and revealed those preferring pink as follows: 98.7% (462/468) Caucasian, 58.3% (14/24) African American, 100% (17/17) Hispanic, and 100% (9/9) Asian.

DISCUSSION

Patient indications for labia minora reduction surgery primarily include complaints of vulvar discomfort and dissatisfaction with genital appearance.^{2,5} Some researchers suggest an attempt should be made to compare preoperative morphological measurements with their published "normal" range of labia lengths.¹ These researchers emphasize establishing specific labia lengths and neglect the patients' actual reasons for surgery, which are symptoms and the patient's personal perception of their labia size/length. As well their emphasis is on a specific measured labia length versus a proportion or relationship to a neighboring fixed structure. Plastic surgery has not come up with a range of average nose lengths but instead the nose is tailored in terms of length, width, and symmetry based upon facial proportions and neighboring landmarks such as the cheekbones, eye socket, lips, and forehead.

Vulvar discomfort/irritation/pain are subjective criteria, and only the patient can determine if they are severe enough to warrant surgical correction. A patient's decision is based on the perception of pain/discomfort/irritation and not on a specific "abnormal" measurement. Dissatisfaction with genital appearance is also a personal patient choice and should not be corralled by measurement criteria. A published review from 1949 revealed the labia minora lengths of 2981 patients. In 87.7% of patients the labia minora measured < 2cm, 4.9% measured 2 cm, 5.7% measured 3 cm, 1.1% from 4 cm to 5 cm, and 0.7% > 5cm.⁷ Although it has been suggested that labia minora are considered hypertrophic if they exceed 4 cm,⁵ or 5 cm,⁸ again the exact measurement of the labia is not the issue, but instead it is the patient's perception of labia length aesthetic appeal. It is

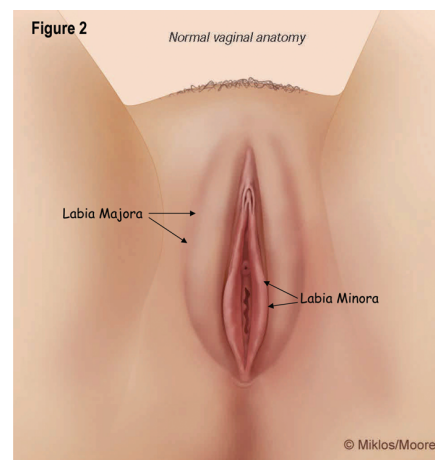


Figure 2. Medical illustration that accompanies the questionnaire in Figure 1.

obvious from our study that it is the protrusion of the labia minora beyond the distal edge of the majora and not a specific length that is problematic for these patients who desire labiaplasty consultation. Though this conclusion sounds elementary, it appears this is the first study to attempt to identify a specific relationship between the labia minora and a neighboring anatomic structure versus a defined length of measurement.

In our study, all patients proceeded with a labia evaluation despite 1% of patients responding that they were not presenting for labia reduction surgery. This probably is a result of human error and not interpreting the questionnaire correctly. Ninety-five percent of patients who presented for evaluation responded to the questionnaire saying their labia minora protruded beyond the edge of the majora; however, on examination 99.5% of all 550 women were noted to have their labia minora protruding beyond the edge of the majora. Other preoperative patients' perceptions include: approximately two-thirds of patients believe their labia skin edges have become darker over time, of which 80% believe this change occurred during either adolescence or pregnancy; another one-half of patients believe they acquired labia enlargement over time, of which 85% believed the change occurred during adolescence or pregnancy. These two milestones, adolescence and pregnancy, were chosen because these are the two periods of a woman's life with greatest increase in hormonal levels.

A review of the questions specific to postoperative expectations is most clari-

lying: 98% of patients preferred their labia minora skin edge at the level of or below the level of the labia majora, and 97% preferred pinker labia minora skin edges postoperatively. Intuitively, these patients understand it is the protrusion of the minora that gives them the feeling of enlarged labia. If the labia were not protruding beyond the neighboring majora, they probably would not be considering labia minora reduction. Based on this information the surgeon should be considering how to lower the edge of the minora so it no longer protrudes and not just reduce the length of the labia minora to a specific labia measured length, which may result in a continued protruding minora. The authors suggest not being overly aggressive with the labiaplasty, which can result in a reduction below the distal edge of the majora but may result in complete labia minora amputation and sometimes leads to a dissatisfied patient and a potential malpractice suit. An ethnic breakdown for postoperative skin color expectations reveals that only 61% of the African American survey respondents favored pink skin edges, and among all other specified ethnic groups more than 99% favored pink skin edges.

Because of the fact that most patients believe that their labia minora protrude beyond the edge of the majora and upon examination we confirmed that 99.5% of patients' labia minora protrude beyond the edge of the majora, it is intuitive that it's the protrusion that is the problem and not a specific "abnormal" length. Considering this statement and realizing that 98% of patients would prefer their postoperative labia minora

skin edge at the level of or below the level of the majora reinforces the concept that labiaplasty surgery should be based upon labia minora/majora proportions. The authors suggest that this information has clinical application to one's practice. Failure to heed this advice can result in unsatisfactory results and a patient seeking a second surgery (Fig. 3).

Though there are many types of labiaplasty techniques to reduce the size of the labia, the two most commonly utilized are the labial edge trimming/contouring/linear resection technique and the W or V central wedge resection technique. In 1975, Radman described the linear resection technique when he presented a single case study in a 17 year old who had vulvar irritation from labia hypertrophy.⁸ Essentially, the protruberant tissue is excised and the labial edge is oversewn.⁹⁻¹² This technique reduces the size of the labia by removing the most distal edge of the minora while simultaneously removing the so called "normal border" and its natural color (Fig. 4).

In 1998, Alter introduced a new labiaplasty technique known as the central wedge resection that would preserve the "normal" labial edge and anatomy (Fig. 5).¹³ Since that time most subsequent papers on labiaplasty use similar techniques and subscribe to the mantra of maintaining natural color and normal borders.^{3-5,14-16}

Interestingly, in our study most patients do not want to maintain their "natural color," they would prefer pinker/light labia skin edge color postoperatively. Anecdotally, many patients

offer their reasoning simply as pinker is more "youthful." If one were only trying to attempt to reduce the labia length to the level of the patient's preference, in skilled hands either a linear resection or a central wedge resection will do the job. However, if one is trying to remove the darkened skin edges, a central wedge resection will not accomplish the task and this can only be accomplished by doing a linear edge resection (Figs. 4 & 5).

Some experts have recommended cosmetic vulvar plastic surgery only if there is an adherence to four medical ethical principles: autonomy, no maleficence, beneficence, and justice.¹⁷ In other words, the patient must be able to make decisions regarding surgery without medical impairment or coercive influence (autonomy); the procedure must have a greater chance of helping the patient than harming her (no maleficence); the surgeon should be adequately trained in the surgery in an attempt to meet the patient's expected cosmetic results (beneficence); and finally, the greater good of society's resources is taken into consideration and their financial coffers should not be resources for the purpose of cosmetic surgery (justice). The authors believe that this paper especially endorses the concept of nonmaleficence by emphasizing a patient's postoperative cosmetic desires and choosing a surgery that will give her results that meet her expectations. Failure to meet a patient's expectations can often result in secondary surgery and an unsatisfied patient. In an attempt to meet the cosmetic desires of patients, it is the authors' recommenda-



Figure 3. Postoperative labiaplasty photo of a patient who now desires a second surgery. Her two reasons: 1) persistent labia minora protrusions, and 2) dark skin edges.

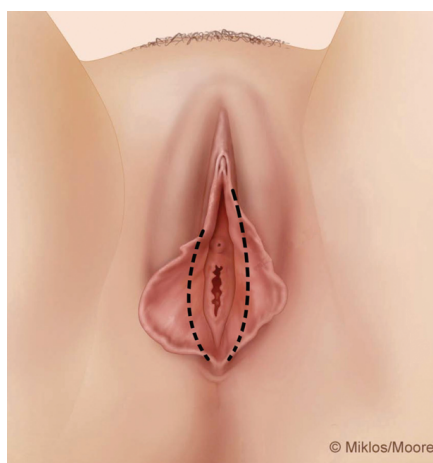


Figure 4. Labiaplasty - linear resection technique.

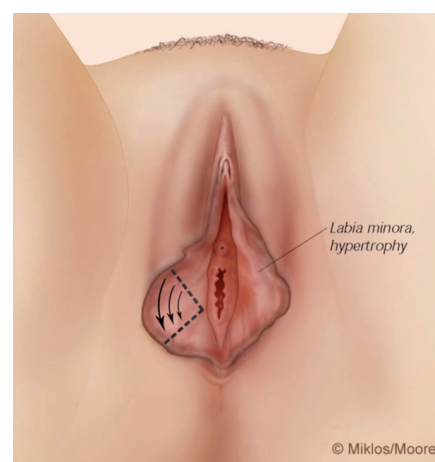


Figure 5. Labiaplasty - central wedge resection technique.

tion that the experienced surgeon should utilize the technique that will best benefit the patients' desired results.

CONCLUSION

It is well documented that patients undergo labia minora reduction surgery for two main reasons: pain/discomfort/irritation and aesthetics. Until now there have been no scientific studies that attempt to define abnormally elongated labia. Despite others suggesting that abnormal elongated labia should be some specific measurement, these authors believe this study confirms that patients desiring labia minora reduction are those with minora protruding beyond the edge of the majora and not some specific labia length. The measurement of the length of the labia minora may be considered somewhat or totally irrelevant; rather it is the size of the majora that may have the major impact on a woman's perception of normality. Additionally, among women seeking labiaplasty, the vast majority of these patients have postoperative expectations of labia minora reduced to the level or below the level of the adjacent labia majora. This usually can be accomplished, depending upon the height of the labia majora, using either the linear resection technique or the central wedge resection technique. Sometimes the labia minora cannot be reduced below the level of the adjacent labia majora because the labia majora lack adequate adipose and essentially are too flat.

However, if surgeons are focused on meeting the postoperative expectations of patients, perhaps they should consider the labial skin edge color in addition to length. As previously noted, the lin-

ear resection and the central wedge resection both reduce labia length, but each procedure gives different skin edge color results. The authors suggest surgeons consider using linear resection techniques for patients who would prefer to have lighter or pinker skin edges and possibly using a central wedge resection in those patients who would prefer to maintain their darker skin edge border. This suggestion is only warranted for surgeons who are equally well versed in both surgical techniques. Though no surgeon can guarantee 100% patient satisfaction, the authors believe incorporating the patient's postoperative desires into the surgical plan may help to minimize patient postoperative dissatisfaction as well as secondary surgical procedures. **STI**

AUTHORS' DISCLOSURES

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