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Wedge Labioplasti Sonrası Hasta Memnuniyeti ve Komplikasyon Oranları

Patient Satisfaction and Complication Rates Following Wedge Labiaplasty

Yasin Ceylan[1], Özlem Yüksel Aybek[2], Eray Çalışkan[3]

[1]Fethiye Devlet Hastanesi, Kadın Hastalıkları ve Doğum Bölümü, Muğla, Türkiye

[2]Bağcılar Eğitim ve Araştırma Hastanesi, Kadın Hastalıkları ve Doğum Bölümü, Istanbul, Türkiye.

[3]Okan Üniversitesi, Kadın Hastalıkları ve Doğum Bölümü, İstanbul, Türkiye.

ÖZ

Giriş: Labioplasti, son yıllarda artan estetik ve fonksiyonel beklentiler doğrultusunda kadınlar arasında giderek daha fazla tercih edilen bir genital kozmetik cerrahi yöntemidir. Bu çalışmada, wedge labioplasti sonrası hasta memnuniyeti, cinsel fonksiyon ve görülen komplikasyon oranlarının değerlendirilmesi amaçlanmıştır.

Yöntem: Prospektif olarak yürütülen bu çalışmaya, aynı cerrahi ekip tarafından wedge labioplasti uygulanan 88 hasta dahil edilmiştir. Hastaların demografik verileri, cerrahi teknik detayları ve komplikasyonları kaydedildi. Tüm hastalara ameliyat öncesi ve ameliyat sonrası 3. ayda Kadın Cinsel İşlev Ölçeği (FSFI) ve Kadın Genital Öz İmaj Ölçeği (FGSIS) uygulanmıştır. Veriler SPSS 25 ile analiz edilmiş, $p<0.05$ değeri anlamlı kabul edilmiştir.

Bulgular: Hastaların ortalama yaşı 37,8 ± 6,9 olup, %94,3'ü estetik kaygılarla labioplasti yaptırmıştır. En sık tercih edilen cerrahi yöntem wedge rezeksiyon (%57,9) idi. Labioplasti sonrası en yaygın komplikasyon %5,7 ile enfeksiyondu. Ameliyat sonrası FGSIS skoru anlamlı düzeyde artmış (10,9 → 25,8, $p<0.001$), FSFI toplam skoru ise 15,8'den 28,2'ye yükselmiştir ($p<0.001$). Tüm FSFI alt parametrelerinde de istatistiksel olarak anlamlı iyileşme saptanmıştır.

Sonuç: Wedge labioplasti sonrası kadınların cinsel işlevleri, genital öz imajları ve genel memnuniyet düzeylerinde anlamlı artış gözlenmiştir. Komplikasyon oranlarının düşük ve hasta memnuniyetinin yüksek olması, bu cerrahinin uygun endikasyonlarla güvenli şekilde uygulanabileceğini desteklemektedir.

Anahtar Kelimeler: labioplasti, genital estetik cerrahi, cinsel işlev, FSFI, FGSIS

ABSTRACT

Objective: Labiaplasty has become increasingly popular among women in recent years due to both aesthetic and functional expectations. This study aimed to evaluate patient satisfaction, sexual function, and complication rates following wedge labiaplasty.

Method: In this prospective study, 88 patients who underwent wedge labiaplasty by the same surgical team were included. Demographic data, surgical technique, and complications were recorded. All patients completed the Female Sexual Function Index (FSFI) and the Female Genital Self-Image Scale (FGSIS) before surgery and at 3 months postoperatively. Data were analyzed using SPSS version 25, with a significance level set at $p<0.05$.

Results: The mean age of the patients was 37.8 ± 6.9 years. Aesthetic concerns were the primary motivation for surgery in 94.3% of cases. The wedge resection technique was used in 57.9% of patients. The most common complication was infection (5.7%). Postoperative FGSIS scores significantly improved (from 10.9 to 25.8, $p<0.001$). FSFI total scores increased from 15.8 to 28.2 ($p<0.001$), with statistically significant improvement across all FSFI subdomains.

Conclusion: Wedge labiaplasty led to significant improvements in women's sexual function, genital self-image, and overall satisfaction. The low rate of complications and high satisfaction support the safety and efficacy of this surgical technique when appropriately indicated.

Keywords: lymphedema, ultrasonography, sarcopenia, elasticity imaging techniques, breast cancer

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Correspondence: Özlem Yüksel Aybek, Bağcılar Training and Research Hospital, Department of Obstetrics and Gynecology, Istanbul, Türkiye.
E-mail: yukselozlem89@gmail.com

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INTRODUCTION

Labiaplasty, a surgical procedure aimed at reducing the size of the labia minora, represents the most frequently performed female genital cosmetic surgery (FGCS) (1). Despite recommendations from certain medical authorities and professional associations against FGCS for purely elective reasons, the rising prominence of this subject in media outlets has contributed to an increasing interest in labiaplasty and related genital aesthetic interventions (2). However, wedge labiaplasty may carry disadvantages such as partial flap ischemia, visible scar lines, and risk of notching.

Evidence suggests that dissatisfaction with body image centered around the genital area increases women's inclination towards FGCS procedures (3). Factors such as labial hypertrophy, asymmetry, functional issues, sexual discomfort, and aesthetic concerns are primary motivations for undergoing labiaplasty (4). In 2023, a total of 18,120 labiaplasty operations were performed in the United States, representing a 67.1% increase between 2019 and 2023 (5). Similar trends have been reported in other countries, including the United Kingdom and Australia (6,7). A review of the literature demonstrates that postoperative satisfaction rates among labiaplasty patients often exceed 90% in numerous studies (8-10).

In addition to high satisfaction rates with surgical outcomes, research indicates that a woman's body image and the appearance of the genital area are closely linked to the quality of sexual life and orgasm (11). A negative perception of body image has been associated with decreased sexual desire and difficulty achieving orgasm (12). Labiaplasty has been shown to positively influence body image, genital self-image, sexual satisfaction, and overall body confidence (13). In a study of 166 labiaplasty patients, 93% reported improved self-confidence, while 71% experienced enhanced sexual quality of life (11). Similarly, a retrospective study from Germany, involving 812 labiaplasty patients, found that 90% of participants experienced psychological improvements post-surgery (14).

This study aimed to systematically investigate the factors motivating women to undergo labiaplasty and to assess the surgery's impact on body image, genital self-image, sexual satisfaction, and body confidence, both pre- and post-operatively.

MATERIALS AND METHODS

This prospective study included 88 patients who underwent labiaplasty, all performed by the same surgical team. The study received approval from the Ethics Committee of Istanbul Medipol University (Decision No: 1130, Date: 11.09.2025). Informed consent was obtained from all participants. Demographic data, such as age, parity, and mode of delivery, were collected and documented. Preoperative examinations of the external genitalia were conducted, and the labia minora were categorized into three types: type I (labial hypertrophy near the vaginal introitus), type II (labial hypertrophy extending laterally to the superior portion of the clitoral prepuce), and type III (labial hypertrophy extending across the entire clitoral prepuce) (15). Labial asymmetry was also documented. Patients younger than 18 years of age were not performed labiaplasty and 27 patients who were not sexually active were excluded from the study.

Each patient was prompted to specify their reasons for undergoing labiaplasty, such as labial hypertrophy, functional concerns, or aesthetic preferences. During the preoperative evaluation, the surgical technique planned for labiaplasty, along with any additional procedures (e.g., labia majoraplasty or clitoral hood reduction), was documented. The labia minora, clitoral region, and labia majora were marked with sterile markers in accordance with the chosen surgical technique prior to the procedure (Figure 1). Caprosyn sutures (size 4.0 or 5.0, round needle) were used for interrupted suturing. Patients were hospitalized for one night postoperatively, and upon discharge oral antibiotics were prescribed twice daily for five days. They were also advised to clean the surgical site with an antiseptic solution twice daily for one week. Representative pre- and postoperative (1st month) photographs of three patients are presented in Figures 2, 3 and 4.

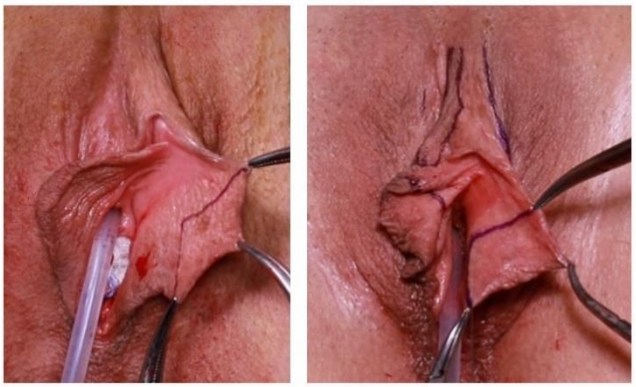

Figure 1. Intraoperative marks are made for wedge labiaplasty.

Postoperative follow-up assessments were carried out during the first week, first month, and third month. All patients were allowed to practice sexual intercourse one month after the surgery. Any complications or cases requiring revision surgery were documented. All patients completed the 19-item Female Sexual Function Index (FSFI) and the 7-item Female Genital Self-Image Scale (FGSIS) questionnaires before the surgery and at the third month postoperatively. Patients were instructed to complete these questionnaires in private, in a designated room (16,17).

Standardized Measures (Questionnaires)

The FSFI (Female Sexual Function Index) is a questionnaire with 6 subparameters: desire, arousal, lubrication, pain associated with vaginal penetration, satisfaction, and orgasm. It assesses sexual function in women over the past 4 weeks. A total score ranging from 0 to 36 is calculated, where higher values indicate better sexual function (16). A score below 26.55 is considered indicative of sexual dysfunction (18).

The FGSIS (Female Genital Self-Image Scale) is a seven-item questionnaire designed to assess women's opinions and perceptions of their genitalia. The survey offers 4 response options (strongly agree, agree, disagree, and strongly disagree), with scores ranging from a minimum of 7 to a maximum of 28. Higher scores reflect a more positive genital self-image (17).

Statistical Analysis

The data collected through the questionnaires were analyzed using IBM SPSS Statistics (version 25; IBM Corporation, Armonk, NY). The categorical data was presented as numbers and percentages, and continuos variables are presented as mean and standart deviation of the mean The FGSIS and FSFI scale scores were compared using paired samples t test for parametric variables. Statistical significance was defined as $p<0.05$.

Figure 2. Preoperative and postoperative (1st month) photographs of patient

Figure 3. Preoperative and postoperative (1st month) photographs of patient

Figure 4. Preoperative and postoperative (1st month) photographs of patient

RESULTS

The mean age of the patients participating in this study was 37.8 ± 6.9 years, with an age range of 22 to 54 years. Among the patients, 41 (46.6%) had a history of vaginal delivery, while 47 (53.4%) had undergone cesarean section. Furthermore, 29 patients (33%) were identified as smokers, whereas 59 patients (67%) were categorized as non-smokers. Classification of the labia minora revealed that type 2 was the most prevalent type observed in both labia. Labial asymmetry was documented in 44 patients (50%) (see Table 1).

The average duration of the surgical procedures was 87 ± 28 minutes, with a range of 35 to 150 minutes. Aesthetic concerns emerged as the predominant motivation for surgery, reported by 83 of the 88 patients (94.3%). In conjunction with labia minoraplasty, 49 patients (55.7%) also underwent labia majoraplasty, while 66 patients (75%) had hudoplasty as an additional surgical intervention. The most frequently employed surgical technique was wedge resection, utilized in 57.9% of cases. Among the patients who underwent labia majoraplasty, 30 (34.1%) received hyaluronic acid injections, 14 (15.9%) were treated with lipid fillers, and 5 (5.7%) underwent surgical excision. Lateral hudoplasty was the predominant technique applied in hudoplasty procedures, accounting for
65.9% of cases. Electrocautery was employed for resection in 35 patients, whereas scissors or a scalpel were utilized in 53 patients.

The most common complication associated with labia minoraplasty and labia majoraplasty was infection, occurring in 5.7% and 2.3% of patients, respectively. In the case of hudoplasty, wound dehiscence was the most frequently observed complication, affecting 6.8% of patients.

Local infections were managed with oral and topical antibiotics, and revision labiaplasty was performed in 4 patients who experienced dehiscence following the procedure (Table 2). In all four revision cases, wound edges healed successfully after secondary repair, and no further complications were observed.

When comparing the preoperative and postoperative total scores of the Female Genital Self-Image Scale (FGSIS), the preoperative score was 10.9 ± 1.8, while the postoperative score was 25.8 ± 1.1, indicating a statistically significant improvement ($p < 0.001$). The total score of the Female Sexual Function Index (FSFI) increased from 15.8 ± 2.6 preoperatively to 28.2 ± 2.7 postoperatively, also showing statistical significance ($p < 0.001$). Subgroup scores of the FSFI—desire, arousal, lubrication, orgasm, satisfaction, and pain—also demonstrated statistically significant improvements after the surgery ($p < 0.001$) (Table 3). Preoperatively, 73 patients (82.95%) had a total FSFI score below 26.55, whereas postoperatively, only 11 patients (12.5%) had scores below this threshold. Preoperatively, 78 patients (88.63%) had a total FGSIS score between 7-14 points, 6 patients (6.81%) scored between 15-21 points, and 4 patients (4.54%) scored between 22-28 points. Postoperatively, no patients scored in the 7-14 range, while 12 patients (13.63%) scored between 15-21, and 76 patients (86.36%) scored between 22-28 points

Table 1. Demographic Data

		Mean ± SD
Age		37.8 ± 6.9 (22-54)
Parity		1.6 ± 1 (0-5)
		N (%)
Mode of delivery	**Vaginal Birth**	41 (46.6%)
	C-section	47 (53.4%)
Smoking		29 (33%)
Left labium minor classification	**Type 1**	39 (44.3%)
	Type 2	41 (46.6%)
	Type 3	8 (9.1%)
Right labium minor classification	**Type 1**	39 (44.3%)
	Type 2	43 (48.9%)
	Type 3	6 (6.8%)
Presence of Asymmetry	**Present/Observed**	44 (50%)
	Absent/Not observed	44 (50%)

Table 2. Surgical Characteristics

		Mean ± SD	N (%)
Operation duration (min)		87 ± 28 (35-150)	
Reason for operation	**Hypertrophy**		39/88 (44.3%)
	Functional		33/88 (37.5%)
	Aesthetic concern		83/88 (94.3%)
Procedures performed	**L. minoraplasty**		88 (100%)
	L. majusplasty		49 (55.7%)
	Hudoplasty		66 (75%)
L. minoraplasty technique	**Wedge**		51 (57.9%)
	Edge-linear		25 (28.4%)
	Composite		12 (13.7%)
L. majusplasty technique	**Hyaluronic acid**		30 (34.1%)
	Lipid filler		14 (15.9%)
	Surgery		5 (5.7%)
Hudoplasty technique	**Lateral hudoplasty**		58 (65.9%)
	V Hudoplasty		8 (9.1%)
Suture material	**4.0**		37 (42%)
	5.0		51 (57.9%)
Energy modality used	**Cautery**		35 (39.8%)
	Cold		53 (60.2%)
Complications observed in labium minorplasty	**Infection**		5 (5.7%)
	Dehiscence		4 (4.5%)
	Dyspareunia		1(1.1%)
	Contracture		1 (1.1%)
Complications observed in labium majorplasty	**Infection**		2 (2.3%)
Complications observed in hoodoplasty	**Dehiscence**		6 (6.8%)
	Paresthesia		1 (1.1%)
Revision operation	**Yes**		4 (4.5%)

Table 3. Evaluation of FGSIS and FSFI Scores Before and After Surgery				
		Before Surgery Mean±SD	**After Surgery Mean±SD**	**p***
FGSIS total score		10.9 ± 1.8	25.8 ± 1.1	< 0.001
FSFI	**Desire**	2.3 ± 0.6	4.8 ± 0.7	< 0.001
	Arousal	2.3 ± 0.4	4.6 ± 0.7	< 0.001
	Lubrication	2.4 ± 0.6	4.3 ± 0.8	< 0.001
	Orgasm	2.4 ± 0.7	4.5 ± 0.8	< 0.001
	Satisfaction	2.4 ± 0.9	5.2 ± 0.6	< 0.001
	Pain	3.7 ± 0.8	4.5 ± 0.6	< 0.001
	FSFI total score	15.8 ± 2.6	28.2 ± 2.7	< 0.001
FSFI — Female Sexual Function Index; FGSIS — Female Genital Self-Image Scale				

DISCUSSION

Female genital cosmetic surgery (FGCS) procedures are performed either alone or in combination to improve the appearance of the genital area and enhance sexual performance. This study demonstrated that labiaplasty, along with supplementary procedures such as hudoplasty and labia majoraplasty, significantly improved women's body image and sexual function post-surgery.

The factors motivating women to undergo labiaplasty are diverse, with the most common being hypertrophy, asymmetry, and concerns related to both functional and aesthetic appearance. In a study conducted by Miklos et al. on 131 labiaplasty patients, 37% underwent the procedure for aesthetic reasons, 32% for functional issues, and 31% for both aesthetic and functional concerns (19). In our study, 83 of 88 patients (94.3%) identified aesthetic concerns as their primary reason for pursuing labiaplasty. Goodman et al., in their evaluation of "patient satisfaction" and "improvement in sexual function," reported that 97% of women expressed overall satisfaction following FGCS, with the majority noting an enhancement in sexual function (8). Similarly, Sharp et al., in a retrospective study of women who underwent labiaplasty, observed high levels of postoperative satisfaction, significant improvements in sexual satisfaction and psychological well-being, and a strong correlation between patients' motivations for surgery and their levels of postoperative satisfaction (20). Additionally, psychosocial factors including partner feedback, clothing discomfort, and reduced confidence during physical activity may further contribute to aesthetic dissatisfaction.

Patients should be thoroughly informed about potential complications following labiaplasty, such as scarring, infection, hypersensitivity, or loss of sensation, and wound dehiscence. Recent studies have presented varying outcomes regarding the safety and complication rates associated with labiaplasty (21,22). In a retrospective study by Köle et al., involving 2,594 labiaplasty patients, 4 cases of dehiscence and 5 cases of infection were reported (21). In our study, infections were noted in 5 patients post-labiaplasty. Birol et al. identified minimal dehiscence in 3 out of 131 labiaplasty patients, none requiring reoperation (3). Similarly, minimal dehiscence was observed in 4 patients within our cohort.

Women with labium minor hypertrophy often report challenges in maintaining personal hygiene, discomfort when wearing swimwear or underwear, and dyspareunia (23). Thus, we believe it is crucial to evaluate not only the impact of labiaplasty on sexual quality of life but also on social quality of life. Numerous studies on cosmetic gynecology have reported improvements in body image and sexual function following genital aesthetic surgeries (24). Similar to our results, Hailparn et al. found significantly higher postoperative scores using the FGSIS questionnaire in their study on labiaplasty (25).

In this study, analysis of the FSFI responses from patients before surgery and at the third postoperative month revealed statistically significant improvements in sexual desire, arousal, lubrication, orgasm, satisfaction, and pain scores following labiaplasty. Alongside increased satisfaction with the aesthetic appearance, we observed that patients' confidence levels improved, contributing to enhanced sexual desire, arousal, and orgasm. Furthermore, we hypothesise that the removal of hypertrophic labial tissue, which can cause friction during intercourse, resulted in a significant reduction in painful sexual experiences.

Turini et al. reported similar findings, noting significant improvements in orgasm and a reduction in painful intercourse by the third-month post-labiaplasty (23). In another study by Goodman et al., patients exhibited increased and sustained sexual satisfaction at 6 and 12 months post-labiaplasty (13). By the end of our study, both total FSFI and total FGSIS scores were significantly higher post-surgery. This improvement can be attributed to the psychological recovery and confidence gained by the patients, leading to greater sexual and social fulfillment. However, studies with longer follow-up periods are necessary to determine the long-term outcomes of cosmetic gynecological procedures.

CONCLUSION

Wedge labiaplasty is a safe and effective procedure that leads to significant improvements in sexual function and self-image while maintaining a low complication profile. This study supports the use of wedge labiaplasty in appropriately selected patients.

Ethics Committee Approval: This study was approved by the Ethics Committee of Istanbul Medipol University (Decision No: 1130, Date: 11.09.2025). Informed consent was obtained from all participants.

Author Contributions: All authors contributed equally to the study

design, data collection, analysis, and manuscript preparation.

All authors have read and approved the final version of the manuscript.

Conflict of Interest: The authors declare that they have no conflict of interest.

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Informed Consent: Written informed consent was obtained from all participants included in the study.

REFERENCES

1. Alter GJ. Aesthetic labia minora and clitoral hood reduction using extended central wedge resection. Plast Reconstr Surg. 2008;122(6):1780-1789.

2. Goodman MP. Female cosmetic genital surgery. Obstet Gynecol. 2009;113(1):154-159.

3. Birol İlter P, Doğan O. Subjective outcomes of female genital cosmetic procedures: a prospective study with a median follow-up of 18 months. J Health Sci Med. 2024;7(5):500-504.

4. Doğan O, Ucar E, Yassa M. Does the surgical margin affect sexual function following linear labiaplasty technique? Aesthet Surg J. 2024;44(4):NP271-NP278.

5. The Aesthetic Society's Aesthetic Plastic Surgery National Databank Statistics. Aesthetic Plast Surg Stats. 2023;14.

6. Crouch NS, Deans R, Michala L, Liao LM, Creighton SM. Clinical characteristics of well women seeking labial reduction surgery: a prospective study. BJOG. 2011;118(12):1507-1510.

7. Australian Government Department of Human Services. Medicare benefits schedule item statistics report: Item 35533 [Data file]. 2015. Available at: http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp . Accessed November 1, 2015.

8. Goodman MP, Placik OJ, Benson RH 3rd, et al. A large multicenter outcome study of female genital plastic surgery. J Sex Med. 2010;7(4 Pt 1):1565-1577.

9. Rouzier R, Louis-Sylvestre C, Paniel BJ, Haddad B. Hypertrophy of labia minora: experience with 163 reductions. Am J Obstet Gynecol. 2000;182(1):35-40.

10. Doğan O, Yassa M. Major motivators and sociodemographic features of women undergoing labiaplasty. Aesthet Surg J. 2019;39(12):NP517-NP527.

11. Amos N, McCabe M. Positive perceptions of genital appearance and feeling sexually attractive: is it a matter of sexual esteem? Arch Sex Behav. 2016;45(6):1249-1258.

12. Satinsky S, Reece M, Dennis B, Sanders S, Bardzell S. An assessment of body appreciation and its relationship to sexual function in women. Body Image. 2012;9(1):137-144.

13. Goodman MP, Placik OJ, Matlock DL, et al. Evaluation of body image and sexual satisfaction in women undergoing female genital plastic/cosmetic surgery. Aesthet Surg J. 2016;36(9):1048-1057.

14. Gress S. Composite reduction labiaplasty. Aesthetic Plast Surg. 2013;37(4):674-683.

15. Cunha FI, Silva LM, Costa LA, Vasconcelos FRP, Amaral GT. Nymphoplasty: classification and technical refinements. Rev Bras Cir Plast. 2011;26:507-511.

16. Aygin D, Aslan FE. Kadın cinsel işlev ölçeği'nin Türkçeye uyarlaması [The Turkish adaptation of the female sexual function index]. Turkiye Klinikleri J Med Sci. 2005;25:393-399.

17. Herbenick D, Reece M. Outcomes assessment: development and validation of the female genital self-image scale. J Sex Med. 2010;7(5):1822-1830.

18. Wiegel M, Meston C, Rosen R. The female sexual function index (FSFI): cross-validation and development of clinical cutoff scores. J Sex Marital Ther. 2005;31(1):1-20.

19. Miklos JR, Moore RD. Labiaplasty of the labia minora: patients' indications for pursuing surgery. J Sex Med. 2008;5(6):1492-1495.

20. Sharp G, Tiggemann M, Mattiske J. A retrospective study of the psychological outcomes of labiaplasty. Aesthet Surg J. 2017;37(3):324-331.

21. Köle E, Doğan O, Arslan G, et al. Labiaplasty outcomes and complications in Turkish women: a multicentric study. Int Urogynecol J. 2024;35(5):1045-1050.

22. Nwaoz B, Sinnott CJ, Kuruvilla A, et al. Outcomes after central wedge labiaplasty performed under general versus local anesthesia. Ann Plast Surg. 2021;87(1S Suppl 1):S17-S20.

23. Turini T, Weck Roxo AC, Serra-Guimarães F, Abreu ML, de Castro CC, Aboudib JH, Nahas FX. Reply: The impact of labiaplasty on sexuality. Plast Reconstr Surg. 2018;142(4):592e-593e.

24. Liao LM, Creighton SM. Requests for cosmetic genitoplasty: how should healthcare providers respond? BMJ. 2007;334(7603):1090-1092.

25. Hailparn TR. How does labia minora labiaplasty surgery impact patients' perceptions of their genitals? Obstet Gynecol. 2020;135:23S.