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Review Article

Lip feminization: A review [☆]

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ABSTRACT

Background: Facial feminization involves a broad array of procedures tailored to transgender women, with lip feminization emerging as a crucial element because of its significant impact on gender expression. Despite its importance, there is a dearth of studies singularly dedicated to lip feminization within this demographic.

Objectives: This review aimed to consolidate knowledge on various techniques (surgical and nonsurgical), outcomes, and patient satisfaction related to lip feminization, thereby highlighting its integral role in facial feminization and its significance in affirming transgender women's identity.

Methods: A systematic search of PubMed, MedLine, and Embase databases was conducted, focusing on studies published up to April 18, 2024. Inclusion criteria were centered on articles addressing the techniques and outcomes of lip feminization. A rigorous screening process was applied to identify relevant literature, which was then reviewed for data extraction on techniques, outcomes, complications, and patient satisfaction.

Results: Among the initial 28 publications, 21 articles remained. These studies provided insights into surgical and nonsurgical techniques for lip feminization and reported high-satisfaction rates

[☆] This work has never been presented at a meeting.

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within a broader scope of facial feminization surgeries. Notably, specific data on lip feminization were sparse and often extrapolated either from broader facial feminization research or studies on cisgender populations.

Conclusion: This review established that lip feminization is a crucial but under researched aspect of gender-affirming care. Recognizing the high-satisfaction rates reported for facial feminization, this study advocated for detailed, procedure-specific research to optimize outcomes for transgender women seeking lip feminization.

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Introduction

Facial feminization spans a broad range of surgical and nonsurgical procedures aimed at aligning transgender women's facial features more closely with their gender identity. This process is an integral part of gender-affirming care. Among the various components of facial feminization, lip feminization stands out as a key element. Effectively, the lips play a central role in facial aesthetics, often serving as a key marker of femininity. Even subtle adjustments to lip shape, volume, and contour can profoundly impact the overall perception of gender. Incorporating lip procedures into facial feminization surgeries allows refined lip proportions to align with the desired feminine aesthetic.

This review delved into the nuanced techniques and considerations involved in lip feminization, detailing the innovative approaches that span from intricate surgeries to minimally invasive nonsurgical procedures and their outcomes. By examining current literature on surgical and nonsurgical techniques and outcomes of lip feminization, this review aimed to highlight the critical role of lip feminization in the broader context of facial feminization, underscoring its significance in the comprehensive support of transgender women's journeys toward self-affirmation and well-being.

Methods

A comprehensive literature search of PubMed, MedLine, and Embase databases was conducted for studies published through April 18, 2024, on techniques and outcomes of lip feminization with the terms "lip feminization" OR "lip feminization surgery" OR "facial feminization injectables" OR "lip feminization botulinum toxin" OR "facial feminization fillers" OR "transgender AND lip."

Two reviewers separately screened the titles, abstracts, and full texts of the articles identified. Disagreement between the reviewers was resolved by a third independent reviewer. Additional articles were selected after reviewing the references for the identified articles. Data on techniques, outcomes, complications, and patient satisfaction were collected. Articles that did not present relevant information on lip feminization or failed to mention it altogether were excluded.

Results

A total of 28 titles of potentially relevant publications were identified from the database query (Figure 1). The full texts of the 28 articles were reviewed in detail. Of these, 24 fit our inclusion criteria; 4 were excluded for failing to mention lip feminization. The further exclusion of review articles and articles with no relevant information regarding lip yielded 21 final articles (Figure 1). Given the lack of published literature focusing on lip feminization in transgender women, the final articles revolved around facial feminization, with subsections tackling lip feminization. Even so, with literature

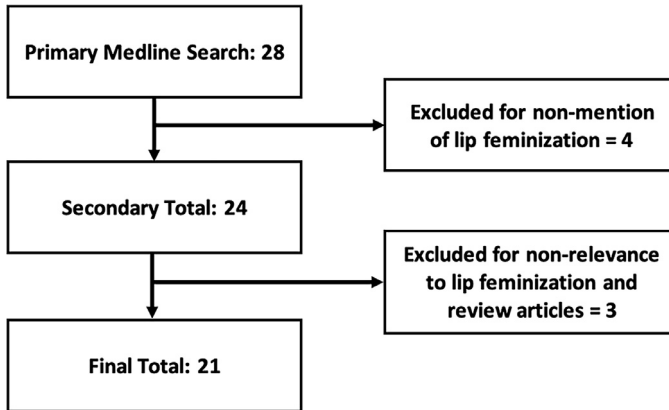


Figure 1. Search algorithm for articles related to lip feminization.

regarding facial feminization in transgender women itself being scarce, data from studies carried out on cisgender patients were utilized to supplement our literature review.

Discussion

Aesthetic lip analysis

Aesthetic facial analysis plays a crucial role in achieving harmonious and affirming outcomes in facial feminization, given the face's central role in gender presentation. To refine the desired level of masculinity or femininity, a nuanced understanding of anatomical disparities between genders is imperative. However, it is essential to recognize that aesthetic goals differ from one individual to another, necessitating a personalized approach to the analysis in question. Factors such as facial proportions, bone structure, skin elasticity, and ethnic considerations should be meticulously assessed to tailor surgical plans for optimal results. Ultimately, a systematic grasp of both masculine and feminine facial aesthetics, coupled with an informed sensibility of the patient's unique identity, is fundamental to achieving facial harmony and satisfactory results in transgender surgeries.

The basis for lip feminization procedures lies in the differences between male and female upper lips (Figure 2). Typically, the average upper lip height (i.e., from subnasal to stomion) is greater in men than in women (23.6 vs. 20.6 mm, respectively).¹ Still, the vermilion height remains consistent across genders.^{1,2} Consequently, the relative height of the vermilion to the upper lip is notably higher in women than in men.³

When the lips are in resting position, women show more of their upper incisors than men.⁴ Additionally, measurements such as labial volumes, mouth width, and upper lip thickness are consistently greater in men^{5,6} even as they vary with age.^{1,5} On another note, women exhibit more pronounced and deeper wrinkles than men, and their perioral skin has significantly fewer appendages.⁷

For transgender women, the primary goal of both surgical and nonsurgical interventions is to achieve a more feminine appearance through techniques such as lip lifting and lip augmentation.^{8–11} These procedures are aimed at reshaping the lips to align with the desired feminine aesthetic, including enhancing lip volume and contour to create softer, fuller lips. By addressing the unique characteristics of the lips, these treatments are instrumental in helping transgender women attain greater harmony between their physical appearance and gender identity, thereby enhancing their overall well-being and self-confidence. It is important to note that full lips are not exclusive to one gender¹²; thus, volume restoration may not be relevant for all transgender women. Therefore, careful patient selection remains paramount.

Table 1 summarizes the procedures employed in lip feminization.



Figure 2. Masculine versus feminine features of the lips.

Table 1
Summary of procedures employed in lip feminization.

	Surgical techniques	Nonsurgical techniques
Lip lift	Bullhorn technique Direct lip lift Endonasal lip lift	Not applicable
Lip augmentation	Fat graft Palmaris longus tendon graft Cellular allogenic dermal graft Alloplastic implant (silicone or Gore-Tex)	Soft-tissue filler Botulinum toxin (lip flip) Hormone therapy

Surgical techniques

Surgical feminization of the upper lip, employing a combination of lip lift and augmentation procedures, yields transformative results in facial feminization surgeries for transgender individuals. This comprehensive approach not only enhances the upper lip’s aesthetic appeal but also complements other feminizing facial procedures, contributing to a harmonious and visually appealing facial transformation.

A lip lift is prominent among surgical techniques for feminizing the lips. It effectively reduces the height of the upper lip to align with typical female dimensions. Several techniques have been described to achieve a lip lift, with the “bullhorn” technique being the most prevalent. This method involves excising a section of the white lip in the shape of a bull’s horn.¹³ The position of the final incision is such that it is located within the shadow of the nose. A meticulous technique produces an almost invisible scar.¹³ Care is taken to remove no more than 25 % of the original philtrum length to avoid disrupting the balance of the lower face.^{14,15}

Parag et al. recommended that 5–7 mm of length be excised from the central part of the lip¹⁶ in facial feminization, but that number is based on the author’s experience. The degree of excision should be individualized depending on the desired aesthetic goals. Although initially developed to counteract the effects of lip aging and produce a shorter, younger lip,¹⁷ this technique is frequently utilized in facial feminization surgeries to achieve a feminine look.^{14,18–20} In gender feminization lip

lift, the goal was to shorten the nasal base-to-vermilion border distance. Increased vermilion show and lip pout are of secondary importance, because these traits are generally similar between men and women.¹⁴

In patients undergoing rhinoplasty and a lip lift, rhinoplasty can be done at the level of the superior incision of the lip lift.²¹ Doing so eliminates the risk of skin necrosis and allows the scar to remain concealed, although this approach is technically more laborious and requires more meticulous dissection. When lip lift is performed together with a rhinoplasty, rhinoplasty is performed after the labial excision and before skin closure.²¹ Conversely, a retrospective study by Insalaco et al. demonstrated that a lip lift and an open rhinoplasty can be safely executed through two separate columellar incisions without risk of necrosis or excessive scarring.²² Lip lift is performed after rhinoplasty to potentially incorporate alar base resection into lip-lift incision when necessary.

In patients undergoing mandibular surgery and a lip lift, a lip lift should be performed before any mandibular procedures, because these tend to produce a significant amount of edema that makes judging where to place the bullhorn incision challenging.²³

Other lip-lift techniques may be used: Direct lip lift involves removing skin around the vermilion border and advancing the mucosa to create more fullness. This incision can be visible, hypertrophic, or cause blunting of the vermilion.²⁴ The endonasal lip lift combines the traditional subnasal lift with endonasal flaps extended into nasal vestibules.²⁵ This approach reduces tension in visible areas, improves the scar, and decreases scar migration and upper lip elongation.²⁶ Although these methods are not specifically described in the literature for transgender lip lifts, we hypothesize that they can be used with proper patient selection depending on the surgeon's preference and experience.

Lip augmentation can also be performed surgically through various techniques. First, fat grafting is a permanent technique for lip augmentation. Survival rates of 20 % to 80 % have been described.²⁷ However, mobile areas of the face are less amenable to correction compared with less mobile areas, such as the malar and lateral cheek. Fat tissue survival in the lip region is moderate.²⁸ Intramuscular fat injection and young patient age are predictors of better graft uptake in this area.²⁹ Second, using the palmaris longus tendon provides another reliable autologous option for soft-tissue upper lip augmentation, with improved vertical height/lateral projection and maintenance of lip mobility.³⁰ Third, cellular allogenic dermal grafts can be used alone or in combination with fat grafting. It is a safe, reliable, and lasting lip augmentation method that provides increased vermilion show compared with results obtained with autologous fat injection alone.³¹ Finally, the use of alloplastic implants, such as silicone³² or Gore-Tex,³³ constitute an additional option for surgical lip augmentation, with good stable success rates in augmentation but with an increased risk of infection and rejection.

Nonsurgical techniques

Nonsurgical lip feminization focuses on lip augmentation using injectables to help patients achieve a feminine lip.^{34–36} Hyaluronic acid is predominantly used as an injectable.³⁴ Lip shaping necessitates low-viscosity fillers, with the vermilion border as the preferred injection site, whereas lip volumizing necessitates higher viscosity and G-prime fillers, with injections generally administered at the wet-dry mucosal border.^{34,35} Given the lack of specific guidelines for using injectables in transgender women, considerations such as patient preference, ethnic background, and provider experience should be considered during administration. Fillers may be used to decrease perioral and Marionette lines.^{37,38} Although these features are not feminizing per se, they can positively boost overall patient satisfaction.

Botulinum toxin derivatives are another tool for lip feminization. Injections into the pars marginalis of the orbicularis oris muscle in the upper lip can provide more lip show (known as a “lip flip”), allowing a more feminized appearance.³⁹ Lip flip can result in natural-appearing, fuller lips with minimal downtime.⁴⁰

Transgender women often seek suppression of androgenic effects and commonly use antiandrogen therapy with feminizing exogenous estrogens.⁴¹ Hormone therapy not only affects broader physical characteristics but also influences the lips. When 71 transgender women were asked about hormone therapy effects on facial features, lip fullness was the second most common feature reported after facial hair.⁴² Although hormone therapy is primarily prescribed for various other indications in trans-

gender individuals, it can also produce additional effects on the lips, contributing to their feminization. This secondary effect on the lips complements the primary goals of hormone therapy, aiding in the overall process of gender affirmation by aligning physical features more closely with the individual's gender identity.

Laser hair removal is another popular nonsurgical procedure among transwomen⁴² targeting facial hair, including the lips (mustache removal). Although hormone therapy has a major effect on facial hair, laser hair removal is essential for a more permanent result.⁴³

Complications

Subnasal lift techniques may lead to adverse scarring, with rates ranging from 6.7 % to 10.5 %.⁴⁴ Such complications can typically be managed with local wound care and secondary revision surgery. Other potential complications include infection, wound dehiscence, lip asymmetry, and alar distortion.^{44,45} Overresection can also yield detrimental outcomes. In some patients with a short lower face, philtrum height is not increased and is not amenable to lifting. Performing lip resection in these patients could lead to undesirable dental show.¹⁴ As such, patient selection is paramount to achieve an aesthetically pleasing result.

In facial feminization surgeries, the foremost indication for revision surgery is the undercorrection of feminine features, including lip treatments.⁴⁶ Thus, achieving a delicate balance is essential to avoid undercorrection and overcorrection, which could compromise the aesthetic integrity of the face. By prioritizing adequate patient selection and operative planning, surgeons can mitigate the risk of complications and enhance the overall satisfaction and well-being of transgender patients undergoing lip-lift surgeries.

Furthermore, minimally invasive procedures such as injectables are rarely covered by insurance, prompting patients to seek cheaper alternatives with less qualified injectors at nonauthorized centers.^{47,48} There exist numerous reports on transgender patients who have undergone these procedures by nonmedical personnel with subsequent morbidity (necrosis, foreign body reaction, etc.).^{49,50} Therefore, it is necessary to consult certified physicians for such procedures. By doing so, transgender women can safeguard their health, minimize risks, and receive quality care tailored to their specific needs, fostering a safer and more positive healthcare experience.

Relevance of lip feminization

Lip feminization constitutes an integral component of the broader spectrum of facial feminization. Although no specific research has exclusively focused on lip feminization until now, facial feminization remains a priority for transgender women. Although most transgender men prioritize modifications to the chest over their face or genitals, transgender women typically place a higher emphasis on facial feminization, often undergoing these procedures before considering chest or genital surgery.^{42,51} This prioritization underscores the intricate role that facial appearance—with the lips at its forefront—plays in the gender affirmation process, reflecting its profound impact on personal identity.

Transgender patients who opt for lip-lift surgeries generally are older than those who do not pursue this procedure. This trend suggests that the motivation behind undergoing lip lifts extends beyond mere aesthetic feminization; these patients also aim to address age-related facial changes.⁵² By combining the goals of reversing aging effects with enhancing feminine features, lip feminization surgeries provide a dual benefit, helping patients achieve a more youthful and femininely aligned appearance.

Patient satisfaction

Although no studies have specifically reported patient satisfaction after lip feminization, the overall satisfaction rates after facial feminization are notably high.^{8,53–55} In a survey assessing the reported quality-of-life postfacial feminization—which included structural fat grafting to the lips—all participants responded positively, indicating improved quality of life with regard to physical, mental, and social functioning after facial feminization surgery.⁵³ Undergoing these surgeries at a younger age

and experiencing shorter wait times for surgery were associated with increased overall facial satisfaction.⁵⁵

Although lip feminization is a relatively small component of facial feminization procedures, its significance cannot be understated in the context of overall facial aesthetic enhancement and patient satisfaction. The lips play a crucial role in defining facial harmony and gender expression as a focal point in facial aesthetics. Even subtle alterations to lip shape, volume, and contour may profoundly impact the perceived femininity of the face. As such, acknowledging the weight lip feminization carries as part of facial feminization streamlines a holistic transformation, synergistically enhancing the effects of other feminizing procedures such as rhinoplasty, brow contouring, and jawline refinement.

Limitations

This discussion was constrained by a notable scarcity of primary research specifically focused on lip feminization in transgender women and described various surgical and nonsurgical approaches to lip feminization in transgender women. However, several of these techniques have been adapted from research carried out on cisgender patients rather than being developed from research centered around transgender populations. This extrapolation is a discernible limitation of this review, because it may not fully account for the unique anatomical and aesthetic requirements of transgender individuals. Future research should aim to refine and describe specific modifications to surgical and nonsurgical procedures tailored for lip feminization in transgender women. Such studies are essential to develop more suitable and inclusive guidelines.

Conclusion

To sum up, to our knowledge, this study is the first scholarly work to center exclusively around lip feminization. This review revealed a multifaceted approach encompassing surgical and nonsurgical procedures for transgender women seeking lip feminization as a part of their transition and highlighted key points about the procedure's techniques and outcomes while reporting high-patient satisfaction. Precise technique and careful patient selection are the cornerstone of providing optimal care. Lip feminization is a fundamental aspect of the facial feminization process crucial for the gender affirmation journey of many transgender women. The topic lacks extensive independent research, indicating a need for further focused studies.

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References

1. Anic-Milosevic S, Mestrovic S, Prlić A, Slaj M. Proportions in the upper lip-lower lip-chin area of the lower face as determined by photogrammetric method. *J Craniomaxillofac Surg*. 2010;38(2):90–95.
2. Fernández-Riveiro P, Suárez-Quintanilla D, Smyth-Chamosa E, Suárez-Cunheiro M. Linear photogrammetric analysis of the soft tissue facial profile. *Am J Orthod Dentofacial Orthop*. 2002;122(1):59–66.
3. Kar M, Muluk NB, Bafaqeeh SA, Cingi C. Is it possible to define the ideal lips? *Acta Otorhinolaryngol Ital*. 2018;38(1):67–72.
4. Motta AFJda, de Souza MMG, Bolognese AM, Guerra CJ, Mucha JN. Display of the incisors as functions of age and gender. *Aust Orthod J*. 2010;26(1):27–32.
5. Sforza C, Grandi G, Binelli M, Dolci C, De Menezes M, Ferrario VF. Age- and sex-related changes in three-dimensional lip morphology. *Forensic Sci Int*. 2010;200(1–3):182 e1–182.e7.
6. Gibelli D, Codari M, Rosati R, et al. A quantitative analysis of lip aesthetics: the influence of gender and aging. *Aesthetic Plast Surg*. 2015;39(5):771–776.
7. Lindsey S, Rosen A, Shagalov D, Weiss E. Sex differences in perioral rhytides—Does facial hair play a role? *Dermatol Surg*. 2019;45(2):320–323.
8. Morrison SD, Vyas KS, Motakef S, et al. Facial feminization: systematic review of the literature. *Plast Reconstr Surg*. 2016;137(6):1759–1770.
9. Siringo NV, Berman ZP, Boczar D, et al. Techniques and trends of facial feminization surgery: a systematic review and representative case report. *Ann Plast Surg*. 2022;88(6):704–711.

10. Barnett SL, Choe J, Aiello C, Bradley JP. Facial feminization surgery: anatomical differences, preoperative planning, techniques, and ethical considerations. *Medicina (Kaunas)*. 2023;59(12):2070.
11. Villavisanis DF, Blum JD, Liou L, et al. Real face analysis of masculinity-femininity, facial ratios, and attractiveness. *Ann Plast Surg*. 2023;91(2):287–293.
12. Deschamps-Braly JC. Commentary on: nonsurgical management of facial masculinization and feminization. *Aesthet Surg J*. 2019;39(5):NP138–NP139.
13. Ramirez OM, Khan AS, Robertson KM. The upper lip lift using the “bull’s horn” approach. *J Drugs Dermatol*. 2003;2(3):303–306.
14. Salibian AA, Bluebond-Langner R. Lip lift. *Facial Plast Surg Clin North Am*. 2019;27(2):261–266.
15. Altman K. Facial feminization surgery: current state of the art. *Int J Oral Maxillofac Surg*. 2012;41(8):885–894.
16. Telang PS. Facial feminization surgery: a review of 220 consecutive patients. *Indian J Plast Surg*. 2020;53(2):244–253.
17. Tonnard PL, Verpaele AM, Ramaut LE, Blondeel PN. Aging of the upper lip: part II. Evidence-based rejuvenation of the upper lip—A review of 500 consecutive cases. *Plast Reconstr Surg*. 2019;143(5):1333–1342.
18. Dang BN, Hu AC, Bertrand AA, et al. Evaluation and treatment of facial feminization surgery: part II. Lips, midface, mandible, chin, and laryngeal prominence. *Arch Plast Surg*. 2022;49(1):5–11.
19. Van Boerum MS, Salibian AA, Bluebond-Langner R, Agarwal C. Chest and facial surgery for the transgender patient. *Transl Androl Urol*. 2019;8(3):219–227.
20. Boucher F, Gleizal A, Mojallal A, Bachelet JT. Facial feminization surgery - middle and inferior third. *Ann Chir Plast Esthet*. 2017;62(2):122–130.
21. Bellinga RJ, Capitán L, Simon D, Tenório T. Technical and clinical considerations for facial feminization surgery with rhinoplasty and related procedures. *JAMA Facial Plast Surg*. 2017;19(3):175–181.
22. Insalaco L, Spiegel JH. Safety of simultaneous lip-lift and open rhinoplasty. *JAMA Facial Plast Surg*. 2017;19(2):160–161.
23. Hohman MH, Teixeira J. *StatPearls [Internet]*. Transgender surgery of the head and neck. Treasure Island (FL): StatPearls Publishing; 2024. [cited 2024 Apr 19]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK568729/>.
24. Sturm A. Lip lift. *Otolaryngol Clin North Am*. 2022;55(4):835–847.
25. Raphael P, Harris R, Harris SW. The endonasal lip lift: personal technique. *Aesthet Surg J*. 2014;34(3):457–468.
26. Montgomery EA, Vincent AG, Hohman MH, Teixeira JC. Lip lift and lip augmentation. *Oper Tech Otolaryngol Head Neck Surg*. 2023;34(1):46–49.
27. Strong AL, Cederna PS, Rubin JP, Coleman SR, Levi B. The current state of fat grafting: a review of harvesting, processing, and injection techniques. *Plast Reconstr Surg*. 2015;136(4):897–912.
28. Mojallal A, Shipkov C, Braye F, Breton P, Foyatier JL. Influence of the recipient site on the outcomes of fat grafting in facial reconstructive surgery. *Plast Reconstr Surg*. 2009;124(2):471–483.
29. Colić MM. Lip and perioral enhancement by direct intramuscular fat autografting. *Aesthetic Plast Surg*. 1999;23(1):36–40.
30. Trussler AP, Kawamoto HK, Wasson KL, et al. Upper lip augmentation: palmaris longus tendon as an autologous filler. *Plast Reconstr Surg*. 2008;121(3):1024–1032.
31. Castor SA, To WC, Papay FA. Lip augmentation with AlloDerm acellular allogenic dermal graft and fat autograft: a comparison with autologous fat injection alone. *Aesthetic Plast Surg*. 1999;23(3):218–223.
32. Guida S, Mandel VD, Farnetani F, et al. Permanent implants for lip augmentation: results from a retrospective study and presentation of tips and tricks. *J Plast Reconstr Aesthet Surg*. 2017;70(5):699–704.
33. Wang J, Fan J, Nordström REA. Evaluation of lip augmentation with Gore-Tex facial implant. *Aesthetic Plast Surg*. 1997;21(6):433–436.
34. Ascha M, Swanson MA, Massie JP, et al. Nonsurgical management of facial masculinization and feminization. *Aesthet Surg J*. 2019;39(5):NP123–NP137.
35. Cattelan L, Dayan S, Aguilera SB, Viscomi B, Fabi SG. A review of aesthetic considerations for treating the transgender patient. *Dermatol Surg*. 2024.
36. MacGregor JL, Chang YC. Minimally invasive procedures for gender affirmation. *Dermatol Clin*. 2020;38(2):249–260.
37. Pascali M, Quarato D, Carinci F. Filling procedures for lip and perioral rejuvenation: a systematic review. *Rejuvenation Res*. 2018;21(6):553–559.
38. Carruthers J, Carruthers A, Dover JS, Alam M, Ibrahim O. Procedures in cosmetic dermatology: soft tissue augmentation. *Elsevier Health Sci*. 2023:395.
39. Ellis M, Choe J, Barnett SL, Chen K, Bradley JP. Facial feminization: perioperative care and surgical approaches. *Plast Reconstr Surg*. 2024;153(1):181e–193e.
40. Teixeira JC, Ostrom JY, Hohman MH, Nuara MJ. Botulinum toxin type-A for lip augmentation: “lip flip”. *J Craniofac Surg*. 2021;32(3):e273–e275.
41. Unger CA. Hormone therapy for transgender patients. *Transl Androl Urol*. 2016;5(6):877–884.
42. Ginsberg BA, Calderon M, Seminara NM, Day D. A potential role for the dermatologist in the physical transformation of transgender people: a survey of attitudes and practices within the transgender community. *J Am Acad Dermatol*. 2016;74(2):303–308.
43. Roche A, Sedgwick PM, Harland CC. Laser treatment for female facial hirsutism: are quality-of-life benefits sustainable? *Clin Exp Dermatol*. 2016;41(3):248–252.
44. Yamin F, McAuliffe PB, Vasilakis V. Aesthetic surgical enhancement of the upper lip: a comprehensive literature review. *Aesthet Plast Surg*. 2021;45(1):173–180.
45. Gibstein AR, Jabori SK, Danker S. Facial feminization surgery: part 1 of the plastic surgeon’s perspective of gender-affirming surgery. *Plast Aesthet Nurs (Phila)*. 2022;42(3):137–142.
46. Rochlin DH, Chaya BF, Rodriguez Colon R, Onuh O, Rojas A, Rodriguez ED. Secondary surgery in facial feminization: reasons and recommendations. *Ann Plast Surg*. 2022;89(6):652–655.
47. Swink SM, Castelo-Soccio L. Dermatologic considerations for transgender and gender diverse youth. *Pediatr Dermatol*. 2021;38(Suppl 2):58–64.
48. Marks DH, Awosika O, Rengifo-Pardo M, Ehrlich A. Dermatologic surgical care for transgender individuals. *Dermatol Surg*. 2019;45(3):446–457.

49. Sullivan P, Trinidad J, Hamann D. Issues in transgender dermatology: a systematic review of the literature. *J Am Acad Dermatol.* 2019;81(2):438–447.
50. Wilson E, Rapues J, Jin H, Raymond HF. The use and correlates of illicit silicone or “fillers” in a population-based sample of transwomen, San Francisco, 2013. *J Sex Med.* 2014;11(7):1717–1724.
51. Plemons E. Gender, ethnicity, and transgender embodiment: interrogating classification in facial feminization surgery. *Body Soc.* 2019;25(1):3–28.
52. Chou DW, Tejani N, Kleinberger A, Shih C. Initial facial feminization surgery experience in a multicenter integrated health care system. *Otolaryngol Head Neck Surg.* 2020;163(4):737–742.
53. Pavlidis L, Spyropoulou GA, Dionyssiou D, Demiri E. Full facial feminization surgery: patient satisfaction assessment based on 180 procedures involving 33 consecutive patients. *Plast Reconstr Surg.* 2016;138(4):765e–766e.
54. La Padula S, Hersant B, Chatel H, et al. One-step facial feminization surgery: the importance of a custom-made preoperative planning and patient satisfaction assessment. *J Plast Reconstr Aesthet Surg.* 2019;72(10):1694–1699.
55. Alper DP, Almeida MN, Hu KG, et al. Quantifying facial feminization surgery's impact: focus on patient facial satisfaction. *Plast Reconstr Surg Glob Open.* 2023;11(11):e5366.