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A Review of Aesthetic Gynecologic Procedures for Women

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Aesthetic gynecologic surgery is gaining popularity among women and physicians. Aesthetic genital surgery for women encompasses both minimally invasive and open surgical procedures. Cosmetic genital procedures for women described in this article include perineoplasty, vaginoplasty, vaginal rejuvenation, labiaplasty, G-spot enlargement, Bartholin gland surgery, clitoral hoodoplasty, clitroplasty, hymenoplasty, and mons pubis plastic surgery. Based on a review of the literature for each procedure, the article discusses procedural methods and techniques, indications for implementation, potential consequences and side effects of the procedure, nursing implications, patients' motives for undergoing the procedure, and positions of scientific institutions relative to the procedure.

Aesthetic genital surgery for women (ie, individuals assigned female at birth) is an expanding branch of medicine that aims to eliminate medical problems such as dyspareunia (ie, pain during sexual intercourse) and aesthetic problems, such as excessive labial skin (International Federation of Gynecology and Obstetrics [IFGO], 2015). Postpartum or postmenopausal aesthetic gynecology procedures may be required to improve quality of life, sexual satisfaction, and self-esteem. Currently, both nonsurgical (eg, vaginal rejuvenation using hyaluronic acid) and open surgical methods, which are often complementary to the noninvasive treatment, are available (American College of Obstetricians and Gynecologists [ACOG], 2020; IFGO, 2015).

Notably, performing aesthetic genital procedures for women is controversial among physicians. In 2013, the Royal College of Obstetricians and Gynaecologists stated that women may not be sufficiently informed about the effectiveness of aesthetic genital procedures. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the Society of Obstetricians and Gynaecologists of Canada assumed similar positions (Amies Oelschlager et al., 2017). In 2015, the IFGO Committee for the Ethical Aspects of Human Reproduction suggested that physicians performing aesthetic gynecology procedures should inform women about what are considered "normal" anatomical variations of their genital organs. These discussions should occur so that woman can distinguish between nonelective indications for surgery (e.g., female phimosis) and a desire to undergo surgery that is elective and not medically indicated. In 2020, the ACOG issued an opinion stating a lack of sufficient data confirming the effectiveness and safety of aesthetic genital surgery (including vaginal rejuvenation) for women. The ACOG (2020) also expressed the importance of physicians sufficiently informing the patient about the risks associated with aesthetic genital surgery procedures. The ACOG recommended that physicians explain and discuss the involved anatomical structures, describe possible postoperative complications, and suggest noninvasive aesthetic procedures that may eliminate the risks associated with undergoing surgery (Amies Oelschlager et al., 2017).

METHODS

The authors conducted a literature search of the PubMed and Google Scholar databases for original and review articles specific to aesthetic gynecologic procedures for women published between March 29, 2019, and August 24, 2021. Search terms included *aesthetic gynecology*,

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perineoplasty, *vaginoplasty*, *labiaplasty*, and *clitoral hoodoplasty*. The authors also searched for reports and positions of committees and societies of aesthetic surgeons and gynecologists. The number of records identified in the PubMed and Google Scholar databases was 1,352. A total of 82 records were included in the review and analysis. This article provides the results of the authors' review and analysis.

Perineoplasty

Perineoplasty is a surgical reconstruction of the perineum that involves lifting the muscle and connective tissue between the entrance to the vagina and the anus. Women seek to undergo perineoplasty to increase sexual satisfaction and reduce postpartum perineal deformities (Furnas & Canales, 2017; İnan et al., 2015). The procedure also provides relief for vaginismus, dyspareunia, genital warts, inflammation of the perineum, and congenital perineal defects (Woodward & Matthews, 2010). Early diagnosis and treatment of perineal deformities improves the patient's quality of life (Dobbeleir et al., 2011; Mughal et al., 2013).

Before determining whether women are appropriate candidates for genital plastic surgery, physicians and nurses should consider the patient's age and mental stability (i.e., their ability to make appropriate decisions based on the information provided) (Dobbeleir et al., 2011; Mughal et al., 2013).

İnan et al. (2015) studied a group of 40 women who underwent operative plastic surgery for problems related to an episiotomy scar (n = 25; 62.5%), swelling around the vaginal entrance (n = 25; 62.5%), and/or dyspareunia (n = 8; 20.0%). The researchers found that perineoplasty improved sexual satisfaction (n = 35; 87.5%). Furnas and Canales (2017) and Woodward and Matthews (2010) also found that, after the surgery, women who underwent perineoplasty experienced a significant increase in satisfaction during sexual intercourse. Goodman et al. (2010) and Rouzier et al. (2002) also found the same results. Complications following perineoplasty and vaginoplasty were low, ranging from 3.8% to 19.7%. Postoperative complications that may occur following these procedures include perineal pain, transient dyspareunia, wound healing problems, bleeding, and a feeling of tightness in the perineum or vagina (Goodman et al., 2010; Rouzier et al., 2002; Woodward & Matthews, 2010).

Midwives or nurses caring for patients considering perineoplasty may need to help the patient articulate their lack of sexual satisfaction and what they consider to be the problem with the appearance of their perineum. When attending births at birthing centers or the patient's home, midwives and nurses can assess the perineum, educate the patient about the benefits of perineoplasty, and recommend consultation with a physician. Nurses caring for patients who have undergone perineoplasty can assist the patient by changing sanitary napkins, applying cooling compress, and administering antibiotics and pain medication. Nursing care will also include educating the woman about the importance of keeping the surgical area clean and dry (Furnas et al., 2020).

Vaginoplasty

Vaginoplasty is a surgical procedure performed to widen or narrow the entrance to the vaginal vestibule (Güneş & Alinsod, 2018). This procedure is usually performed to repair flaccidity of the vaginal walls, which increases friction, dryness, and risk for infection and decreases sexual sensation. Surgeons perform vaginoplasty to repair the genitalia after delivery; however, vaginoplasty may also be performed for purely aesthetic reasons (Furnas & Canales, 2017; Goodman, 2011).

Vaginoplasty is a minimally invasive procedure with a short recovery time that is usually performed under local anesthesia. It provides long-lasting aesthetic and functional improvement. The surgeon may use anchored vaginal threads during the procedure. Contraindications for using vaginal threads include severe blood coagulation disorders, inflammation or bleeding from any genital organ, perineal cancer, pregnancy, or anesthetic allergy or sensitivity (Sthetic, n.d.)

Vaginal reconstruction is performed in women with congenital malformations (e.g., Mayer-Rokitansky-Küster-Hauser syndrome) or as part of gender affirmation surgery (Amies Oelschlager et al., 2017). Vaginal reconstruction may be performed nonsurgically using vaginal dilators or surgically using skin grafts; bladder, intestinal, or cheek mucosa; or oxidized regenerated cellulose fabric stents and expanders (Chan et al., 2017; Kim et al., 2017). Cheek mucosa is often used for vaginal reconstruction because it is similar to the vaginal epithelium in its color, relaxation quality, healing time, secretory ability, and lack of hair. An additional advantage of using cheek mucosa is its hydration quality, which has a positive effect on the quality of sexual intercourse (Grimsby & Baker, 2014; Ostrzenski, 2014).

Childbirth is a common cause of vaginal dilation and tissue laxity. Midwives and nurses caring for women after childbirth can educate patients about vaginoplasty. In many cases the procedure can reduce vaginal inflammation and improve the sexual intercourse experience. Nurses caring for patients who have undergone vaginoplasty can assist the patient by changing sanitary napkins, applying cooling compresses, assessing vaginal healing, and administering antibiotics and pain medication (Furnas & Canales, 2017; Furnas et al., 2020).

Vaginal Rejuvenation

Vaginal rejuvenation involves restoring the vaginal structure by reducing the diameter of the vaginal canal. It is

usually performed in women whose vaginal tissues have weakened after a difficult vaginal delivery. Vaginal rejuvenation may also be performed in women with urinary incontinence, postmenopausal vaginal atrophy, or vaginal tissue damage resulting from oncological treatment for breast cancer (Karcher & Sadick, 2016; Magon & Alinsod, 2017). Vaginal devitalization may cause depression, lead to difficulties in interpersonal relationships, and reduce desire for sexual activity.

Qualities of the "ideal" vaginal appearance have been discussed in the media (Cohen, 2018; Hashim et al., 2018). In a study by Konig et al. (2009), the researchers found that 78% of 482 women (n = 376) learned about vaginal rejuvenation surgery via the media and 14% of these women (n = 53) thought their own vaginal appearance was abnormal.

Fractional laser treatments may also be used to treat cervical or vaginal abnormalities, and postmenopausal vaginal atrophy. This treatment leads to tissue contraction and cellular reconstruction and improves tissue tension, creating a rejuvenating effect (Gold et al., 2018; Tadir et al., 2017). Factors influencing the effectiveness of the procedure include length and density of the laser wave, duration and diameter of the laser pulse, blood supply to the tissue, hydration of the devitalized tissue, and the amount of fatty tissue present. For an optimal effect, laser vaginal revitalization should be performed in 2–3 sessions, 4–6 weeks apart (Shah et al., 2017; Tadir et al., 2017). The Mona Lisa Touch (Cynosure, Westford, MA) is a CO_2 fractional laser designed for optical thermolysis of the skin. It restores hydration and elasticity of the vaginal tissues and normal vaginal pH. The procedure is performed under local anesthesia and is effective with a single application (Magon & Alinsod, 2017).

Noninvasive temperature-controlled radiofrequency energy devices (e.g., ThermiRF, THERMIva, THERMI, Austin, TX) may also be used to treat orgasm dysfunction and urinary incontinence, improve vaginal wall tension and hydration, and rejuvenate the vulva (Magon & Alinsod, 2016). These devices work by heating the focused tissues. The effects are noticeable immediately after the procedure and last up to a year.

Vaginal atrophy may also be treated with exogenous estrogen. Topical estrogen thickens the vaginal epithelium, improves blood flow to the vaginal mucosa, increases local mucus secretion, and may improve vaginal pH. Low doses of vaginally delivered estrogen improve blood supply to the tissues and reduce lower urinary tract symptoms in women with atrophic changes in the genitourinary system (Shah et al., 2017).

Platelet-rich plasma (PRP) or hyaluronic acid can also be used to treat vaginal and vulvar atrophy, sexual dysfunction, and urinary incontinence. PRP treatment activates pluripotent stem cells with the help of cytokines and plasma growth factors, thus affecting tissue reconstruction (Güneş & Alinsod, 2018). PRP treatment also increases the number of fibroblasts, neurons, and blood vessels allowing the anterior vaginal wall glands to proliferate. Blood flow is improved and the number of nerve and collagen sensory fibers is increased, which improves the overall condition of the vagina. Similarly, hyaluronic acid therapy provides deep hydration of the vaginal tissue, which smooths and increases the volume of vulvar and vaginal tissues, positively influencing sexual satisfaction. The effects of PRP or hyaluronic acid treatment can last up to 2 years (Güneş & Alinsod, 2018; Origoni et al., 2016).

Vaginal rejuvenation can sometimes be a less invasive alternative to vaginoplasty. Nurses caring for patients experiencing problems with vaginal lubrication due to estrogen deficiency, frequent infections, or other problems associated with urinary incontinence can educate patients about the benefits of vaginal revitalization. Often, nurses are the only people with whom the patient is able to discuss such personal and sensitive information.

Labiaplasty

Labiaplasty, plastic surgery performed to reshape the labia minora, is used to treat labial hypertrophy. Labial hypertrophy is defined as a labial width of 50 mm or greater and/or visible asymmetry (i.e., a difference greater than 30 mm) of the labia (Burger, 2015; Crouch et al., 2011). Labiaplasty is a relatively new procedure in aesthetic gynecology. Women may desire to reduce their labia for various reasons including sexual development disorders, childhood treatment with estrogen or androgen (Hagisawa et al., 2012), recurrent pulling of the labial tissues, or infections (Committee on Gynecologic Practice & ACOG, 2007). Notably, most women seeking labial reduction have anatomically symmetrical genitals with labial dimensions similar to the labial dimensions of women who do not opt to undergo genital surgery (Lloyd et al., 2005).

In order to become a "real Zambian," Zambian women preparing for marriage undergo a traditional elongation of the labia. These women believe that having larger labia is indicative of being a better and more attractive woman and wife; therefore, in these women, labial enlargement procedures allow for greater self-esteem and sexual pleasure (Martínez Pérez et al., 2015).

Labial hypertrophy and the need for labiaplasty must be determined by each woman individually. The definition of beauty and the desire and ability to access various treatments in developed countries influences women and the way they perceive themselves. Women are motivated to undergo labiaplasty to achieve greater sexual satisfaction and to please their sexual partner (Bramwell et al., 2007; Zwier, 2014).

The surgical technique used for labial reduction depends on the labial width. According to the Ellsworth algorithm (Ellsworth et al., 2010), which is based on the labial classification proposed by Franco and Franco (1993), women are categorized into one of four groups

based on their labial size: Type I (<2 cm), Type II (2–4 cm), Type III (4–6 cm), or Type IV (>6 cm).

González et al. (2015) modified this classification to include the location of the labial hypertrophy as either (A) front, (B) central, or (C) general and a designation of (S) symmetrical or (AS) asymmetrical. This modified classification allows clinicians to obtain a detailed labial image. For example, the classification 3AS describes a symmetrical labia with 4–6 cm front hypertrophy. The Ellsworth algorithm is controversial because it could indicate a need for surgical treatment even in women with Type I and Type II labia. Crouch et al. (2011) argue that labial reduction should only be performed in women with labia greater than 5 cm and more than 3 cm asymmetry. Labiaplasty is not recommended and may even be contraindicated for women not falling into this category.

There are 11 primary surgical techniques used for labiaplasty. These techniques can be divided into three groups: labial edge resection, labial wedge resection, and central resection.

1. *Labial edge resection* involves removal of excess tissue from the most protruding labia edges. As shown in Figure 1, the excision in made in a straight line. The straight cut can be performed using a scalpel, diathermy, or a combination of both. To minimize blood loss, some surgeons first use a clamp to crush the incisional area (Özer et al., 2018).

   Following the shape of the labia, an S- or a W-shaped excision may also be made. The S-shaped excision was first introduced by de Alencar Felicio (2007) to reduce the effects of scar contraction after excising some parts of labia and to increase the length of the scar. Maas and Hage (2000) recommend using a double W-shaped incision, as this makes it easier to fold the tissue alternately on the inside and the outside of the labia.
2. *Labial wedge resection* or clinical resection techniques are the most commonly used techniques for labiaplasty. These techniques preserve both the color and the shape of the labia and the ability to experience sexual pleasure. Central wedge resection can be performed with or without preserving the posterior labial artery. The wedge can also be performed at the back of the labia for posterior resection, or at the bottom of the labia, so that the upper tissue can be reconstructed. One primary advantage of the wedge resection technique is that the labia are not excessively reduced. Excessive labia reduction leads to a number of postoperative complications including pain when wearing underwear, infection, dryness, and vaginal extension during intercourse (Özer et al., 2018). Giraldo et al. (2004) designed a template for Z-90° plastic surgery to prevent postoperative scarring.

   As shown in Figure 2, when performing this technique, the wedge is marked on the inner labia and symmetrically mirrored onto the outer labia. The

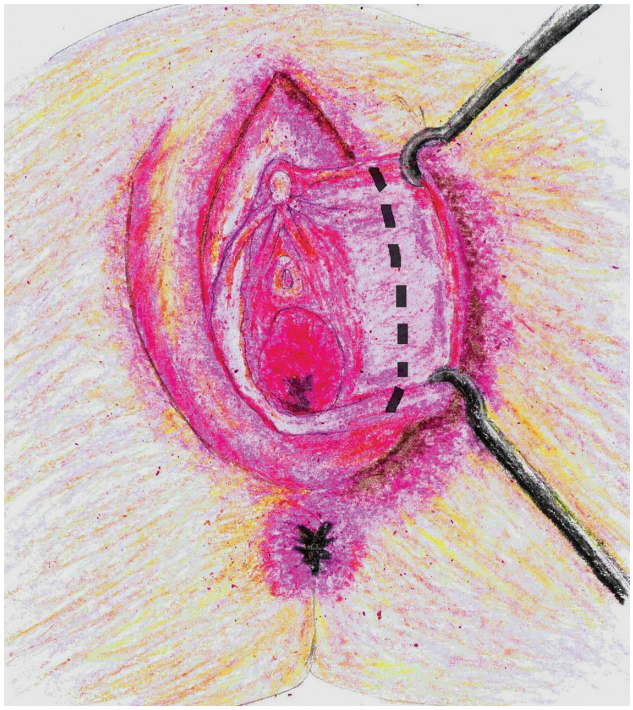

FIGURE 1. Labiaplasty. Example of straight excision in edge resection, excision follows the curve of the labia. This figure is available in color online (www.psnjournalonline.com).

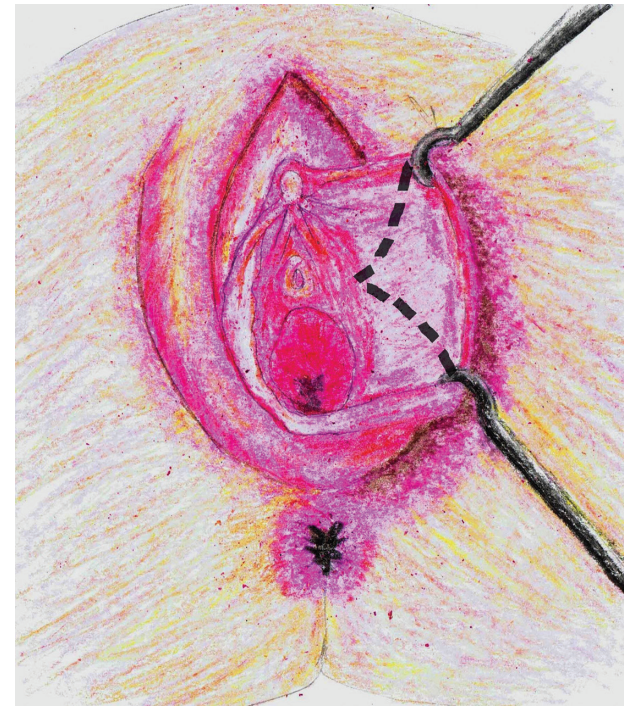

FIGURE 2. Labiaplasty. Example of central wedge resection, the most popular labiaplasty technique. This figure is available in color online (www.psnjournalonline.com).

wedge is recessed using a scalpel and diathermy and then the labia are sewn in layers using 4-0 synthetic absorbable suture, and the skin is closed with 4.0 or 5.0 synthetic absorbable suture or 5.0 synthetic absorbable monofilament suture (Alter, 1998).

3. *Central labial resection* techniques help maintain the correct contour, texture, and pigmentation of labial edges. These techniques include de-epithelialization (i.e., excising only a surface layer of tissue) and fenestration (i.e., a window-shaped excision). In the de-epithelialization technique described by Choi and Kim (2000), all margins of the incisions are determined and marked in the shape of a triangle in the middle of the labia and then the area of epithelium removal is marked. The edges are sewn together with absorbable suture.

As shown in Figure 3, this technique was modified by Ostrzenski (2014), who proposed a central excision, referred to as the "bicycle helmet shape." This technique is performed using lidocaine and prilocaine with initial cooling of the tissues for 30 min. The surgeon makes an excision with a scalpel, while the internal and external labial surfaces are sewn separately, without stitching the tissue between them.

Most women who undergo labiaplasty have no postoperative complications and are satisfied with the results. In a meta-analysis of 16 studies, Özer et al. (2018) enumerated side effects of minor labia surgery that included swelling, bruising, bleeding, hematoma, minor wound dehiscence, chronic discomfort, reduced sexual sensation, orgasm problems, dyspareunia, and general dissatisfaction with the appearance of the labia. However, in 11 of 16 studies, the researchers found the women experienced significant satisfaction with the procedure, increased confidence, improved comfort during intercourse, increased frequency and strength of orgasm, and even an increase in the number of sexual partners. In some cases, these benefits occurred because of reduced shame during intercourse related to an unpleasant anatomical appearance (Placik & Arkins, 2015).

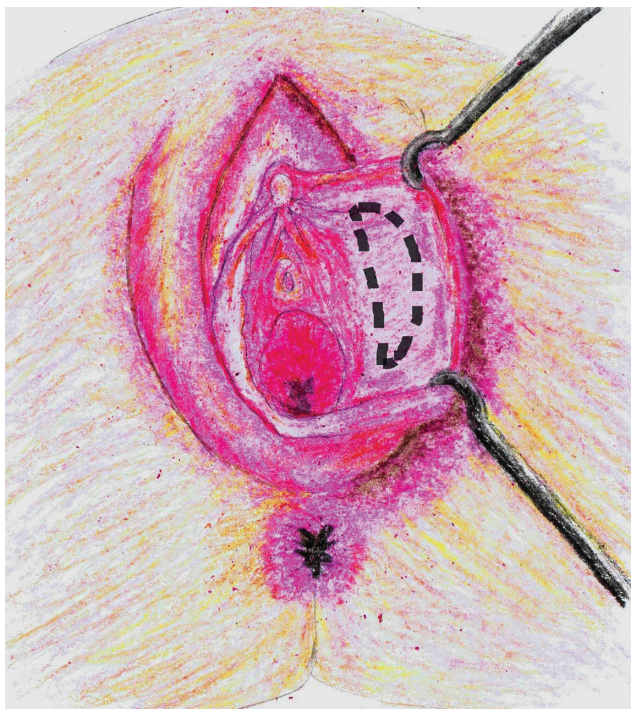

FIGURE 3. Labiaplasty. Example of central resection, tissue is removed from the center of the labia minora in a "bicycle helmet" shape. This figure is available in color online (www.psnjournalonline.com).

Women who have not undergone labiaplasty, and whose labia are relatively large, have greater sexual intercourse satisfaction, have more frequent sexual intercourse, and more intense orgasms than women with smaller labia (Schober et al., 2015). Özer et al. (2018) found that, in most cases, women believed the appearance of their labial region was less attractive than what their partners believed it was. This finding supports the way the media shapes the image of femininity and the desired appearance of the genitals.

Because of their close contact with the patient and the trust that patients place in nurses and midwives, it is important for the nurse to be able to recognize labial hypertrophy and provide education about the benefits of labiaplasty. Postoperative nursing care includes providing regular wound assessment and applying cold packs between the patient's underwear and outerwear (i.e., 20 min on and 20 min off). Placing the cold pack directly on the patient's skin may cause skin injury or frostbite. Using a cold pack, such as VagiKool (V-Kool Products, Inc., Calabasas, CA), provides temporary relief of vaginal discomfort, relieves burning and itching, and reduces swelling (Furnas et al., 2020).

G-Spot Enlargement

The *G-spot* (Gräfenberg spot) is an erogenous zone located on an anterior wall of the vagina. Some believe the G-spot is a fragment of the vaginal anterior wall innervated by a labial nerve. Others believe the G-spot is an area where a nerve passes close to the urethra, and others believe the G-spot is composed of urethral glands that correspond functionally to the cavernous bodies of a male penis. Some researchers claim the Gräfenberg spot does not exist (Kilchevsky et al., 2012; Puppo & Gruenwald, 2012).

G-spot enlargement is a procedure to increase the size, firmness, and sensitivity of the G-spot by injecting a filler composed of collagen or hyaluronic acid (e.g., Desirial, Laboratoires VIVACY, Paris, France) into a septum between the bladder and the front wall of the vagina, about 5 cm from the vaginal entrance. This injection increases sensation during sexual intercourse and the frequency of

orgasms for 1–2 years. After this time it is usually necessary to repeat the procedure. The procedure is performed under local anesthesia, typically lasts about 20 min, and a woman can have intercourse 4 hr after the procedure. Performing G-spot enlargement is indicated for women who are unable to achieve vaginal orgasm and who lack sexual satisfaction (Bachelet et al., 2014).

Ostrzenski (2018) performed anatomical and histological examinations, in vivo electrovaginography, and in vivo magnetic resonance imaging to confirm the existence of the G-spot. To develop the G-spotplasty procedure, observe for potential complications, and determine whether the procedure improves sexual activity, behaviors, and concerns in women, Ostrzenski (2018) performed the procedure on female cadavers and subsequently studied three women who underwent the procedure with a 5-year follow-up. The women completed the validated Sexual Relationships and Activities Questionnaire at the end of the study period. All of the women reported reestablishing vaginal orgasm and were pleased with the outcome of the procedure.

Herold et al. (2015) described the case of a 29-year-old woman who underwent G-spot enlargement by autologous fatty tissue transplant into the G-spot area. The patient confirmed greater satisfaction with sexual intercourse and a stronger desire for intercourse; however, both preoperatively and postoperatively she was unable to achieve vaginal orgasm. This area of plastic surgery warrants further research.

As noted earlier, because of their close contact with the patient and the trust that patients place in nurses and midwives, nurses may be the only people with whom the patient is able to discuss problems with orgasm. For this reason, it is important for nurses to be able to provide education about the benefits of G-spot enlargement.

Bartholin Gland Surgery

The *Bartholin glands* are two glands located on each side of the vaginal entrance. They were first described by Bartholin in 1677. The Bartholin glands produce mucus that moisturizes the vagina during intercourse. The mucus is secreted through ducts located on the labia minora (Frega et al., 2016; Krissi et al., 2016). The Bartholin ducts can become clogged and when the glands become infected, an abscess may form that requires operative drainage (Krissi et al., 2016).

Infection of the glands can be caused by various bacteria (e.g., *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Staphylococcus aureus*, *Escherichia coli*, and *Bacteroides fragilis*) (Lee et al., 2015). Signs and symptoms of Bartholin gland abscess include soreness, swelling, redness in the vaginal vestibule, and fever. Because Bartholin gland cysts and lumps may indicate cancer (i.e., 2%–7% of vulvar cancer cases), menopausal women who present with signs and symptoms of Bartholin gland abscess should undergo testing to eliminate malignancy as a cause (Krissi et al., 2016).

In most cases treatment involves simple drainage, *fistulation* (i.e., creating a drainage pathway to unclog the ducts), *marsupialization* (i.e., incising the cyst wall and sewing its edges to the mucosa), or resection of the gland, usually under local anesthesia (Omole et al., 2003). A 2.5-cm Word's catheter (CooperSurgical, Inc., Trumbull, CT) may be used to drain the ducts; however, this method is not recommended if an abscess is present. When an incision is involved, the effluent mucus should be swabbed and bacteriologically examined so that efficient antibiotic therapy can be applied (Krissi et al., 2016).

A CO_2 laser may also be used to incise the cyst. Using a laser reduces scar formation and the potential for recurrence of the abscess. Despite the greater complexity of using a CO_2 laser, a range of potential complications are reduced (Frega et al., 2016; Lee et al., 2015).

Based on swelling and redness present in the vaginal vestibule and an interview with the patient, most nurses or midwives should be able to identify a Bartholin gland abscess and refer the patient for surgery. Although the procedure is performed by a gynecologist, patient teaching and follow-up are often provided by a nurse or nurse practitioner. Patients recovering from Bartholin gland surgery should be educated about the need for taking sitz baths for few days after the procedure and the importance of maintaining good hygiene of the perineal area (Lee & Wittler, 2021).

Clitoral Hoodoplasty

The *prepuce* of the clitoris, also called the *clitoral hood*, is a skinfold surrounding and protecting the clitoris. Some women have excess tissue in this area, which both lessens sensitivity during sexual intercourse and has an unattractive look (see Figure 4). *Clitoral hoodoplasty* is frequently performed during labiaplasty. Resection of the lower wedge of the labia minora and reconstruction of the pedicle flap can lead to reduction of the labia and clitoral prepuce. This is performed most frequently when the frontal flap is used to reconstruct a defect of the labia and the excess tissue forming the clitoral prepuce is pulled up, exposing the clitoris or during central wedge resection of the labia with anterior excision. Either of these techniques may be used in women with deformities of the clitoral prepuce, but not in patients with closed prepuce entry (Alter, 2008; Triana & Robledo, 2015).

Treatment depends on the degree of clitoral foreskin overgrowth. Significant clitoral overgrowth can be removed using a horseshoe-shaped resection around the clitoris moving from the top toward the labia, with an incision at the base of the prepuce. Surgeons should take

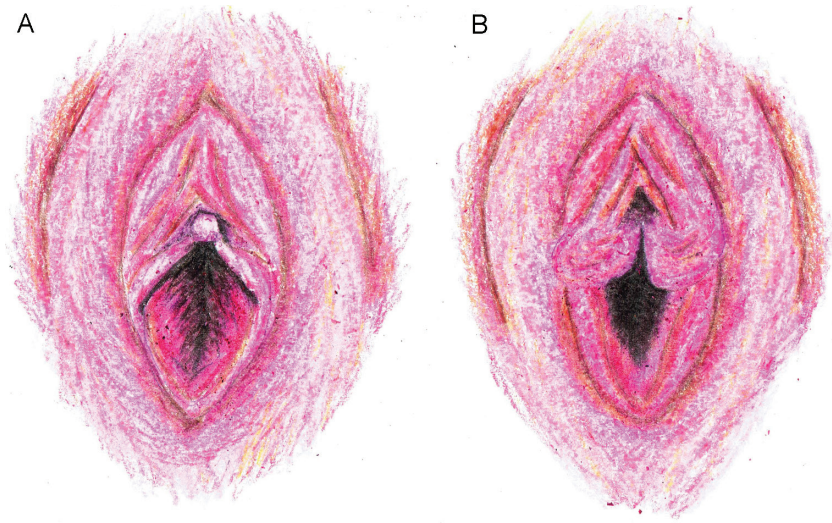

FIGURE 4. (A) Normal clitoral foreskin. (B) Overgrowth of clitoral foreskin. This figure is available in color online (www.psnjournalonline.com).

care not to remove too much tissue, because this may lead to excessive clitoral exposure.

In cases of mild and moderate hypertrophy, the surgeon can use a longitudinal resection and remove the excess tissue by cutting out the prepuce periphery so that the suture line is hidden in the newly created clitoral prepuce opening (i.e., the area where the skin is adjacent to the mucosa). Excessive clitoral tissue can be excised with scissors after raising the prepuce. Because longitudinal resection of the prepuce may result in visible or tight scarring, this procedure should only be performed on women with small clitoral prepuce hypertrophy (Triana & Robledo, 2012).

In the case of asymmetrical clitoral foreskin hypertrophy, the surgeon can remove excess tissue. This procedure was described by Ostrzenski (2013), who performed subcutaneous hoodoplasty in nulliparous women with asymmetrically overgrown prepuce. Ostrzenski (2013) also established three clitoral hoodoplasty classifications based on clitoral hood characteristics:

1. *Occluded clitoral hood:* The clitoral hood opening is partially or completely occluded with prepuce.
2. *Hypertrophic-gaping clitoral hood:* The clitoral prepuce is elongated, excessively thick, or both.
3. *Asymmetrical subdermal hypertrophy:* The clitoral hood has uneven thickness.

Regardless of which method for hoodoplasty is used, surgeons should avoid excessive excision of the clitoral prepuce. Excising excessive prepuce may lead to postoperative complications that include discomfort and pain when walking and sitting. Deterioration of the perineal appearance, difficult hygiene, and reduced sexual satisfaction have also been reported. These complications are infrequent, but there is a lack of literature discussing clitoral prepuce reduction (Triana & Robledo, 2015).

Wolffenbuttel et al. (2017) have indicated that excessive clitoral prepuce reduction may require corrective surgery. The researchers reported that, in two of six patients, excessive exposure of the clitoral glans led to pain and hypersensitivity of the clitoris. Corrective surgery resulted in complete covering of the glans in five of six patients and in partial covering in one patient. The corrective procedure also reduced pain and improved aesthetic appearance.

It is important for nurses and midwives to be able to recognize the presence of excess skin covering the clitoris and provide education about the benefits of clitoral hoodoplasty. Postoperative nursing care includes providing regular wound assessment and applying cold packs. Nurses should also educate the patient to refrain from sitting for long periods after surgery, as this can lead to blood stasis. Elevating the perineal area (i.e., by having the patient get on her elbows and knees or lie on her back with her hips on a pillow) can also help to reduce the potential for stasis (Furnas et al., 2020).

Clitroplasty

An indication for plastic surgery of the clitoris (i.e., *female phimosis*) is when the skin surrounding the clitoris is too tight or there is no opening in the skin for the glans of the clitoris to protrude for stimulation. This can cause clitoral insensitivity during intercourse, hygiene problems, and an unpleasant smell caused by an accumulation of body fluids (e.g., mucus and urine) in the clitoral cavities (Ostrzenski, 2013).

In patients suffering from clitoral phimosis, *clitroplasty* is performed to separate the clitoris from the glans of the foreskin. The surgeon makes a V-shaped incision in the foreskin and excises a small fragment of skin allowing

the clitoris to emergence. This procedure is also used to reduce the amount of tissue covering the clitoris or for a clitoral foreskin reduction (Ostrzenski, 2010). *Hydrodissection* involves separating the clitoral glans from the foreskin by injecting a small amount of fluid between them.

In women with asymmetrical subcutaneous hyperplasia, the surgeon performs a subepithelial reduction. By removing the hypertrophied tissue beneath the epithelium, the surgeon ensures the foreskin on both sides of the clitoris is the same thickness (Ostrzenski, 2013).

Clitoral phimosis can cause clitoral inflammation and prevent appropriate hygiene. Nurses who are knowledgeable about clitroplasty can provide education about the benefits of the procedure to a woman (or the parents of a child) when there is a suspicion of clitoral phimosis. Suspicions of clitoral atresia may be raised by unpleasant odor in the clitoral area. Postoperative nursing care includes providing regular wound assessment, changing sanitary napkins, and applying cold packs.

Hymenoplasty

The *hymen* is an elastic membrane located at the entrance to the vagina in women who have not engaged in vaginal intercourse (DelVecchio Good, 2015). Many cultures and religions have traditional beliefs that a bride should be a virgin. Bridal virginity is particularly important in regions where patriarchy is the dominant culture (Bawany & Padela, 2017). To uphold the family reputation, Muslim and Arab communities allow for the execution of a sexually active, unmarried woman (Press Trust of India, 2010).

Hymenoplasty, or *hymenorrhaphy*, is a procedure that restores the original appearance and anatomical integrity of the hymen (Leye et al., 2018). In a study conducted in Tehran, Ahmadi (2014) found that despite legal consequences doctors may face for performing hymenoplasty (i.e., suspension of their medical licenses), physicians still perform the surgery. The physicians feel morally obligated to help women who otherwise would be exposed to violence for losing their virginity before marriage. In additional ethnographic research also conducted in Tehran, Ahmadi (2016) concluded that the "renewal" of virginity is a form of resistance to the law regulating premarital purity because this law does not apply to men.

Women who were victims of sexual assault, resulting in hymen rupture, may also desire to undergo hymenoplasty in an attempt to regain control of their body. In such cases, undergoing hymenoplasty may help the woman regain both physical and emotional control over her body, thus reducing the trauma of the experience. In France and several other countries, victims of sexual assault are guaranteed the right to undergo hymen reconstruction (Steigrad, 2007). Very young and immature women, who began their sex life as a result of peer pressure, may also be motivated to undergo this procedure. In some cases, reconstructing this biological symbol of virginity helps a woman increase her self-esteem and regain control over her sex life. There are other indications for hymenoplasty, such as a woman's desire to restore her hymen shortly before a planned wedding or wedding anniversary. In these cases, the biological function of a hymen during sexual intercourse is important to the patient (i.e., feeling pressure, seeing blood) (Wei et al., 2015).

Prakash (2009) posited that undergoing hymenoplasty aligns with beliefs that decisions regarding a woman's body should be respected. Conversely, Christianson and Eriksson (2015) posited that hymenoplasty is a "misogynistic practice" that strengthens the patriarchal system and manifests gender inequality regarding premarital purity, which does not apply to men. Christianson and Eriksson (2015) also emphasized the importance of providing education about hymen reconstruction that is based on facts and science.

Surgeons can perform hymenoplasty using the *approximation method*, the *cerclage method*, or the *suture three stratums around the introitus (STSI) method* (Wei et al., 2015). After the hymen is ruptured, two or three V-shaped fragments usually remain at the vaginal entrance. In the approximation method, an epithelial layer that has formed over the previously broken hymen is removed, and the remnants of the ruptured hymen are stitched together in two layers. The inner layer of one remnant is connected to the inner layer of another remnant and the procedure is repeated for the outer layers. A small opening is left at the vaginal entrance to allow for menstruation (Prakash, 2009; Wei et al., 2015). Notably, Ou et al. (2008) described the need to repeat hymen reconstruction by approximation due to wound dehiscence.

In the cerclage method, the epithelial layer is not removed and the hymen remains are joined together with absorbable suture (Ou et al., 2008).

In the STSI method, the hymen edges and vaginal tissues are removed at a depth of about 1 cm. Sutures are applied in three layers. The inner hymen mucosa is sewn with a horizontal mattress suture. The fascial layer, which is exposed to the greatest tension, is sewn together with straight intermittent sutures and strong knots. The third layer is stitched to the vaginal vestibule using a vertical mattress suture. All layers are stitched together to avoid any dead space. This method increases the wound area and the additional fascial layer increases blood supply to the tissues, which leads to blood loss during intercourse. Using mattress sutures is also beneficial in terms of wound healing. After using the STSI method in 125 women, Wei et al. (2015) found that 92.2% ($n = 115$) of the women provided a high surgery satisfaction score and reported no postoperative health issues.

The hymenoplasty procedure is performed on an outpatient basis, using regional or general anesthesia, with the patient in lithotomy position. The procedure does not leave any scars, absorbable sutures are used, and

no dressing is necessary. The procedure takes approximately 30–40 min. After the procedure, the physician or nurse should advise the patient to wash the area with warm water and use mild pain medication if needed. In a study conducted by Prakash (2009), the patients also received a combination of metronidazole and ofloxacin for 5 days after the procedure. The incidence of complications following hymenoplasty is low. The most frequent complications include bleeding, minor infection, dyspareunia, or hematoma (Leye et al., 2018).

The hymenoplasty procedure can be repeated multiple times and the patient receives the same physiological experience each time. The fact that the procedure has been performed can only be detected by a specialist during a gynecologic examination (DelVecchio Good, 2015).

Hymenoplasty and other cosmetic gynecologic procedures for women should be performed in accordance with the recommendations of the International Society for the Study of Vulvovaginal Disease (Vieira-Baptista et al., 2018). These recommendations state that because there is a lack of data on the postoperative increase in sexual satisfaction, procedures should not be performed on women who are younger than 18 years. The woman should undergo a psychological consultation before the procedure. The surgeon should obtain informed consent from the woman and she should be informed about potential complications. Physicians should not allow patients to pressure them into performing the surgery. Additionally, surgeons who provide cosmetic gynecologic procedures for women should not advertise or promote these procedures.

There are numerous cases when hymenoplasty is performed as a corrective surgical intervention for women who have been circumcised, victims of sexual violence, or desire to mask their premarital sexual history. This occurs primarily in Muslim women. Notably, hymenoplasty is also being performed more frequently in women from Western cultures. This may be the result of changing views concerning premarital sexual activities, religious convictions, or as a method of prevention from sexually transmitted diseases. The available literature discussing aesthetic gynecology lacks information about the safety and effectiveness of these procedures. Likewise, there are no clear regulations or standards and the education provided about hymenoplasty is generally not adequate.

Hymenoplasty is an elective procedure centered on a desire to regain physical virginity. When a woman or a child's parents request this procedure, nurses and physicians should be aware that these requests may be occurring as a result of rape, sexual abuse, or other physical trauma (Zeyneloğlu et al., 2013). Postoperative nursing care includes changing sanitary napkins, applying cold packs, and monitoring for complications.

Mons Pubis Plastic Surgery

An enlarged mons pubis is aesthetically unpleasing and is most frequently observed in obese women. To reduce the mons pubis, treatment with ultrasound-assisted liposuction provides a smooth skin appearance. The surgeon performs the procedure using a 3-mm liposuction cannula and inserts the cannula slowly and accurately to prevent

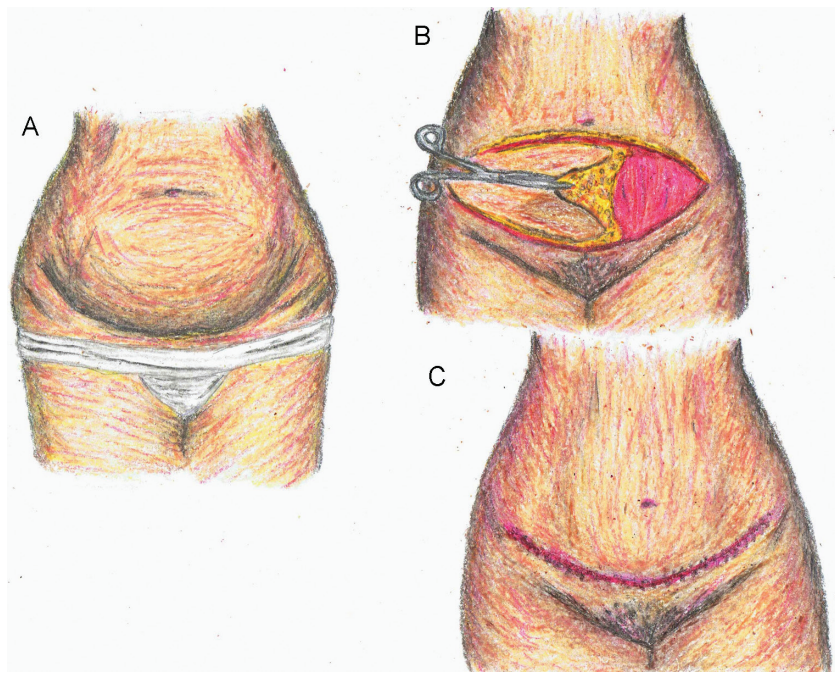

FIGURE 5. Mons plastic surgery during abdominoplasty. (A) Preoperative view. (B) Ellipse-shaped excision in a horizontal wedge. (C) The skin is pulled up, resulting in a reduction of the mons pubis. This figure is available in color online (www.psnjournalonline.com).

possible complications (e.g., irregular fat distribution) (Hughes, 2000).

Another method for reducing the mons pubis is an abdominoplasty. This procedure pulls the lower abdominal skin up and removes excess tissue. Before the procedure, it is important for the surgeon to ascertain whether the abdominal excess tissue is positioned horizontally, vertically, or both. The location of the adipose tissue determines the type of the procedure that will be used (Matarasso & Wallach, 2001). Most often, the excess tissue is in a vertical position. Therefore, the surgeon excises the excess tissue in a horizontal wedge, shortening the distance between mons pubis and the navel. If the excess tissue is positioned horizontally or both horizontally and vertically, the surgeon excises the tissue as both a horizontal and vertical wedge. Notably, obese women often have skin that is loose and hanging and frequently the *monsplasty* is performed during abdominoplasty, rather than as a stand-alone procedure. As shown in Figure 5, the surgeon makes an ellipse-shaped incision in the fold of skin above the mons pubis and after removing the excess skin and fat, the mons pubis tissue is attached to the rectus abdominis fascia in two to three locations to eliminate tissue adhesion (de Sá Nóbrega & deAndrade Silva, 2009; Triana & Robledo, 2012).

Nurses can educate patients about the benefits of mons pubis surgery. Postoperative nursing care includes performing wound assessment, monitoring wound drainage, changing dressings, and assessing postoperative pain (Erdoğan & Bulut, 2019).

SUMMARY

The American Society of Plastic Surgeons (ASPS; 2020) statistical report shows that plastic surgeons performed 11,218 labiaplasty procedures in 2020. The total number of all cosmetic surgical procedures performed by plastic surgeons in 2020 was 2,678,302. Labiaplasty was the most popular aesthetic gynecologic procedure, yet it constituted only 0.4% of all cosmetic surgical procedures performed by plastic surgeons in 2020 whereas breast augmentation comprised 8.3%, liposuction comprised 9.1%, and nose reshaping comprised 15.2%. Notably, this report shows the number of procedures performed by plastic surgeons who are members of the ASPS. Therefore, the total number of procedures performed by plastic surgeons worldwide is certainly much higher.

Recently, there has been an increased interest in aesthetic genital surgery for women. There are currently television programs presenting various aspects of aesthetic gynecologic surgery where viewers can actually visualize the surgical transformations as they take place. As the media promotes concepts of what is considered beautiful, the demand for cosmetic procedures increases.

There is no ideal model of genital beauty. Women undergo genital cosmetic surgery for unique and personal reasons. These reasons include clear medical indications as well as emotional considerations (Güneş & Alinsod, 2018). The increasing popularity and frequency of genital cosmetic surgery for women may lead to improved treatment techniques that increase safety and reduce postoperative complications. Ongoing studies that evaluate and assess the impact of these procedures on the patient's quality of life are needed.

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