**TITLE: COSMETIC SURGICAL PROCEDURES ON THE VULVA AND VAGINA - An Overview**

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**ABSTRACT**

Cosmetic surgery is defined as any procedure involving a change in the appearance or aesthetics of an essentially normal anatomy. The procedures that can be included under female cosmetic genital surgery are the following a) Reduction Labiaplasty. b) Vaginoplasty. c) Revirgination. d) G Spot amplification. f) Miscellaneous [3].

*Labiaplasty;* Labiaplasty is the surgical reduction or amputation of the labia minora. Labiaplasty has the potential to cause significant adverse effects on sexual function. *Cosmetic vaginoplasty;* this procedure refers to tightening of the vagina. There are no studies to prove that vaginal tightening enhances the sexual response in either the male or the female. *Revirgination;* also called hymenoplasty this procedure refers to the reconstruction of the hymen. *G Spot amplification;* here gel based hyaluronic acid is injected into the labia minora and the anterior vaginal wall with the intention of increasing the sensitivity of the Graffenberg spot (G spot). *Miscellaneous;* Other cosmetic procedures which have been performed include liposuction of the mons pubis and even fat injections into the mons pubis with the purpose of increasing the aesthetics of the external genitalia.

Those who support these procedures could argue that this is a part of feminine choice whereas those opposed could argue that this choice would have been made because of society’s fascination with physical appearance and feeling young. Prima facie these procedures appear to contradict the Hippocratic principle of “primum non nocere”.

Though there has been an increase in the marketing and performance of the above mentioned procedures, practitioners need to be both skeptical and cautious while performing these surgeries. Patients requesting these surgeries need to be counseled regarding the lack of data supporting the efficacy of these procedures and their potential complications.

***KEYWORDS:***

*Cosmetic, aesthetics, ethics, labia, rejuvenation, counseling*

**INTRODUCTION**

Cosmetic surgery is defined as any procedure involving a change in the appearance or aesthetics of an essentially normal anatomy. Reconstructive surgery, with respect to gynecology, refers to surgery performed on abnormal female genitalia, such as McIndoe’s operation for Mayer-Rokitansky-Küster-Hauser syndrome, or incision of an imperforate hymen, or even pelvic reconstructive surgery for pelvic organ prolapse. Such surgeries have been routinely performed by gynecologists as indicated surgeries in the past.In this overview we shall restrict ourselves to discussing cosmetic procedures on the vulva and vagina only, and not on the surgeries performed on abnormal or dysfunctional genitalia.

The American College of Obstetricians and Gynecologists remains skeptical and cautious about cosmetic vulvar and vaginal surgery due to its risks and lack of scientific data on safety and effectiveness [1]. Inspite of that there has been a steady increase in the demand as well as the performance of these procedures. In fact modification of the external genitalia has become one of the top-20 most frequently performed cosmetic surgeries [2].

The procedures included under female cosmetic genital surgery are the following a) *reduction labiaplasty* b) *vaginoplasty* c) *revirgination* d) *G spot amplification* and f) *miscellaneous* [3]. Some authors include genital mutilating surgeries such as female circumcision in cosmetic surgery on the vulva and vagina. However, we have not included it in this discussion, as it is a topic by itself.

A) ***LABIAPLASTY*:**

The labia minora are 2 folds of hairless skin that border the vaginal vestibule and define the lateral limits of the vagina. Labiaplasty implies surgical reduction of the labia minora and this is the most common procedure under the umbrella of female genital cosmetic surgery with the prevalence increasing over the past 10-15 years. Since labial reduction hinges on increased size of the labia one would have to look for objective criteria to define labial hypertrophy. In one study, Cao et.al. found that the width of the labia minora ranged between 3mm and 45mm [4]. This implies wide variation and the study does not include variations in region and ethnicity. At present there are no standardized criteria for defining labial hypertrophy in order to legitimize this procedure. Moreover labial tissue harvested from girls who had undergone labial surgery showed that the labia minora are highly innervated along the entire free edge and have a microscopic structure that facilitates engorgement during sexual arousal [5]. The labia minora are second only to the clitoris for sensation and sensitivity and are more sensitive than the vaginal introitus. It follows that labiaplasty has the potential to remove tissue that contributes to sensory sexual arousal and it is reasonable to conclude, therefore, that amputation of labial skin and tissue, will have an adverse effect on sexual function.

There are no randomized trials to show outcomes following labiaplasty. However in one retrospective study by Goodman MP et al there was a 91.6% satisfaction rate [6]. The study was retrospective, had a low participation rate, an abnormally high satisfaction rate and there were no specific criteria used for performing the procedure. Moreover many patients also underwent additional surgery along with labiaplasty.

B) ***COSMETIC VAGINOPLASTY***

Cosmetic vaginoplasty traditionally refers to a procedure done to tighten the normal introitus. The most common surgical procedure employed for the same is the posterior colporrhaphy with or without perineorraphy. Vaginal tightening has also been attempted using radiofrequency heat waves or laser on the vagina to induce fibrosis and resultant tightening. The combination of labiplasty and cosmetic vaginoplasty is called vaginal rejuvenation. It is emphasized that this procedure is different from reconstructive surgery performed for a prolapsed vaginal wall or a lax vaginal outlet.

Does this procedure enhance vaginal sensitivity as some proponents claim? There are no studies to substantiate this hypothesis. Does vaginal tightening enhance the sexual response in either the male or the female; again there is no evidence to confirm this hypothesis. Instead in one study, the reported dyspareunia rates, following posterior colporrhaphy, ranged between 13 and 20% [7, 8].

C) ***REVIRGINATION:***

This most controversial of surgeries is a reconstruction or repair of a ruptured hymen. It is also called hymenorrhaphy/hymenoplasty. An intact hymen is suggestive of virginity. Virginity has importance with respect to social, legal and religious issues. This surgery has no official sanction even though it is not governed by laws that criminalize female genital mutilation. Gender activists oppose this surgery since virginity is a concept that promotes a patriarchal mindset and discriminates against women.

If hymenal remnants are inadequate, a small flap of vaginal skin from the posterior vaginal wall is approximated to the anterior wall as a band across the hymenal ring [9].

D) ***G SPOT AMPLIFICATION:***

G Spot amplification is a physician-administered treatment that claims to temporarily augment the sensitivity of the Grafenburg spot (G-spot) in sexually active women. In this procedure an injection of gel based hyaluronic acid into the labia majora, labia minora and anterior vaginal wall is done. Those who perform this surgery claim that smoothening of the wrinkles and increase in the surface area of the erogenous zones heightens the sexual response. Hyaluronic acid is not USFDA approved for vaginal use, and the American College of Obstetrics and Gynecology does not endorse it as effective or safe. In fact there is a reported case of pulmonary embolism of hyaluronic acid following its use in the vagina [10].

F). ***MISCELLANEOUS:***

The other cosmetic procedures performed include liposuction of the mons pubis either independently or in conjunction with abdominal liposuction. The claim is that reduction in the mons will improve the esthetic look of the external genitalia.

Fat injections into the mons and the labia majora and minora have also been tried and they primarily attempt to circumvent the changes of aging. These procedures could lead to local infection and even scarring and there is no evidence to show any long term benefits.

**ETHICAL ISSUES**

Whether gynecologists should perform cosmetic surgeries on the vulva and vagina delves into complex ethical issues, including training and safety, conflict of interest, feminism and the commercialization of medicine by practitioners, who perform surgeries only for profit [11]. Those who support these surgeries could argue that this is a part of feminine choice; after all, women have a right to have body aesthetics which they perceive as being ideal for themselves. They could also argue that the patient does not perceive her status as normal, even though she may actually be normal, and hence performing these surgeries would make the individual feel “more normal”. These could be construed as an acceptable indication for a practitioner to carry out these surgeries. Those opposed to these surgeries could counter this argument by stating that increased visual depiction of the female form in different multimedia platforms and the aggressive marketing of these surgeries have made women victim to society’s fascination with physical appearance and feeling young.

How do the above surgeries measure up to the four principles of bio-medical ethics as described by Beauchamp and Childress? Let us take them one by one. ***Autonomy***; an individual should have the freedom to make a choice about his or her appearance; hence cosmetic surgeries on vulva and vagina satisfy the first criteria. The role of baseless advertisements in making the choice however is condemnable. ***Beneficence***; whether the above surgeries are beneficial is debatable, in fact there is no evidence that these procedures improve the anatomical or physiological functioning of the human body. The psychological benefit is nebulous, and to all purposes, insignificant. ***Maleficence***; as detailed before, most of these surgeries can result in unintended long term consequences which could affect normal functioning of the body. Prima facie these surgeries appear to contradict the Hippocratic principle of “primum non nocere”. ***Justice***; Here there is ambiguity, since one has to consider issues of gender equality, personal choice and self-esteem, practitioners’ remuneration and short term benefits versus long term complications.

There are two more issues that need highlighting; one is lack of information and the other is misinformation. In a study performed on the pediatric and adolescent age group, the parents and guardians came requesting for vulvar surgery because they believed that the vulva was abnormal in appearance, but in most of the cases there was no abnormality present in the external genitalia [12]. In addition there is a perception amongst the lay populace that cosmetic surgeries could enhance the sexual experience of the male and female partner. There is no evidence to substantiate this claim. In fact there is evidence to the contrary. Operations on erogenous areas such as the labia and clitoris may cause damage to the vascular and nerve supply. This will have a negative impact on sexual satisfaction and pleasure [13].

It is our belief that cosmetic surgeries on the vulva and vagina do not fully measure up to the principles of biomedical ethics. However, though it is easy to reject a request for performing such surgeries from a moral standpoint, there is a view that practitioners make such decisions on an individual basis after careful deliberation of all aspects with the stakeholders concerned [14].

**CONCLUSIONS**

It is beyond doubt that there has been an increase in the marketing and performance of different procedures on the vulva and the vagina. These procedures are marketed as ways to enhance appearance or sexual gratification. However, these procedures are not based on evidence based medicine and do not fully satisfy the criteria of being called ethical. Whenever a patient requests a cosmetic vulvar or vaginal surgery the practitioner must delve into the underlying psychological reason for the request. A thorough physical examination is essential to exclude any anatomical abnormality requiring surgery. Thereafter the patient’s concern for the appearance of her external genitalia needs to be allayed by explaining the wide range in the appearance of the external genitalia of a normal woman. The patient needs to be counseled that there is no correlation between appearance and sexual gratification for both the male and female partner. They also must be informed about the potential complications, including infection, altered sensation, dyspareunia, adhesions and scarring.

Practitioners themselves must be trained regarding their approach to women demanding cosmetic surgery. Sometimes outright rejection of a patient’s request may prove counterproductive, and instead, counseling regarding the lack of data supporting the efficacy of these procedures and their potential complications is likely to be more effective in allaying their concerns. Future research and deliberations must concentrate on studying all aspects of cosmetic genital surgery in women and in formulating ethical guidelines for practitioners. Lastly this overview, is limited to discussing cosmetic surgery on the vulva and vagina and does not seek to disparage other types of cosmetic surgery.

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