Egypt, J. Plast. Reconstr. Surg., Vol. 38, No. 1, January: 31-35, 2014

Assessment of Inferior Wedge Resection and Superior Pedicle Flap Reconstruction as a Favorable Technique for Labioplasty

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ABSTRACT

Background: Hypertrophy and variation in the size of labia minora have long been recognized. Hypertrophic labia minora can be bothersome for aesthetic, functional, and psychosocial reasons. Different techniques for labia minora reduction have been developed. Whatever the used technique is, the main principle is to have a hidden scar and to preserve the free edge of the labia minora.

Patients and Methods: This study was done on 40 female patients asking for reduction of labia minora size. All patients were operated for labioplasty using inferior wedge resection and superior pedicled flap reconstruction under local anesthesia.

Results: Dehiscence of the tip of the flap was noted in 12.5% of the cases, which was managed conservatively. The overall cosmetic result was assessed 6 months postoperatively, which was very good and excellent in 87.5% of cases, and good in 12.5% of the cased. No patients had unsatisfactory cosmetic results.

Conclusion: Inferior wedge resection and superior pedicle flap reconstruction is an ideal and simple technique for reduction of hypertrophied labia minora with good cosmetic and functional results.

Key Words: *Labioplasty – Labial reduction – Labial hypertrophy – Cosmetic vulval surgery.*

INTRODUCTION

Vulvar plastic surgery is becoming a more commonly requested procedure now than in the past **[1,2].**

It is important that the physicians understand that patients can suffer from a variety of physical and emotional symptoms **[3].**

Labiaplasty is a cosmetic genital surgical procedure to reduce the size of or reshape the labia minora. The goal is to achieve a more natural aesthetic appearance, reduce discomfort and improve self-confidence with preservation of sensation without adding unsightly scars or distorting normal anatomy.

Hypertrophy and variation in the size of labia minora have long been recognized. Hypertrophic labia minora can be bothersome for aesthetic, functional, and psychosocial reasons. The hypertrophy includes both width and length of the labia minora, and it can be congenital or acquired by chronic irritations, excessive masturbation, and abnormal participation in sexual activities. The indications that this can cause are local irritation, poor hygiene, interference with sexual intercourse, and intermittent urination **[4-6].**

Patients seeking labiaplasty often present with reports of difficulty with hygiene, discomfort with tight clothing, pain with bicycle riding and similar sports, labia catching in zippers, or painful intercourse due to hypertrophy of the labia minora. Perhaps the most common is the perception that the labia minora are too visible. Many women report that the labia minora protrude beyond the labia majora while in the standing position, leading to self-consciousness and difficulty with intimacy. Another common report is asymmetry of the labia minora. Women often present to the clinic with one lip of the labia minora larger than the other. For these women, treatment may be limited to the one side; in such cases, the goal of reduction is to match the smaller side as closely as possible **[7,8].**

Labiaplasty can be safely performed any time after sexual maturity, although the author prefers a minimum patient age of 18 years. This procedure can be performed before or after pregnancy. Surgery should be performed when the patient is not actively menstruating to reduce potential hormonal effects on anatomy and increased risk of postoperative infection **[8,9].**

FGC has traditionally been called female circumcision. Recognition of its harmful physical, psychological and human rights consequences has led to the use of the term “female genital

mutilation" or FGM. Female genital cutting (FGC) is the collective name given to traditional practices that involve partial or total cutting away of the female external genitalia whether for cultural or other non-therapeutic reasons **[10]**.

Female circumcision is a phrase that loosely refers to three related but distinct practices: Clitoridectomy or clitoral excision, female circumcision, and infibulation or Pharaonic circumcision. The first technique is the removal of the clitoris, the second usually involves clitoridectomy and excision of the labia minora, whereas the third involves removal of the labia majora and minora and the mons veneris and often the clitoris as well, and subsequent suturing of the remnants of the labia majora **[11-13]**.

The external female genitalia are referred to collectively as the vulva. This comprises the labia majora, labia minora, clitoris, and the openings of the urethra and vagina.

The labia majora, the larger outer lips, extend from the mons pubis to the rectum. Just inside the labia majora are the smaller lips, the labia minora. In some women, they are hidden by the labia majora. In others, they are thicker and more prominent, and can extend well past the labia majora. Such an extension may be considered for reduction **[8]**.

No universally accepted definition or grading system exists for hypertrophy of the labia minora. Some surgeons measure the size of the labia horizontally from the midline. Others measure between the base and the free edge. In the past, surgeons have used numbers ranging from 3-5cm to define labia minora hypertrophy. These numbers are used by some physicians as minimal measurements to proceed with surgery.

The following grading system is simple and reproducible tool to objectively measure labia minor hypertrophy:

None: The labia minora are concealed within or extend to the free edge of labia majora.

Mild/Moderate: The labia minora extend 1-3cm beyond the free edge of the labia majora.

Severe: The labia minora extend >3cm beyond the free edge of the labia majora **[14]**.

Traditionally, labia minora hypertrophy has been treated by simple straight amputation of the excess tissue **[6,7,15-18]**. Despite the simplicity of this procedure, by its nature, it often results in a poor aesthetic outcome and sometimes even sexual dysfunction **[19]**. Moreover, with this technique, the labia minora margin is replaced by a breakable suture line that is associated with local irritation and discomfort (Fig. 1). Different techniques for labia minora reduction have been developed. Whatever the used technique is, the main principle is to have a hidden scar and to preserve the free edge of the labia minora **[3]**.

We have used a simple and reliable technique based on inferior wedge labia minora resection and superior pedicle flap reconstruction. This study was designed to review a series of labia minora reductions performed using this technique **[20]**.

PATIENTS AND METHODS

This study was done on 40 female patients asking for reduction of labia minora size. Patients requested surgical correction of hypertrophied labia minora for different reasons which were painful intercourse (28 cases), too visible labia minora (6 cases), discomfort with tight clothes (4 cases), or labia minora asymmetry (2 cases).

Examination and measurement of the labia minora was done to classify the degree of labia minora hypertrophy.

All patients with moderate and severe labia minora hypertrophy are candidate for labioplasty using inferior wedge resection and superior pedicled flap reconstruction.

EMLA cream (Lidocaine 2.5% and Prilocaine 2.5%) was applied for at least 30 minutes before surgery.

With the patient in lithotomy position, the middle point of the labia minora is stretched inferiorly using fine forceps till reaching the posterior part of the vaginal introitus, and this point could be adjustable up or down to get tension free closure as this point represents the tip of the flap (point A). The posterior point of the vaginal introitus represented point (B). A wedge-shaped area between points A and B and the base of the labia is designed as the area to be excised (Fig. 2).

Local anesthesia infiltration of the labia minora was done using Lidocaine 1% with Epinephrine 1:200,000.

Excision of the designed wedge was performed and meticulous hemostasis of the fine vessels was done before closure. The tip of the flap (point A) is approximated to the inferior point (point B). The medial and lateral incisions were closed using resorbable sutures (Fig. 3).

Post operative antibiotics and analgesics were administered orally for three days postoperatively. Patients were instructed to rest and maintain good hygiene keeping the wound clean and dry and to apply antibiotic ointment for two weeks.

RESULTS

This study was done on 40 female patients complaining of labia minora hypertrophy who were treated with inferior wedge resection and superior pedicled flap reconstruction, their mean age was 30.1 years (range 20-35 years).

All patients were operated under local anesthesia and were discharged on the same surgery day.

Dehiscence of the tip of the flap was noted in only 5 cases (12.5%), and was managed by antibiotic ointment till complete healing.

The overall cosmetic result was assessed 6 months postoperatively, which was considered to be very good and excellent in 35 cases (87.5%), and good in 5 cases (12.5%). No patients had unsatisfactory cosmetic results (Figs. 4,5).

All patients were completely satisfied with the scar as it is considered to be completely hidden.

Furthermore, patients report improved hygiene, improved sexual intercourse, and elimination of chronic irritation.

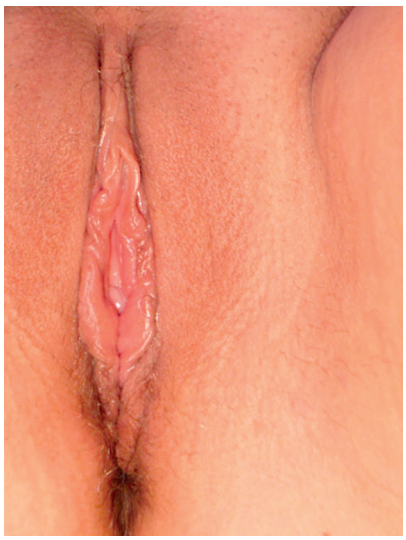

Fig. (1): Poor postoperative outcome after simple amputation of hypertrophied labia minora replacing the labia minora edge by scar tissue.

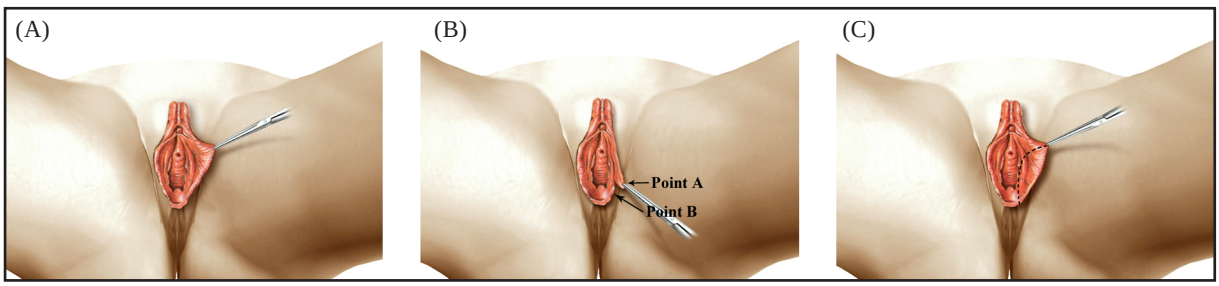

Fig. (2): Design of the inferior wedge to be excised **[20]**.

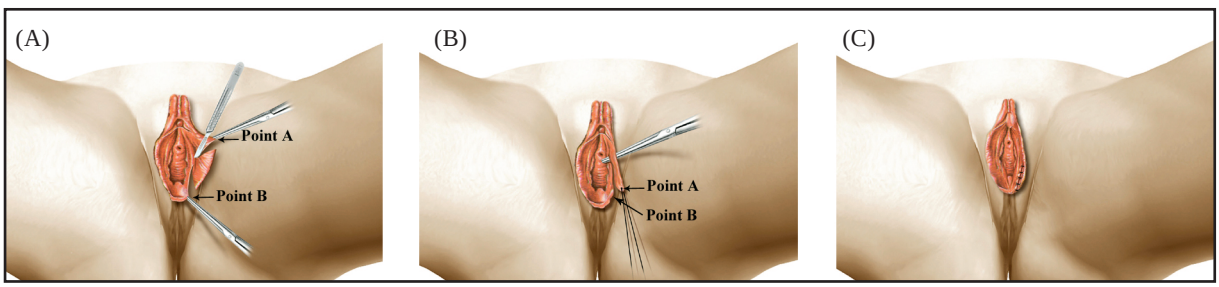

Fig. (3): Operative steps. A- Excision of the designed wedge. B- Approximation of the tip of the superior flap. C-Closure of the incisions **[20]**.

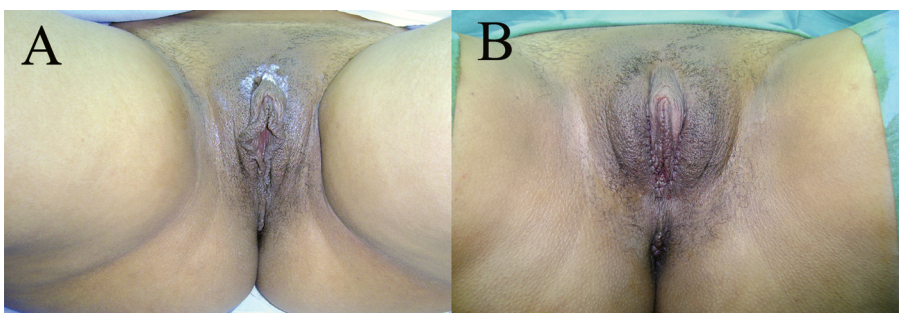

Fig. (4): A- Preoperative moderate labia minora hypertrophy. B- Immediate postoperative after inferior wedge labia minora resection and superior pedicle flap reconstruction.

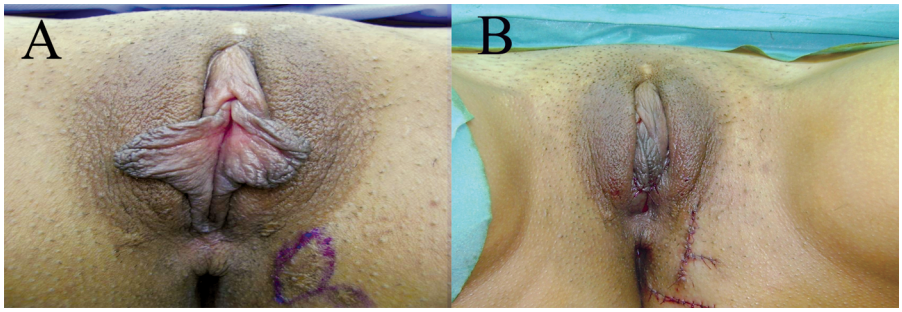

Fig. (5): A- Preoperative severe labia minora hypertrophy. B-Immediate postoperative after inferior wedge labia minora resection and superior pedicle flap reconstruction.

DISCUSSION

Cosmetic vulvar surgery is becoming a more requested plastic surgery for various reasons, either cosmetic, functional, or emotional causes. Labiaplasty, as one of the cosmetic genital surgical procedures, is indicated to reduce the size of or reshape the labia minora to achieve a more natural aesthetic appearance, reduce discomfort and improve self-confidence with preservation of sensation without adding unsightly scars or distorting the normal anatomy. It is completely different from female circumcision, which has serious physical and mental health risks for women and young girls, especially for women who have undergone extreme forms of the procedure **[3,6]**.

The original technique for labiaplasty involves simple amputation of that portion of the labia that is determined to be excessive. This the most simple approach, and it is still commonly used.

Our technique was firstly described by Alter, 1998 which consisted of a full-thickness resection of inferior wedge of tissue from within the borders of the labial tissue and superior pedicle flap reconstruction, preserving the natural free edge of the labia minora **[21]**.

In our study, most of the complications occurred in the early postoperative period and were related to wound-healing problems, and were managed conservatively.

Our used technique did not leave a scar at the labial edge and avoids longitudinal scar contraction as the final scar runs more obliquely close to the base of the labia minora leaving the free edge of the labia minora uninterrupted with scars, which is usually found in reduction techniques that involve straight amputation of labia minora **[21]**.

As regards the aesthetic outcome and surgical morbidity, inferior wedge resection and superior advancement flap has many advantages including normal skin texture and color, the technique is simple and less aggressive, and the free margin of the labia minora is always preserved.

Conclusion:

Labioplasty using the inferior wedge resection and superior pedicle flap reconstruction is an ideal and simple technique for reduction of hypertrophied labia minora because it has many advantages including preservation of the natural edge and outline and the natural pigmentation of the labia minora, in addition to completely hidden invisible scar.

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