Hypertrophy of labia minora: Experience with 163 reductions

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OBJECTIVE: Our purpose was to describe the surgical procedure, its results, and its complications and to determine whether patients are satisfied with surgical reduction of labia minora in cases of hypertrophy.

STUDY DESIGN: The records of 163 patients who underwent reduction of the labia minora during a 9-year period were reviewed. The ages of the patients ranged from 12 to 67 years (median, 26). Motives for requesting surgery were aesthetic concerns in 87% of the cases, discomfort in clothing in 64%, discomfort with exercise in 26%, and entry dyspareunia in 43%. Anatomic results were assessed 1 month postoperatively. Patient satisfaction was assessed by means of a mailed questionnaire.

RESULTS: No surgery-related significant complications were noticed. Anatomic results were satisfactory for 151 patients (93%). Ninety-eight completed questionnaires were returned. Eighty-one patients (83%) found that the results after surgery were satisfactory. Eighty-seven (89%) were satisfied with the aesthetic result, and 91 (93%) approved the functional outcome. Four patients (4%) would not undergo the same procedure again.


Key words: Labia minora, hypertrophy, surgical reduction

Large labia minora projecting beyond the labia majora are occasionally a concern among adolescent and adult women for functional, aesthetic, or emotional reasons. Labia minora are considered hypertrophic when the maximal distance between base and edge is >4 cm. As a consequence they protrude in winglike fashion from the vulva and look like a spaniel’s ears.1 The enlargement can be unilateral or bilateral and is sometimes asymmetric. Hypertrophy may be associated with local irritation, discomfort in walking or sitting, and problems of personal hygiene during menses. Most cases require reassurance alone, but major labial hypertrophy occasionally warrants surgical reduction. This surgery has been designed for the psychological and physical comfort of the patients. The Department of Gynecologic Surgery at the Intercommunal Hospital in Cretéil (France) has been a referral center for vulvar diseases since 1989 (>500 vulvar surgical procedures per year) and evaluates patients with vulvar abnormalities from all over Paris and its vicinities. Here we describe the procedure and present an assessment of both anatomic and functional results on 163 patients over a 9-year period.

Material and methods

The records of 163 consecutive patients who underwent labia minora reduction in our department between April 1989 and February 1998 were reviewed. In every case the surgery was requested by the patient, who was then referred to our department by her gynecologist. We agreed to perform surgical reduction only when the maximal distance between base and edge was >4 cm and when the size of the labia minora was therefore likely to induce physical discomfort that would be improved by the surgical procedure. If the labia minora were not this large, the patient’s condition was not considered to be pathologic, and the patient was counseled against reduction surgery. Patients ranged in age from 12 to 67 years (median, 26). The motives for requesting surgery were aesthetic dissatisfaction in 87% of the cases, discomfort in clothing in 64%, discomfort when taking part in sports in 26%, and entry dyspareunia by invasion of the protuberant tissue in 43%. The surgical procedure was bilateral for 85% of the patients and unilateral for 15%. Assessment of anatomic results was based on physical examination 1 month after operation. As for functional and aesthetic results, the patients were sent a questionnaire about the aftermath of surgery and the degree of satisfaction (see Appendix). Finally, we asked a simple question, namely, “If you had to, would you undergo the same surgical procedure again?” The questionnaires were analyzed and the answers were recorded by members of the team who did not take part in the surgery. All the patients were operated on by the same senior
surgeon (B.-J.P.). Each labium minus is spread and two Kocher clamps are placed to delimit a V-shaped area of redundant labial tissue. The first clamp is placed on the posterior part of the labium minus, parallel and close to its base. The second clamp is placed across the labium minus, forming together with the first one an angle of approximately 90° (Fig 1). The area delimited by the 2 clamps is excised, leaving an anterior flap that will constitute a labium minus of the desired size (Fig 2). The base of the flap can be much smaller than its length because of the rich blood supply. Hemostasis is achieved. The anterior labial flap is gently spread, placed without tension, and secured to the underlying connective tissue with a buried running suture of 4-0 polyglactin. Running sutures with the same thread are used to close the raw surface below the flap and to suture the inner and outer edges of the flap to the vulvar mucosa (Fig 3). No drainage is used. Histologic study of the excised tissue was done for the first 40 patients. The patients remain in the hospital 1 day postoperatively. Postoperative care consists of good perineal hygiene and analgesics. Residual stitches are removed 1 month later, with the patient under local anesthesia if necessary. Fig 4, A and B, presents a long-term postoperative aspect; scars are nearly invisible on the internal side of the labia minora in Fig 4, B.

Results

One hundred sixty-two patients were examined 1 month after surgery. Anatomic results are considered satisfactory by the surgeon when the distance between base and edge is below 4 cm and when the healing process is completed by 1 month. This was obtained in 151 cases (93%). Eleven patients (7%) had to undergo a second procedure because of a minimal wound dehiscence resulting in an aesthetic result that was not perfect and warranted improvement. All the 40 microscopic findings were considered as normal by our pathologist.

Out of the 163 patients, 29 patients had moved since the time of postoperative examination and were lost to follow-up. Out of the 134 remaining patients, 98 answered the questionnaire; this represents a return rate of 73%. For these 98 patients, the delay between surgical procedure and questionnaire evaluation ranged from 6 to 109 months (median, 30 months). The 65 nonrespondents did not differ significantly from the respondents in terms of age, motives for undergoing surgery, and time between operation and questionnaire evaluation. Seventy-eight patients (80%) answering the questionnaire considered that the surgeon had satisfactorily explained the procedure and the results to be expected.

Postoperative pain, reported by only 64% of the pa-
Table I. Patient satisfaction*

<table>
<thead>
<tr>
<th>Result</th>
<th>Satisfied (No.)</th>
<th>Not satisfied (No.)</th>
<th>No answer (No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetic result</td>
<td>87 (89%)</td>
<td>10 (10%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Functional result</td>
<td>91 (93%)</td>
<td>3 (3%)</td>
<td>4 (4%)</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>94 (96%)</td>
<td>3 (3%)</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

*The patients were asked whether they were satisfied overall by the procedure and specifically by the aesthetic result and by the functional result.

patients, is usually relieved by nonnarcotic analgesic agents and lasts 1 to 60 days (median, 7 days). Forty-five percent of the patients complained about a postoperative discomfort and 23% complained of entry dyspareunia for 3 to 90 days (median, 28 days), but 83% found that the results of surgery were satisfactory. Duration of postoperative pain and dyspareunia are reported in Fig 5.

Patient satisfaction is reported in Table I. The aesthetic result was the one expected by 86 patients (88%). The size of the labia minora was still too large according to 4 patients and too small according to 8 patients. More precisely, among the 85 patients who were displeased with the original aesthetic appearance of the vulva, 77 (91%) were satisfied by the aesthetic result of the reduction. The labia minora reduction corrected the discomfort (dyspareunia and discomfort associated with clothing or exercise) for 77 (96%) out of the 80 patients with this complaint before surgery.

Only 4 patients (4%) answered that they would not undergo this procedure again. For these 4 patients, the procedure was uncomplicated and the labia minora had a postoperative distance between base and edge < 4 cm.

Ten of the 11 patients who underwent reoperation because of wound dehiscence answered the questionnaire; 8 are satisfied with the aesthetic result and 9 accept the functional result. Overall these 10 patients are satisfied and would undergo the same surgical procedure again.

Comment

The results of this study demonstrate that reduction of hypertrophic labia minora improves the aesthetic aspect in 91% of cases and relieves discomfort in 96%. Results were considered satisfactory in 96% of the cases by the surgeon. One could argue that anatomic results have not been evaluated by an independent observer. First, we found it difficult to ask the patients to be examined by an observer other than the surgeon. In addition, the purpose of this surgery is to relieve patient concerns about aesthetic aspects or functional comfort; consequently, we thought our major end point should be patient satisfaction. Would an interview have given a more accurate measure of patient satisfaction than a questionnaire? We do not think so. Goin and Rees found a close correlation between statistics collected by means of questionnaires and those collected by interviews. These same authors found that dissatisfaction was more commonly expressed on a questionnaire than during an interview with the operating surgeon. The return rate (73%) is very satisfactory for this kind of survey compared with the rate usually obtained for plastic surgery. In total, 40% of the patients did not respond to the questionnaire or were lost to follow-up, thus giving a potentially lower satisfaction rate. This is the main limitation of our study.

The number of patients in this series, which is the largest of the literature, is surprising. It is important to emphasize that each patient was referred by an independent gynecologist who diagnosed hypertrophy of the labia minora and appraised the patient’s discomfort. We also wish to stress that this surgery constitutes a very minor part of our practice, with 163 patients operated on among a total of 4542 with vulvar disease during this 9-year period. We only operate on patients with labia minora > 4 cm. We think that this is the minimum size to consider for two reasons, as follows: (1) This degree of hypertrophy can be symptomatic because of interference between the protuberant tissue and the underwear or during sexual intercourse; (2) the surgical procedure would probably be very difficult with less protuberant tissue and possibly could provide unsatisfactory aesthetic
results. However, we want to emphasize that a size >4 cm should never be considered as a motive for surgery unless there is a real aesthetic or physical discomfort that should be carefully assessed by the surgeon before he or she agrees to perform this surgical procedure.

The wound dehiscence, which is the only complication we encountered (7% of the cases), usually involves the extremity of the flap, which is thin with a poor blood supply, even if the main artery of the labium minus courses along the anterior border and is preserved in the flap. This complication, which is often responsible for an imperfect but acceptable result, is not associated with poor satisfaction because in most cases the second procedure can be performed with the patient under local anesthesia and it produces a flawless result. No characteristic has been identified regarding which women had a greater risk of wound dehiscence. A postoperative dyspareunia is relatively frequent because the labia minora reduction involves the vulvar canal in a way similar to an episiotomy, but this condition was temporary for all of the 98 patients who answered the questionnaire. Three patients had postoperative dyspareunia for >1 month (Fig 5). All of them complained of entry dyspareunia before surgery and 2 have undergone reoperation for wound dehiscence, but all 3 patients were finally satisfied with the functional result of the labia minora reduction.

The high degree of satisfaction reported by our patients (96%) supports the use of this procedure. In regard to the anatomic results, we noticed some discrepancies between the answers we got and the results observed by the clinician. Actually, there are two possible reasons for patient dissatisfaction. The first one, which is a technically unsatisfactory surgical procedure (physical complications or a poor aesthetic or functional result), is the most frequent one (8 patients). The second one is unre-
alistic patient expectations. This mainly concerns the oldest patients, who expected an improvement of their sex life along with the physical change. We suspected this was the case in 4 patients. This emphasizes the fact that the patients should be carefully selected. Conversely, anatomic changes allow some patients, who associate the vulva with bad memories (rape, incest), to have a better sex life, as reported by 2 patients.

After the 40 first cases, we stopped sending specimens for histologic analysis because no abnormality was noticed. We think that a histologic study is useless if no lesion is macroscopically visible.

Hypertrophy of the labia minora is rare, and the surgical procedures used to correct this abnormality are seldom described. In an exhaustive review of the English literature, we could find only 16 reports of surgical reduction of the labia minora. Most surgeons make a long elliptical incision parallel to the edge, excise the redundant labial tissue, and close the wound with interrupted sutures, but to achieve a perfect aesthetic result, the pigmented free edges of the labia minora must be preserved. The nymphaectomy, which is easier to perform, does not prevent postoperative discomfort and complications. The technique of labia minora reduction that we used results in appearance and measurements of the labia minora that are closer to the usual proportion. In addition, reduction must be performed over simple nymphaectomy for functional reasons; when the vulvar slit is closed, labia minora contribute to the occlusion of the vulvar canal with their medial sides in contact. Furthermore, labia minora reduction avoids the strange and unpleasant sensation of rubbing of the medial sides of the labia majora, which would occur after nymphaectomy. When the vulvar slit is opened, for example, during sexual intercourse, the labia minora constitute the medial lining and the internal sliding surface of the vulvar canal. Actually, the size of the flap must be discussed with the patients and adapted to their symptoms. If dyspareunia or discomfort in clothing or when taking part in sports is a motive for desiring surgery, the patient may prefer a very small flap even if the cosmetic result is not natural (Fig 4, A). If the aesthetic concern is the major motive for requesting reduction or in cases of asymmetry, we can retain longer flaps of the labia minora extending along the entire length of the vulvar slit. This will give very natural aesthetic results (Fig 4, B), but in these cases the flap has to have a certain width to give an adequate blood supply up to its extremity. Other authors have recently reported surgical procedures that closely resemble ours and that also preserve the free edge of the labia minora. The anatomic results are good, but the reports concern only a small number of patients. In addition, the long-term satisfaction has never been evaluated before our series.

The etiologic factors of hypertrophy of the labia minora are unknown except for infections such as *Filaria sanguinis hominis* (responsible for a blocking of the lymph channels). It can be caused artificially by traditional manipulations (stretching of the labia manually or by weights), which are practiced on female children in some tribes. Labia minora enlargement can also result from the childhood administration of androgenic medication. Some have attributed the condition to masturbation or early sexual activity, but in our study 44% of patients had never had sexual intercourse before labia minora reduction. Kato et al reported 3 cases of patients with myelodysplasia who had hypertrophy of the labia minora, possibly caused by diaper dermatitis. All of these etiologic factors sound anecdotal, and we believe that hypertrophy of the labia minora is definitely a mere variant of normal anatomy.

In conclusion, hypertrophy of the labia minora is not a pathologic condition. It is often asymptomatic and thus does not require attention. On the other hand, when the patient has aesthetic or functional concerns, labia minora reduction should be proposed. The technique we describe can be performed easily. This study on 168 patients demonstrates that it is associated with a high degree of patient satisfaction.

**REFERENCES**

1. Jeffcoate N. Hypertrophy of the labia minora "Spaniel ear nymphae."

**Appendix**

**Questionnaire**

Did you find that the surgeon had satisfactorily explained the procedure? (Yes or no)

Did you feel postoperative pain? (Yes or no) If yes, for how many days?

Did you experience postoperative discomfort (clothing, exercise)? (Yes or no)
Did you have sexual intercourse before surgery?  
(Yes or no)

Have you had sexual intercourse since the procedure?  
(Yes or no)

Did you feel pain during sexual intercourse after the procedure?  
(Yes or no) If yes, for how many days?

Did you find the aftermath of surgery simple?  
(Yes or no)

Is the result the one you expected?  
(Yes or no)

Do your labia minora now have the size you wished?  
(Yes or no) If no, are they still too large?  
(Yes or no) Are they too small?  
(Yes or no)

Are you satisfied with the aesthetic result?  
(Yes or no)

Are you satisfied with the functional result (disappearance of the discomfort)?  
(Yes or no)

Overall are you satisfied with the result?  
(Yes or no)

If you had to, would you undergo the same kind of surgery again?  
(Yes or no)

If you want, you can report some additional comments.