Abdominal Contour Surgery: Treating All Aesthetic Units, Including the Mons Pubis

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Background: Many patients who seek “abdominal” contour surgery also desire improvement of areas of the torso adjacent to the abdomen, such as the flanks and back rolls.

Objective: We propose a classification of the abdomen into distinct aesthetic units and report on a series of cases in which this classification was used, with special emphasis on one such unit, the mons pubis.

Methods: A series of 400 consecutive patients were evaluated according to the proposed designation of aesthetic units. Lipoplasty was performed as described in previous studies. A subset of 6 patients who specifically desired improvement of the mons pubis were treated by lipoplasty and/or horizontal or vertical wedge incision.

Results: Most patients who received treatment according to aesthetic unit were satisfied with their outcomes. Two of the patients who sought improvement of the mons pubis specifically requested additional procedures.

Conclusions: An approach to abdominal contour surgery that includes consideration of all related aesthetic units can achieve more proportional, harmonious results and increase patient satisfaction.

Abdominal contour surgery has undergone a number of refinements as our understanding of the vascular anatomy¹,² and the superfascial system³ has increased. Furthermore, the incorporation of advanced lipoplasty techniques in the repertoire has enabled improved outcomes and an ability to tailor procedures to the individual patient’s anatomy.²,⁴-¹⁰ This advance is reflected in the increased popularity of abdominal contour procedures in recent years.¹¹

To achieve harmony during abdominal contour surgery, it might be useful to think of the abdomen as being composed of several aesthetic units—similarly to how we define such units in the nose¹² and the face.¹³,¹⁴

To this end, we suggest that the female “abdomen” be considered to consist of 7 related aesthetic units (Figure 1) and the male “abdomen” be considered to consist of 6 related units (Figure 2).¹⁵ These units were formulated on the basis of our experience with a series of patients seeking abdominal contour surgery who frequently inquired about...
additional improvement or referred to these adjacent areas during consultation for such surgery.

Practically speaking, abdominal contour surgery could be termed “torso contour surgery,” because in many situations the flanks and back rolls are also treated at the patient’s behest. However, whereas physicians refer to these units as part of the torso, patients always express their concerns for these units in terms of the “abdomen.”

The youthful female “abdomen” has an hourglass appearance in frontal view with a midline depression (linea alba) and a well-defined outline of the paired rectus muscles. There is a gentle concavity centered over the umbilicus on profile view, and there is a slight convexity of the upper abdomen as well as the region of the mons pubis; a central depression from the xiphoid to the umbilicus also defines a well-contoured figure. The sacral region and flanks are likewise concave on profile view, with a smooth transition to a convex buttock region.

The youthful male “abdomen” has a more triangular shape on frontal view, with a midline depression and well-defined paired rectus muscles. Laterally, there is a slight concavity extending to the flanks, which in a youthful man maintains a gentle convexity continuing to the back. On profile view, the male “abdomen” appears relatively flat, with a slight concavity of the sacral region extending to a convex buttock region.

Rather than treatment of only one area, such as the lower or upper abdomen, adequate management of the abdomen might require treatment of a number, or even all, of the related aesthetic units that patients perceive as parts of the “abdomen.” Abdominal contour procedures that do not encompass all of these aesthetic units might leave the abdomen in relative disproportion and ultimately lead to patient dissatisfaction.
The mons pubis is one of these units. A distinct entity that is often overlooked, it can lead to an unbalanced aesthetic. The youthful mons pubis is narrow, with good skin tone, and it has a moderate amount of fat in the subcutaneous plane to provide padding against the bony symphysis. With age, pregnancy, or weight fluctuations, the mons pubis can appear wide and full, with poor skin tone, and can take on a worsening convex appearance. When the mons pubis region is neglected in abdominal contour surgery, a relative disproportion to the abdomen can result from the fatty, loose, or wide mons pubis. Similarly, after full abdominoplasty, although the abdomen might appear tighter and flatter, the mons pubis is often stretched and disproportionate. This will often result in a relative lengthening of the mons pubis, creating an imbalance to the newly contoured abdomen.

We report our experience with the concept of incorporating treatment of all of the aesthetic units of the abdomen. Moreover, we also make recommendations for contouring treatment of a distinct and often neglected abdominal aesthetic unit, the mons pubis.

**Materials and Methods**

Through use of our cross-filing data, 400 consecutive patients were evaluated according to aesthetic subunit, as defined in Figures 1 and 2. The patients included 342 women and 58 men whose ages ranged from 16 to 71 years. In all cases, the regions of concern that consisted of abdominal aesthetic units were treated. Methods included lipoplasty and open abdominal contour procedures, as previously described.

Patients were evaluated in the presence of a 3-way mirror to identify all areas of concern. The data were recorded and appropriate surgical plans formulated on the basis of the findings. “Open” procedures were performed with patients under general anesthesia supple-
mented with low-volume (approximately 1 L) superwet anesthesia. “Closed” procedures were performed with patients under general anesthesia or monitored with intravenous sedation and also supplemented with low-volume superwet anesthesia. The superwet anesthesia consisted of 1 L of Ringer’s lactate, 20 mL of 1% lidocaine, and 1 mL of 1:1,000 epinephrine. The preoperative, intraoperative, and postoperative parameters and protocol used have been described previously.15

Lipoplasty was performed as indicated through use of machine-driven suction-assisted lipoplasty (SAL), ultrasound-assisted lipoplasty (UAL), or power-assisted lipoplasty (PAL) through 2 to 3 access incisions for women and 5 access incisions for men. Patients were placed in prone, supine, and lateral decubitus positions as indicated to access treatment of all aesthetic units of the abdomen.

A subgroup of 6 patients specifically complained of the disproportionate appearance of the mons pubis. Five of these 6 patients had undergone previous abdominal contour surgery procedures by another surgeon (Table). This subgroup consisted of 5 women and 1 man whose ages ranged from 28 to 57 years (mean, 44 years). They were evaluated and treated for this isolated unit as well as for other sites. Each patient was examined preoperatively in a standing position. Treatment of the mons pubis was determined by evaluating the area for excess fat, skin tone, and tissue redundancy. The therapeutic options for the mons pubis included (1) horizontal wedge excision to shorten the mons-to-umbilicus distance, (2) vertical wedge excision to narrow the senescent mons, and (3) lipoplasty to debulk the mons, either alone or in combination with one of the wedge excision techniques. In open procedures, the mons pubis can be secured to the underlying fascia to prevent migration and a resulting stretched appearance.15

### Results

Most of the patients in the group receiving treatment of all aesthetic units of the abdomen were pleased with their outcomes. Of those in the subgroup that complained of the disproportionate appearance of the mons, 1 patient who underwent lipoplasty later requested a horizontal reduction to decrease the height of the mons pubis. Another patient for whom an abdominoplasty and SAL were recommended initially decided to have SAL alone; though generally happy with the result, she subsequently underwent the abdominoplasty and SAL along with a vertical wedge excision of the mons pubis. Representative photographs of some of these patients are shown (Figures 3 through 7).

There were no adverse outcomes reported in either patient group. The most common complaint in the mons

### Table. Patients seeking correction of mons pubis area

<table>
<thead>
<tr>
<th>Patient no.</th>
<th>Sex</th>
<th>Age (y)</th>
<th>Previous procedures</th>
<th>Procedures performed by authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>57</td>
<td>SAL of abdomen</td>
<td>SAL of buttocks, flanks, and inner &amp; outer thighs; followed 1 y later by type III abdominoplasty²; SAL of flanks, mons, and abdomen; vertical wedge excision of mons</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>47</td>
<td>Abdominoplasty; face lift; 4-lid blepharoplasty; breast augmentation</td>
<td>SAL of thighs and mons; scar revision of abdomen, UAL/SAL of back, flanks, and mons; autologous fat grafting to nasolabial folds</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>50</td>
<td>SAL of abdomen</td>
<td>SAL of mons, followed 8 mo later by horizontal wedge excision of mons, Type IV abdominoplasty; brachioplasty; vertical wedge excision of mons</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>54</td>
<td>SAL of abdomen and flanks</td>
<td>SAL of chest, abdomen, and mons pubis; revision of lower abdominal scar</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>28</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>31</td>
<td>SAL of abdomen</td>
<td></td>
</tr>
</tbody>
</table>

F, Female; M, male; SAL, suction-assisted lipoplasty; UAL, ultrasound-assisted lipoplasty.
**Figure 3.** A, Preoperative appearance of a 28-year-old woman’s abdomen. B, Postoperative appearance of the mons pubis 12 months after simultaneous abdominoplasty and vertical wedge reduction to narrow the mons.

**Figure 4.** A, Preoperative appearance of a 47-year-old woman who had undergone abdominoplasty, face lift, 4-lid blepharoplasty, and breast augmentation by another surgeon. B, Postoperative appearance after lipoplasty of thighs and mons pubis and scar revision of the abdomen.
pubis group was labial edema and ecchymosis, which gradually resolved over the course of a few weeks.

**Discussion**

We report on a large consecutive series of patients who sought abdominal contour surgery—including some patients who were dissatisfied with the results of prior abdominal contour surgery because some portion of the abdomen (e.g., the upper abdomen) had not been simultaneously addressed—and for whom we recommended reconciliation of treatment areas defined as distinct aesthetic units. A subset of patients who were unhappy with the disproportionate appearance of a distinct unit, the mons pubis, was also reviewed.

Our successful outcomes validate the use of this approach to treatment of the abdomen. Omitting the rejuvenation of one of the abdominal aesthetic units can result in disproportion, disharmony, and patient discord. To avoid this problem, related abdominal aesthetic units should be addressed in both open and closed abdominal contour procedures.

We propose that the patient’s perception of what constitutes the abdomen often exceeds the lower abdomen or the anatomical boundaries of the abdominal area as these are normally defined by surgeons (i.e., extending from the anterior axillary folds to the costal margins and groin creases). During consultations it becomes evident that many patients who seek “abdominal” contour surgery are concerned with their flanks, back rolls, epigastrium, and mons pubis—areas not always considered in evaluation and treatment of the abdomen. Men express greater concern with the flanks, often expressing a desire to improve the circumferential “beltlike” region between L_2 and L_4 (popularly referred to as the love handles). In contrast, women rarely present with this anatomical deformity; instead, they often desire contouring of the hip or abdominal back rolls in conjunction with abdominal contour surgery. Therefore, we believe that the patient discussion should include those areas of concern to patients and that consideration should be given to contouring in relation to units generally considered part of the abdomen by the patient. The inability to reduce the portion of abdominal girth caused by intra-abdominal fat must be emphasized during patient counseling.

In most abdominoplasty and abdominal lipoplasty procedures, we address the mons pubis with lipoplasty; however, varying degrees of mons distortion beyond lipodystrophy can be seen. Horizontal or vertical wedge excision are options for creating an improved aesthetic

![Figure 5. A, Preoperative appearance of a 54-year old woman who had undergone lipoplasty of the abdomen. B, Postoperative appearance 7 months after lipoplasty of the mons pubis.](image-url)
Horizontal wedge excision shortens the distance between the mons and the umbilicus to the ideal 10 to 12 cm. In the setting of a modified abdominoplasty in which the umbilicus is floated, horizontal mons shortening can assist in maintaining its appearance and the distance to the lowered umbilicus. Vertical wedge excision narrows the senescent mons pubis, establishing a less widened or “floppy” appearance.
ance and restoring a more youthful triangular configuration. Lipoplasty, either alone or in combination with one of the wedge excision techniques, allows for defatting of the protuberant mons pubis and aids in final contouring to provide balance of the abdominal aesthetic units.

References


Figure 7. A, C, Preoperative appearance of a 31-year-old man after lipoplasty of the abdomen. He expressed a desire for additional improvement in multiple aesthetic units of the abdomen that were not treated, including the mons pubis, as well as a revision of a lower abdominal scar. B, D, Postoperative view 10 months after secondary lipoplasty of the chest, abdomen, and mons pubis and revision of a lower abdominal scar.


