Commentary on: Progressive Tension Sutures in Abdominoplasty: A Review of 597 Consecutive Cases

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It is uncommon to read a follow-up article by original authors on a surgical technique many years after the initial report. Drs Pollock and Pollock\(^1\) provide additional evidence that the progressive tension suture (PTS) technique they presented in 2000 can almost entirely eliminate seroma in abdominoplasty. Although other techniques to prevent seroma have been published—including tissue glues, different dissection planes, new dissection devices, and prolonged patient immobilization\(^2-5\)—it appears that none has been supported by favorable results published by other authors who treated a large number of patients. The success of the PTS technique has been corroborated by several large series\(^6-8\) including reports with Level 2 and Level 3 evidence\(^9,10\). From the available evidence, PTS appears to be the only technique that continues to be associated with low seroma rates and allows for the elimination of drains.

Since their original publication,\(^1\) the authors have made minor modifications, including the use of a heavier absorbable suture (0 Vicryl instead of 3-0 Vicryl; Ethicon, Inc, Somerville, New Jersey) and placement of the PTS further apart (2 cm instead of 1 cm apart). The latter modification allows for only 18 to 20 PTS to be placed and should take no more than 15 minutes after becoming comfortable with the procedure, typically after a few cases. The authors’ current study also confirms that PTS are safe and effective when abdominoplasty is combined with liposuction, as 67% of their patients had liposuction of the abdominoplasty flap or an adjacent area without any increased risk of seroma formation.

My experience performing abdominoplasties with tumescent infiltration supports not requiring drains when PTS are used. PTS also can be beneficial, and be used without drains, in patients who undergo circumferential abdominoplasty or an abdominoplasty procedure that involves a vertical incision, including patients with massive weight loss. Although hard to measure, PTS may prevent the abdominoplasty scar from migrating superiorly and causing excessive elevation of the mons pubis and pubic hairline. From the patient’s perspective, PTS allow for easier ambulation because drains are not used and there is less discomfort. This may also result in easier home care and less patient stress concerning the drains.

A potential risk of using PTS on the abdominal wall is nerve injury or entrapment. Among the authors’ 597 patients, 3 cases of lateral femoral cutaneous nerve entrapment occurred, involving a 3-point suture at the level of the abdominoplasty incision. Performing the procedure meticulously and including only the abdominal wall fascia in the deep component of the PTS technique will help to minimize nerve injuries. Avoiding abdominal wall sutures in the “danger zones” around the inguinal ligament\(^11\) should protect the lateral femoral cutaneous nerve, genitofemoral nerve, and iliohypogastric nerve branches from injury.

A recent modification of PTS in abdominoplasty is the use of running bidirectional or monodirectional barbed sutures.\(^6,7\) The authors believe that individually placed PTS, as opposed to running PTS, allow for more precise placement and easier removal (if necessary). I agree that the running barbed sutures are somewhat more difficult to change or remove once they have been placed. However, I would advise surgeons to try both methods to determine which one best suits their individual needs.

The studies published to date, including this large series of PTS in abdominoplasty, confirm that the technique is effective for reducing seroma and eliminating drains. Although the procedure involves a little more time, the learning curve is favorable and patient satisfaction may be improved.

Disclosures

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REFERENCES


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