Another innovation in surgery for primary spontaneous pneumothorax (for men only)

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The surgical approach for primary spontaneous pneumothorax (PSP) has evolved from thoracotomy to 3-port video-assisted thoracoscopic surgery (VATS), which has become the favored option. More recently, 2-port and uniport approaches for PSP are gaining interest.¹⁻³

In this issue of the *Journal*, Lin and colleagues⁴ report yet another innovation in the surgical treatment of PSP with bullectomy and pleural abrasion using a transareolar incision. At the time of writing, there were 3 other published cardiothoracic surgery papers describing the use of transareolar approach in sympathectomy,⁵ robotic mitral valve surgery,⁶ and lung wedge resection.⁷

In the current series, 112 male patients with PSP underwent transareolar bullectomy, which is essentially a 2-port access through the third and fourth intercostal spaces, with the incisions made over the superior and inferior aspects of the areola. Blebs were resected with endostapling, and mechanical pleural abrasion was performed. Because the majority of blebs occurred in the apical segment of the upper lobe, this access provided a direct path to the target area. The transareolar approach is not suitable for female patients, for fear of damaging the mammary glands, and obese patients, because of the variable position of the areola. The authors concluded that the transareolar approach resulted in excellent cosmetic results and patient satisfaction at with no recurrence at 1-year follow-up.

One important piece of information that the authors did not provide in the manuscript is the percentage of patients who had a previous PSP and the percentage of first-time PSP. The authors stated that all patients underwent preoperative computed tomography (CT), and, if blebs were detected, then surgery would be offered even in patients with first-time PSP. This management algorithm is at variance with the recommendations from published guidelines on the management of PSP. The guideline from the American College of Chest Physicians does not recommend surgery for first-time pneumothorax, unless there is persistent airleak.⁸ The guideline of the British Thoracic Society recommends surgery for first-time PSP

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Central Message

Early results of transareolar bullectomy for men with primary spontaneous pneumothorax show promise, but more data are needed to evaluate its role.

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in the following situations: first-time contralateral, persistent airleak, failure of re-expansion, synchronous bilateral, or at risk professions.⁹ Admittedly, some authors suggest surgery may be offered in first-time PSP, but this is not the prevalent practice.¹⁰

The routine use of CT is not recommended by either the American College of Chest Physicians or the British Thoracic Society,^{8,9} although this is more because of practical constraints. Because the transareolar approach may be unsuitable where there are multiple complex bullae, a preoperative CT would be useful for patient selection.

Lin and colleagues⁴ stated that VATS bullectomy/pleurodesis via a 2-port or uniport technique requires expensive devices and incurs poor maneuverability when conventional instruments are used. Proponents of uniport VATS may disagree with this statement, although few would argue against the excellent cosmetic results with the transareolar bullectomy over the more “conventional” multiport or uniport approach.

Transareolar bullectomy is a promising innovation, and the authors should report long-term data, particularly in patients with recurrent pneumothorax, to help determine its place in the management of PSP.

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