

Letters to the Editor

number of patients, especially in the surgical group (n = 13).

Exclusion of patients with cancer at the time of pulmonary embolism, however, is more complicated than performing a Kaplan-Meier survival analysis with fewer patients at follow-up. There are several different types of cancer, of course, and the survival and prognosis are influenced not only by the type of cancer (Hodgkin lymphoma vs pancreatic cancer for example) but also by the staging (localized vs metastatic), the overall condition of the patient, and the patient's age. We agree with McGuire and Rubens that a patient with metastatic cancer will likely have a very poor prognosis and probably should not undergo aggressive surgery for pulmonary embolism, and this is an assessment that should be performed by the surgeon, the patient, and the family at the bedside. If, however, a patient has a history of cancer that has been treated successfully with surgery, chemotherapy, or radiation therapy and as a result has a meaningful survival (>1 year), then surgery for pulmonary embolism should be carefully considered. In general, for patients with known diagnosis of cancer at the time of pulmonary embolism, our practice is to consult our medical oncology colleagues, when patient stability makes this feasible, to give us an assessment of the estimated survival. If survival is estimated at greater than 1 year, we consider pulmonary embolism surgery and go over this with the patient and family.

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THE PARACHUTE TECHNIQUE FOR ANTERIOR LEAFLET PROLAPSE

To the Editor:

The publication by Zannis and colleagues¹ highlights the critically important new surgical approach for the treatment of anterior leaflet prolapse. Konstantinos and colleagues performed the parachute technique on 44 consecutive patients.¹ Echocardiographic examination was performed in all patients to measure the distance from the tip of each papillary muscle to the annular plane at end systole in an apical view. Constructing the parachute according to the described distance may cause the persistence of prolapse because there must be coaptation depth between the anterior and posterior leaflets.² The coaptation depth is approximately 4 mm in the anterior and posterior commissures and approximately 8 mm between the A2 and P2 scallops. Adjusting the coaptation depth is not clear in the article.

Furthermore, the authors did not mention the causes of the patient's disease. The artificial chordal replacement can be used in both Barlow's disease and fibroelastic deficiency.³ Nonetheless, Barlow's disease has distinct features. It generally has complex valve pathology and dysfunction, which is most often multisegmental. Lesions include excessively thick and billowing leaflet segments, chordal elongation and chordal rupture, calcification of the papillary muscles or annulus with chordae restriction, and severe annular dilatation with giant valve size.⁴ Patients with fibroelastic deficiency often present with minimal, as opposed to excess, tissue, so extensive leaflet resection or complex leaflet remodeling procedures are rarely indicated.⁴ All lesions present should be corrected to store not only valve competency but also a normal valve geometry and satisfactory line closure. Because excess tissue is the hallmark lesion of Barlow's disease, leaflet resection and restoration of normal relationship of

the annular dimension are usually central to the surgical strategy.^{4,5} The authors state that in the beginning of their experience, large anterior mitral leaflet prolapses had been addressed by triangular resection of some of the excess tissue before parachute implantation. In the perennial concern of simplification and standardization of surgical techniques, they have completely abandoned anterior mitral leaflet triangular resection, and the running suture was used to crimp excessive tissue on the Dacron strip of the parachute.¹ However, crimping may only remove the excess tissue vertically, not horizontally. So performing triangular resection in the anterior leaflet may improve the result in selected cases.

This is an admirable study. The readers thank the authors for sharing their experience and knowledge. The explanation of previously described points will be helpful for better understanding.

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Reply to the Editor:

In this patient series,¹ we report our experience regarding the correction of