We also disagree that the thrombus on the membrane was from a DVT, because it was very adherent to the membrane and had to be peeled off, reflecting that the thrombus was formed in situ. Because we strongly believe that the cause for the patient's pulmonary embolism (and myocardial infarction) was the thrombotic mass on the thickened membrane in RA (which was all surgically excised), especially with negative coagulation studies and absence of any documented DVT, we also do not agree with the recommendation that the patient should be placed on long-term medical prophylaxis for DVT despite her family history of pulmonary embolism. We used short-term anticoagulation and long-term aspirin therapy.

We greatly appreciate the opportunity to address the queries of Martínez-Quintana and Rodríguez-González.¹

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ASCENDING AORTIC ANEURYSMS AND VOLUMETRIC MEASURES

To the Editor:

We read with interest the article, "A prospective study of growth and rupture risk of small-to-moderate size ascending aortic aneurysms" by Geisbüsch and colleagues.¹ The volume of the ascending aorta can certainly be calculated when the diameter and the length of the vessel are known. A patient with a longer ascending aorta with normal transverse diameters can still have a high-volume ascending aorta. But a long ascending aorta is never 1 of the indications for surgery in the setting of a normal transverse diameter. However, when a patient has a very short and enlarged ascending aorta, he or she can still have a normal ascending aorta volume. It would be a mistake to ignore this patient based on volumetric parameters. We strongly believe that volume of the vessel should not be a criterion for a surgical approach.

The authors claim in their Table 1¹ that the presence of a bicuspid aortic valve was not a contributing factor for aortic dilation. However, bicuspid aortic valve is one of the major contributing factors to aortic dilation because the bicuspid valves disrupt blood flow creating an abnormal flow pattern within the vessel. We also request that the authors further explain the underlying mechanism/s so we can accurately apply anticoagulation therapy to the volume of the ascending aorta. Because there was a statistically significant finding (shown in Table 1¹), it deserves an explanation.

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GROWTH AND RUPTURE RISK OF SMALL-TO-MODERATE SIZE ASCENDING AORTIC ANEURYSMS: A PROSPECTIVE STUDY

Reply to the Editor:

Thank you for your interest in our article and your comment. The decision to operate on a patient with an ascending aortic aneurysm depends on a reliable and reproducible diagnostic method. To estimate the risk of rupture and death it is important to understand the natural history of thoracic aneurysms and take into account the morphology of the aneurysm and progression of the disease rather than looking at a single measurement (eg, diameter). We agree that a long aorta with a normal diameter is unlikely to rupture, whereas a shorter aorta with greater diameter is at higher risk for rupture. Both, however, could have the same volume measurement. Monitoring growth by taking diameters presents, we believe, a high risk of interobserver variability because measurements are often taken at different levels or angles. Also, the aorta is a 3-dimensional structure, which should not be described with a single linear measurement. Thus, calculating volumes is a more objective way of describing this structure and adds to the reliability of monitoring with computed tomography scans. To include the

FIGURE 1. Ratio of ascending aortic volume compared with total aortic volume.

length of the aorta and avoid unnecessary operations due to high volume values, we suggest calculating the ratio of ascending aortic volume/total aortic volume (Figure 1). Predisposing factors for increased growth, such as persistent hypertension, smoking, connective tissue disease, or dysfunctional bicuspid aortic valve, should also be taken into account and shorter follow-up times recommended in those patients.

There is consensus that a bicuspid aortic valve with malfunction contributes to the progress of aortic dilatation. However, in our analysis, a bicuspid valve was present in 20% of patients with a maximum diameter of the ascending aorta of 4.4 ± 0.6 cm at the time of first scan and was not a significant predisposing factor for increased growth. Please note that this is not an analysis of predisposing factors for aortic dilatation itself. We still recommend close follow-up for those patients because the risk of rapid growth, dissection, or rupture may be increased.

As we already stated, it is difficult to explain our finding that low-dose aspirin decreases growth of the aneurysms. Before changing any recommendations regarding medication, further investigation is needed.

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PREOPERATIVE POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY IN PULMONARY GROUND GLASS OPACITIES: A USEFUL DIAGNOSTIC AND STAGING TOOL OR NOT?

To the Editor:

We have read with interest the article by Cho and colleagues,¹ focused on the utility of positron emission tomography (PET)/computed tomography (CT) in the preoperative staging of patients with pure ground glass opacity (GGO) adenocarcinoma. Its background is the diffuse suggestion that pure GGOs have favorable behavior, because cancer-specific survival approaches 100% in surgically treated patients.² These outcomes are due to the absence of lymphatic/hematic tumor spreading as supported by some articles reporting no nodal involvement at pathologic examination in patients who underwent surgery.³ This suggests that clinical staging workup should be reconsidered.

The authors compared preoperative PET/CT findings and pathologic nodal examination in operated patients affected by pure GGOs. Because pathologic nodal 18-fluorodeoxyglucose uptake at PET/CT was always absent, except in 2 cases that resulted in non-neoplastic nodes, and all the nodes removed were negative for cancer, they concluded that preoperative PET/CT is not necessary.

Their conclusions are interesting; however, we have some criticisms, and the most important is that the median of nodal stations extracted was 4.1 and 51 patients did not even undergo nodal dissection. In our opinion, complete nodal dissection is mandatory to support the absence of lymphatic spreading.

More generally, we underline that preoperative PET/CT is performed not only to complete tumor staging but also to obtain diagnostic information about the nodule. In fact, some authors have showed that nonsolid adenocarcinoma is prone to be false-negative on PET/CT,⁴ but it has been shown that GGOs adenocarcinoma exhibit positivity on PET/CT in case of invasive features.⁵

Our conclusion is that the diagnostic role of PET/CT in pure GGOs currently is still uncertain, and more data are needed to determine the role of PET/CT in pure GGOs before leaving preoperative PET/CT in pure GGOs.

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