THE ANATOLIAN JOURNAL OF CARDIOLOGY

Official journal of the TURKISH SOCIETY OF CARDIOLOGY

How Little Things Can Make a Big Difference?

LETTER TO THE EDITOR

To the Editor,

We read the article by Akbal et al[1] with great interest. The majority of pulmonary embolism (PE) treatment has focused on device therapy (e.g., catheter-directed fibrinolysis and mechanical thrombectomy) for pulmonary artery reperfusion. This study suggested that the AnjioJet rheolytic thrombectomy (ART) system may be considered in the treatment of PE patients despite the black box warning. Given the difficulties in treating patients with PE, furthermore reliance on imaging surrogates, such as right ventricle (RV) to left ventricle (LV) diameter ratio and thrombus volume reduction, fails to recognize the multifactorial pathophysiology of PE and may provide an incomplete assessment for treatment benefit. Moreover, proximal thrombus volume reduction as measured by standard thorax computed tomography (CT) does not account for distal pulmonary artery perfusion and the impact of hypoxemia and circulating pulmonary vasoconstrictors on pulmonary vascular resistance and RV pressure overload.[2] The ART system could easily be used for the treatment of upper and lower extremity venous thrombosis cases. However, PE treatment options with the ART system should be evaluated with caution. The skill of the operator and the hemodynamic status of the patient generally affect the outcomes. The other catheter-directed methods for PE treatment are more user-friendly and have potential better outcomes in the hands of less experienced operators.[3] In this study, Akbal and colleagues made a great job with their 7-year experience with ART in patients with PE. Beyond this, we assume that some issues should be clarified: (1) The ART procedure should be expressed step by step in the text as the catastrophic phase of the ART appears during the fragmentation and aspiration sequences. (2) Are all the ART catheters used in the treatment 6 Fr in size, what is the fact choosing 6 fr ART instead of 8 Fr size? (3) You mention that chest CT images were acquired 3-4 days after the ART procedure. Is this protocol a routine for PE patients, as both the ART system and angiographic contrast material force the kidneys for a potential kidney injury? In this circumstance, it is hard to discriminate the potential guilty for post-procedural nephropathy. We again congratulate the authors for this large-scale study and potential contribution to future innovative ideas.

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Cite this article as: Özçınar E. How little things can make a big difference?. *Anatol J Cardiol*. 2022;26(6):498.

DOI:10.5152/AnatolJCardiol.2022.1459