activator in a 37-year-old female in the early postoperative period," by Aykan et al. (1) in Anatolian J Cardiol 2014; 14: 400-2. We believe that it can be a really good idea to administer low-dose thrombolytic agents in pulmonary embolism to minimize possible complications. Of course, randomized controlled trials should be performed to test the reliability of this low-dose regimen. We are curious as to why the authors did not consider using well-proven modalities, like percutaneous ultrasound-accelerated thrombolysis (PUAT) and directed thrombolysis (CDT) (2-4). There is no clinical study available so far comparing systemic thrombolytic therapy and endovascular thrombolytic therapy, but this kind of study can take considerable time and can also yield major hemorrhagic complications up to 20%; so, it is preferable to go for an endovascular approach, where direct administration of a thrombolytic agent into the thrombus is possible (4, 5). In PUAT therapy, the dose of tissue plasminogen activator (tPA) is 0.5 mg/kg. Engelhardt et al. (4) even showed the efficacy of doses as low as 20 mg tPA for treatment of pulmonary embolism. In our institution, 4 patients with massive/sub-massive pulmonary embolism received PUAT with 0.5 mg/kg tPA infusion for 6 hours. We did not experience any complications or mortality. Remarkable improvement in right ventricular functions was shown in all patients with echocardiography and computed tomography.

Measurements of right ventricle and left ventricle diameters could also be a very useful tool in assessing the efficacy of treatment in massive pulmonary embolism. We would like to hear the authors' opinions regarding the concerns mentioned above.

Orhan Gökalp, Yüksel Beşir[1], Börtecin Eygi[1], Gamze Gökalp[2]
Department of Cardiovascular Surgery, Faculty of Medicine, İzmir Katip Çelebi University; İzmir-*Turkey*
[1]Department of Cardiovascular Surgery, İzmir Katip Celebi University, Atatürk Education and Research Hospital; İzmir-*Turkey*
[2]Department of Pediatric Emergency, Tepecik Education and Research Hospital; İzmir-*Turkey*

References

1. Aykan AC, Boyacı F, Hatem E. Successful treatment of a pulmonary embolism with low dose prolonged infusion of tissue typed plasminogen activator in a 37 year old female in early postoperative period. Anadolu Kardiyol Derg 2014; 14: 400-2. [CrossRef]
2. Bavare AC, Naik SX, Lin PH, Poi MJ, Yee DL, Bronicki RA, et al. Catheter-directed thrombolysis for severe pulmonary embolism in pediatric patients. Ann Vasc Surg 2014; Mar 31. [CrossRef]
3. Lin PH, Chen H, Bechara CF, Kougias P. Endovascular interventions for acute pulmonary embolism. Perspect Vasc Surg Endovasc Ther 2010; 22: 171-82. [CrossRef]
4. Engelhardt TC, Taylor AJ, Simprini LA, Kucher N. Catheter-directed ultrasound- accelerated thrombolysis for the treatment of acute pulmonary embolism. Thromb Res 2011; 128: 149-54. [CrossRef]
5. Fiumara K, Kucher N, Fanikos J, Goldhaber SZ. Predictors of major hemorrhage following thrombolysis for acute pulmonary embolism. Am J Cardiol 2006; 97: 127-9. [CrossRef]

Should systemic thrombolytic therapy be considered a first-line treatment in acute pulmonary embolism?

To the Editor,

We read the article, entitled "Successful treatment of a pulmonary embolism with low-dose prolonged infusion of tissue-type plasminogen

Address for Correspondence: Dr. Orhan Gökalp,
Altınvadi Cad. No:85 D:10 35320 Narlıdere, İzmir-*Türkiye*
Phone: +90 505 216 88 13
Fax: +90 232 243 15 30
E-mail: gokalporhan@yahoo.com
Available Online Date: 25.12.2014

DOI:10.5152/akd.2014.5861