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Reply to Letter to the Editor: Critique of ''Dramatical Response to Low-Dose Ultra-Slow Infusion of Alteplase for Massive Mitral Mechanical Valve Thrombosis''

LETTER TO THE EDITOR
REPLY

To the Editor,

We appreciate you and your journal readers' interest in our case report.[1] Also, we thank you for your valuable contributions to our e-page original image entitled "Dramatical Response to Low-Dose Ultra-Slow Infusion of Alteplase for Massive Mitral Mechanical Valve Thrombosis," recently published in the May 2022 issue of The Anatolian Journal of Cardiology.

As mentioned, acute ischemic stroke (AIS) is one of the deadliest complications of mitral valve thrombi. It has been reported in the literature that combined embolic events are seen at rates ranging from nearly 1.5% to 20% in surgically treated patients and those receiving thrombolytic therapy. In the studies by "Hattusha"[2] and "Prometee"[3], 2.4% and 1.7% embolic events were observed, respectively, in the groups receiving low-dose ultra-slow thrombolytic therapy. Consistent with the literature, there is no definite information on how to approach embolic events that develop during treatment in these studies. In this step, individualized management is recommended considering both the severity of the complication and the residual valvular obstruction.

In our case, AIS occurred at the 13th hour of the ultra-slow low infusion thrombolytic therapy (TT) regimen. The recommended dose of alteplase is 0.9 mg/kg (maximum dose 90 mg) for 60 minutes for AIS according to current guidelines, with 10% of the dose given as a bolus for one minute.[4] However, there are case reports in the literature in which lower doses of thrombolytic therapy are given in this situation.[5]

As we consulted with neurologists, they recommended that to continue the current TT regimen with close clinical follow-up. We agreed with this recommendation due to our concerns about the results of accelerating the TT, such as new larger ischemic or hemorrhagic cerebrovascular events, and we achieved a positive clinical response.

As a result, we presented a case of mitral prosthesis valve thrombi treated with a low-dose ultra-slow infusion of TT and continued the therapy for the coincident acute cerebral ischemic complication, which was resolved with complete success.

An individual and multidisciplinary approach is recommended in the management of acute ischemic stroke during TT for prosthesis valve thrombus. It should be kept in mind as an option to continue the current regime after excluding the hemorrhagic event.

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