

Tolvaptan should be used very carefully in very elderly patients

To the Editor,

We were very interested to read the article entitled 'The clinical utility of early use of tolvaptan in very elderly patients with acute decompensated heart failure' by Niikura et al. (1) recently published in the *Anatol J Cardiol* 2017; 18: 206-12 and the editorial comment entitled 'Tolvaptan in the very elderly with acute decompensated heart failure- a therapeutic option worth of consideration' by Ndrepepa (2) in the same issue, which evaluated the safety and efficacy of tolvaptan, a selective vasopressin V2 receptor antagonist, in very elderly patients.

Tolvaptan's efficacy has been evaluated in various trials for the treatment of congestive heart failure (HF) (3). In these trials, while improving many signs and symptoms of HF, it did not reduce long-term mortality or HF-related morbidity. Because of its pure water excretion, without influencing renal function and electrolyte balance, it has been used for many years, especially in the treatment of hypervolemic HF patients. A single-center trial conducted by Sağ et al. (4) assessed the efficacy and safety of tolvaptan in hyponatremic and hypervolemic HF patients in Turkey, and found tolvaptan to be very effective. In all of these trials, hypervolemia is the main cause of congestion, especially in chronic HF. But in acute decompensated HF patients, vasoconstriction caused by sympathetic hyperactivity triggered by an underlying etiological factor, such as COPD exacerbation or infection, is also an important pathophysiologic mechanism, as well as volume overload. So vasodilator agent use may be as important as water extraction from body. In this regard, the 2016 European Society of Cardiology HF guidelines recommend avoiding diuretic use in patients with acute HF and signs of hypoperfusion. Although the authors indicated that they excluded patients with hypovolemia, we do not know the subgroups of etiological factors causing acute decompensated HF. Vasoconstriction may predominate hypervolemia by increasing blood pressure and causing pulmonary congestion. Especially in very elderly patients, as in this trial, daily water consumption can be lower than in the normal population. Zizza et al. (5) reported that total water consumption for the middle-old (75-84 years) and oldest-old (>85 years) age groups was significantly lower than in the young-old (65-75 years) age group.

So we think that while treating congestive symptoms and evaluating the patients' volume status, understanding the underlying cause of acute HF is very important. Accurate treatments are always important for the short- and long-term prognosis, especially in frail patient groups like the very elderly.

However, we think that this trial was very courageous and instructive for the medical field. The sample size was small, but we

believe that larger studies will support these results. We thank the authors for this valuable contribution.

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Author's Reply

To the Editor,

We would like to thank Dr. Kahraman and Dr. Yılmaz for their interest in our recently published paper (1). We agree with your indication that a very elderly patient should use tolvaptan more carefully since acute decompensated heart failure (ADHF) is usually caused by multiple mechanisms. As mentioned by Dr. Kahraman and Dr. Yılmaz, it may be somewhat difficult to completely exclude the possibility that vasoconstriction caused by sympathetic hyperactivity is involved in the development of ADHF. However, it could be identified in patients with hypovolemia in a clinical scenario (2). In our study, 6% of the patients demonstrated clinical scenario 3. We think that in that case hypotension can be avoided by using tolvaptan at a low dose of 3.75 mg or 7.5 mg.

The timing of initiating tolvaptan is also important. We never

use tolvaptan immediately after admission. We always use a low dose of furosemide before initiating tolvaptan. This way, we are able to identify the signs of unexpected hypotension. Of course, because our findings were derived from a small sample size, they should be interpreted with caution and continue to generate hypotheses. Due to characteristics such as physical and social frailty, elderly patients are more prone to drug side effects and organ dysfunctions resulting in long periods of hospitalization. Therefore, after correct diagnosis of the clinical scenario, the initiation of tolvaptan within 24 hours after furosemide use can improve quality of life after discharge without a reduction in physiological activity.

Finally, we again thank Dr. Kahraman and Dr. Yılmaz for adding variable comments to our paper.

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Simultaneous subacute thrombosis in two new-generation drug-eluting stents in different vessels

To the Editor,

We report a rare case of simultaneous subacute thrombosis in 2 new-generation drug-eluting stents (DES) in different vessels after cessation of ticagrelor therapy for 3 days. A 66 year-old man was admitted to our emergency department complaining of acute, severe chest pain. He had hypertension and diabetes mellitus for 20 years, was a smoker, and had a history of stent implantation in the left anterior descending artery (LAD) 6 years ago. His electrocardiography results (ECG) revealed inferior ST elevation. An emergent catheterization was performed, revealing a totally occluded proximal right coronary artery (RCA) and a critical thrombotic lesion on the left circumflex artery (LCX). Angioplasty was performed and 2 everolimus-eluting stents (PROMUS Element, 2.5x16 mm and 2.5x20 mm; Boston Scientific Corp.,

Marlborough, MA, USA) were deployed in the proximal RCA and 1 everolimus-eluting stent (PROMUS Element, 3.0x24 mm) in the mid LCX. A final coronary angiography showed patency of the 2 vessels with Thrombolysis in Myocardial Infarction (TIMI) 3 flow after percutaneous coronary intervention (PCI). He was discharged on hospital day 3 with a recommended course of treatment of dual antiplatelet therapy (aspirin 100 mg daily and ticagrelor 90 mg twice daily).

After 10 days, the patient was readmitted to the emergency department with severe chest pain. ECG revealed inferoposterior ST segment elevation. The patient indicated that he had stopped taking the ticagrelor therapy 3 days earlier because of hematuria. He was hemodynamically stable and taken to the catheterization laboratory for primary PCI, which revealed totally occluded proximal RCA and mid LCX at the same time, the site of the stents. Successful primary PCI with angioplasty was performed for both vessels with transradial access and a final angiography revealed TIMI 3 flow distal to the coronary stents. After 4 days of observation, he was discharged with a strict recommendation to continue dual antiplatelet therapy for at least 1 year.

Stent thrombosis (ST) is a challenging problem that can lead to serious clinical consequences. In addition to patient characteristics or procedure factors, inadequate dual antiplatelet therapy is the main cause (1). Simultaneous subacute thrombosis of 2 new-generation DESs in different vessels is rare and there is little in the literature discussing this condition. Most cases of ST in the literature occurred in a single coronary vessel, and there are still some rare cases reporting simultaneous ST in multiple coronary vessels for bare metal stents and first-generation DESs (2, 3). But there are few reports about the same condition for new-generation DESs (4, 5).

In conclusion, simultaneous ST in different new-generation DESs in multiple coronary vessels was extremely rare, but still a possible complication of PCI. This case strongly suggests that it be ensured that patients are properly educated about the importance of drug use and the potential severe consequences of antiplatelet therapy cessation. Our case also demonstrates that the use of multiple stents, irrespective of stent type, in multiple coronary artery lesions should be undertaken with great attention, especially in high-risk patients, such as acute myocardial infarction.

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