

patient in the article entitled "Stuck aortic valve treated by reteplase in a Bentall patient." published in *Anatol J Cardiol* 2015; 15: 339-40 by Tanyeli et al. (1). In a patient with prosthetic valve thrombosis, thrombolysis, thrombectomy, or prosthetic valve re-replacement is the currently available option (2). Firstly, the patient's complaints were acute and life-threatening with a possible acute myocardial infarction. In our paper, we stated that the patient had a huge thrombus material blocking the movement of the aortic valve with resultant severe aortic stenosis; this detection was made in the catheterization laboratory with the aid of transthoracic echocardiography (TTE). Fluoroscopy showed total blockade of the aortic valve, and coronary angiography showed normal coronary angiogram. Although the cardiologists tried to perform transesophageal echocardiography, the patient could not tolerate the procedure. The patient was in acute hypotensive shock status and was immediately sent to our intensive care unit for operation. We thought that the patient had limited time because of total blockade of the aortic valve. Because the patient previously had a Bentall operation with a valved conduit due to aortic dissection, both exploration of the heart in a re-do surgery and excision of the graft material with the valve and coronary ostia would increase operative mortality because these procedures would need a certain period of time. As the authors stated, rapid thrombolysis should only be reserved for certain circumstances, including critically ill patients with prosthetic valve thrombosis or those with stroke or acute myocardial infarction (3), and our patient was in the category of being critically ill. That is the reason we used the rapid infusion strategy, and in case the thrombolysis was unsuccessful, we would immediately take the patient to the operation theater, which had a high risk of mortality. We totally agree with the authors that a slow infusion strategy could be more beneficial in a more stable patient. After bedside evaluation of the patient with TTE, even a small amount of aortic valve motion dramatically improved the patient's status. Unfractionated heparin was continued for 48 h; thereafter, the patient was on enoxaparin sodium treatment until INR reached 2.5 with oral warfarin treatment.

We agree that such a single case with a good outcome cannot prove that our strategy is universally applicable; however, we also stated that any cardiologists and cardiac surgeons should always be in close collaboration with decision making with the aid of universally accepted guidelines. The patient's critical status and the risk taken by the operative strategy should never overcome the risk taken by the medical decision-making. This is the reason we stated that thrombolytic therapy (in this case, reteplase) may be kept in mind in re-functioning of the stuck mechanical valves, particularly in high-risk patients.

Ömer Tanyeli

**Department of Cardiovascular Surgery, Meram Medicine Faculty,
Necmettin Erbakan Konya University; Konya-Turkey**

References

1. Tanyeli Ö, Dereli Y, Düzenli MA, Görmüş N. Stuck aortic valve treated by reteplase in a Bentall patient. *Anatol J Cardiol* 2015; 15: 339-40. [\[CrossRef\]](#)
2. Doğan V, Başaran V, Altun I, Biteker M. Transesophageal echocardiography guidance is essential in the management of prosthetic valve thrombosis. *Int J Cardiol* 2014; 3: 1103-4. [\[CrossRef\]](#)
3. Özkan M, Gündüz S, Biteker M, Astarcioglu MA, Çevik C, Kaynak E, et al. Comparison of different TEE-guided thrombolytic regimens for prosthetic valve thrombosis: the TROIA trial. *JACC Cardiovasc Imaging* 2013; 6: 206-16. [\[CrossRef\]](#)

Address for Correspondence: Dr. Ömer Tanyeli,
Necmettin Erbakan Konya Üniversitesi, Meram Tıp Fakültesi,
Kalp ve Damar Cerrahisi Anabilim Dalı, Konya-Türkiye
Phone: +90 532 767 89 09
E-mail: otanyeli@gmail.com

Transcatheter aortic valve implantation for severe pure aortic regurgitation: looking beyond the image

To the Editor,

The growing worldwide experience with TAVI has given rise to several off-label indications. Pure severe native aortic valve regurgitation without aortic stenosis is one of these off-label indications. However, clinical experience is limited worldwide (1-3). The results of this limited experience showed that although it is feasible in patients ineligible for surgery, there are many technical difficulties to overcome. Large annulus size and absence of calcification may cause reduced fixation of the valve at the annulus during deployment. In addition, the increased frequency of requiring two valves and leaving a significant residual aortic regurgitation are important concerns of the procedure (4, 5).

Awareness of technical difficulties and knowing tips to overcome these will help operators to have better procedural outcomes in such patients.

In this report, we aimed to mention our TAVI experience and some specific technical issues that were encountered in a pure severe aortic regurgitation patient; this was the first case in Turkey. The patient was an 85-year-old man with a severely dilated left ventricle and EF of 40%. The aortic valve was tricuspid and minimally calcified. The patient had several concomitant diseases and a high surgical risk that the off-label application of TAVI was decided. Cardiac CT revealed an annulus with 25.9 x 31.2 mm dimensions, which were in the upper limit for available prostheses. During the procedure, a 31-mm CoreValve prosthesis dislocated into the aorta in the first attempt. The prosthesis was successfully retrieved and reloaded. In the second attempt, the implantation was aimed at a slightly deeper position. The lower 2/3rd portion of the device was unfolded in the first step enabling prosthetic valve function. At this step, prosthesis did not obtain the expected coaxial alignment. The fluoroscopic image suggested a malopposed valve. Despite this image, the hemodynamic profile unexpectedly got better with prominent diastolic notches on aortic pressure tracing. Relying on this hemodynamic evidence of properly functioning aortic valves, we continued deploying the upper 1/3rd portion of the device. After full deployment and release of the prosthesis, both fluoroscopic and hemodynamic images were perfect with no residual AR. A control after 6 weeks showed the stable position of the prosthesis with no paravalvular regurgitation.

This case demonstrates the importance of hemodynamic monitoring during TAVI. In a very critical step, we conducted the procedure by hemodynamic guidance rather than a sole fluoroscopic guidance, which yielded a perfect procedural outcome. This phenomenon has never been described in previous literature. We think that in such technically demanding patients in whom the optimal fluoroscopic position-

ing of the prosthesis is not always possible, the operator should take into account the hemodynamic profile and aortic pressure tracing of the patient to evaluate the functioning of the valve in that position. If the hemodynamic signs are in favor, neglecting an acceptable amount of fluoroscopic malposition would not result in a bad procedural outcome. Operators should keep in mind that hemodynamic monitoring must be a part of the procedure and may be a sign of proper valve positioning.

Ebru Özpelit, Hüseyin Dursun, Tuğra Gençpınar*, Özer Badak, Dayimi Kaya
Departments of Cardiology and *Cardiovascular Surgery, Faculty of Medicine, Dokuz Eylül University; İzmir-Turkey

References

1. Dhillon P, Kakouros N, Brecker S. Transcatheter aortic valve replacement for symptomatic severe aortic valve regurgitation. *Heart* 2010; 96: 810. [\[CrossRef\]](#)
2. Krumsdorf U, Haass M, Piro M, Chorianopoulos E, Katus H, Bekeredjian R. Technical challenge of transfemoral aortic valve implantation in a patient with severe aortic regurgitation. *Circ Cardiovasc Interv* 2011; 4: 210-1. [\[CrossRef\]](#)
3. Chiam PT, Ewe SH, Chua YL, Lim YT. First transcatheter aortic valve implantation for severe pure aortic regurgitation in Asia. *Singapore Med J* 2014; 55: 103-5. [\[CrossRef\]](#)
4. Roy DA, Schaefer U, Guetta V, Hildick-Smith D, Möllmann H, Dumonteil N, et al. Transcatheter aortic valve implantation for pure severe native aortic valve regurgitation. *J Am Coll Cardiol* 2013; 61: 1577-84. [\[CrossRef\]](#)
5. Wendt D, Kahlert P, Pasa S, El-Chilali K, Al-Rashid F, Tsagakis K, et al. Transapical transcatheter aortic valve for severe aortic regurgitation: expanding the limits. *JACC Cardiovasc Interv* 2014; 7: 1159-67. [\[CrossRef\]](#)

Address for Correspondence: Dr. Ebru Özpelit
 Dokuz Eylül Üniversitesi Tıp Fakültesi Hastanesi,
 Kardiyoloji Anabilim Dalı, 35340 İnciraltı/İzmir-Türkiye
 Phone: +90 232 412 41 01
 Fax: +90 232 279 25 65
 E-mail: ebru.ozpelit@gmail.com



©Copyright 2015 by Turkish Society of Cardiology - Available online at www.anatoljcardiol.com
 DOI:10.5152/AnatolJCardiol.2015.6412

Ebola virus disease 2014: Induction of abnormal cardiac rhythm?

To the Editor,

The present outbreak of Ebola virus disease 2014 in Africa is of public health concern. This disease is a deadly infection and has high fatality (1). The clinical presentation is mainly an acute febrile illness with hemorrhagic complication (1). Of interest, there are also other systemic presentations in the patient. The effect of the infection on cardiac rhythm is very interesting. Indeed, in the earlier outbreak in Sudan in 1976, the problem of cardiac rhythm abnormality was not observed (2). However, in the present situation, Ebola 2014, tachycardia is common (3). Bah et al. (3) reported that the mean heart rate of patients was >93 beats/minute. It appears that the new Ebola virus 2014 has a possible cardiac chronotropic action.

Viroj Wiwanitkit
Surin Rajabhat University; Bangkok-Thailand

References

1. Wiwanitkit V. Ebola virus infection: what should be known? *N Am J Med Sci* 2014; 6: 549-52. [\[CrossRef\]](#)
2. Ebola haemorrhagic fever in Sudan, 1976. Report of a WHO/International Study Team. *Bull World Health Organ* 1978; 56: 247-70.
3. Bah EI, Lamah MC, Fletcher T, Jacob ST, Brett-Major DM, Sall AA, et al. Clinical presentation of patients with Ebola virus disease in Conakry, Guinea. *N Engl J Med* 2015; 372: 40-7. [\[CrossRef\]](#)

Address for Correspondence: Dr. Viroj Wiwanitkit
 Wiwanitkit House, Bangkhae, 10160, Bangkok-Thailand
 Phone: +6624132436
 Fax: +6624132436
 E-mail: wviroj@yahoo.com



©Copyright 2015 by Turkish Society of Cardiology - Available online at www.anatoljcardiol.com
 DOI:10.5152/AnatolJCardiol.2015.6465