CORE
Metadata, citation and similar papers at core.ac.uk
Provided by Elsevier - Publisher Connector

Robert W. Emery, MD
Christopher C. Krogh
Cardiac Surgical Associates, PA
St Paul, Minn

References

1. Chan V, Jamieson WR, Lam BK, Ruel M, Ling H, Fradet G, et al. Influence of the On-X mechanical prosthesis on intermediate term major thromboembolism and hemorrhage; a prospective multicenter study. *J Thorac Cardiovasc Surg*. 2010;140: 1053-8.e2.
2. Akins CW, Miller DC, Turina MI, Kouchoukos NT, Blackstone EH, Grunkemeier GL, et al. Guidelines for reporting mortality and morbidity after cardiac valve interventions. *J Thorac Cardiovasc Surg*. 2008;135:732-8.
3. Emery RW, Krogh CC, Jones DJ, Nicoloff DM, Blake DP, Arom KV. Five-year follow up of the ATS mechanical heart valve. *J Heart Valve Dis*. 2004;13:231-8.
4. Emery RW, Krogh CC, Arom KV, Emery AM, Benyo-Albrecht K, Joyce LD, Nicoloff DM. The St. Jude Medical cardiac valve prosthesis: a 25-year experience with single valve replacement. *Ann Thorac Surg*. 2005;79:776-83.

doi:10.1016/j.jtcvs.2010.10.058

Reply to the Editor:

We thank Emery and Krogh for their interest in our study describing the intermediate-term outcomes after aortic valve replacement (AVR) with the On-X valve (On-X Life Technologies, Inc, Austin, Tex).[1] We agree that the reporting of clinical events related to anticoagulation is important; however, the comments of Emery and Krogh must be taken with the following considerations.

In our study, clinical thromboembolic and hemorrhagic events were defined in accordance with current guidelines.[2] Although the current guidelines do not separate thromboembolic events into major and minor categories, major thromboembolic events have been extensively reported by Jamieson and colleagues.[3] Our definition of the term *major thromboembolism* incorporated all major events (cerebral and peripheral, inclusive of reversible ischemic neurologic deficits).

With reference to Table 3 in our original article,[1] there was an error on our part and also an error in the comment by Emery and Krogh. The major thromboembolic events rates for the ATS prosthesis (ATS Medical, Inc, Minneapolis, Minn) should be 0.7%/patient-year for AVR and 0.4%/patient-year for mitral valve replacement (MVR).[4] The article about the ATS made no mention of reversible ischemic neurologic deficit events, and it also did not document whether such events were considered minor or major. We mistakenly reported the minor thromboembolic event rates, which Emery and Krogh erroneously stated as the total thromboembolic event rates; however, the article gave the total AVR thromboembolic event rate for the ATS prosthesis as 2.6%/patient-year and the total MVR thromboembolic event rate as 3.0%/patient-year. For the St Jude Medical prosthesis (St Jude Medical, Inc, St Paul, Minn), the major neurologic and peripheral thromboembolic event rates should be 1.04%/patient-year for AVR and 1.49%/patient-year for MVR[5]; here, we mistakenly reported total thromboembolic events. There was, however, no mention of reversible ischemic neurologic deficit events in the thromboembolic event categorization in that article.

The valve-related mortalities were neither reported nor calculated by us in our Table 3.[1] The AVR valve-related mortalities were similar for the On-X and ATS valves at 0.2%/patient-year, whereas the MVR-related mortality was higher for the ATS valve at 0.4%/patient-year. The valve-related mortalities for the St Jude Medical valves were 1.05%/patient-year for AVR and 1.24%/patient-year for MVR.[5]

Emery and Krogh have correctly identified the differences associated with the measurement of prothrombin time versus the international normalized ratio. We did not discuss the impact of using prothrombin time, because this measurement is less commonly used to monitor anticoagulation. Our study involved a relatively recent cohort; anticoagulation in all patients was therefore managed by monitoring the international normalized ratio, in accordance with the current recommendations from the American Heart Association and the American College of Cardiology.[6]

We therefore believe that our study provides insight regarding the intermediate-term performance of the On-X valve in a relatively large cohort of patients.

Vincent Chan, MD, MPH[a]
W. R. Eric Jamieson, MD[b]
Thierry G. Mesana, MD, PhD[a]
[a]*University of Ottawa Heart Institute*
Ottawa, Ontario, Canada
[b]*University of British Columbia*
Vancouver, British Columbia, Canada

References

1. Chan V, Jamieson WR, Lam BK, Ruel M, Ling H, Fradet G, et al. Influence of the On-X mechanical prosthesis on intermediate-term major thromboembolism and hemorrhage: a prospective multicenter study. *J Thorac Cardiovasc Surg*. 2010;140. 1053-8.e2.
2. Akins CW, Miller DC, Turina MI, Kouchoukos NT, Blackstone EH, Grunkemeier GL, et al. Guidelines for reporting mortality and morbidity after cardiac valve interventions. *J Thorac Cardiovasc Surg*. 2008;135:732-8.
3. Jamieson WR, Moffatt-Bruce SD, Skarsgard P, Hadi MA, Ye J, Fradet GJ, et al. Early antithrombotic therapy for aortic valve bioprostheses: is there an indication for routine use? *Ann Thorac Surg*. 2007;83:549-57.
4. Emery RW, Krogh CC, Jones DJ, Nicoloff DM, Blake DP, Arom KV. Five-year follow up of the ATS mechanical heart valve. *J Heart Valve Dis*. 2004;13:231-8.
5. Emery RW, Krogh CC, Arom KV, Emery AM, Benyo-Albrecht K, Joyce LD, et al. The St. Jude Medical cardiac valve prosthesis: a 25-year experience with single valve replacement. *Ann Thorac Surg*. 2005;79:776-83.
6. Bonow RO, Carabello BA, et al., American College of Cardiology/American Heart Association Task Force on Practice Guidelines, Society of Cardiovascular Anesthesiologists, Society for Cardiovascular Angiography and Interventions, Society of Thoracic Surgeons. ACC/AHA 2006 guidelines for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (writing committee to revise the 1998 Guidelines for the Management of Patients With Valvular Heart Disease): developed in collaboration with the Society of Cardiovascular Anesthesiologists: endorsed by the Society for Cardiovascular Angiography and Interventions and the Society of Thoracic Surgeons. *Circulation*. 2006;114: e84-231.

doi:10.1016/j.jtcvs.2011.06.017