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New heart valve replacement technologies offer hope for high-risk patients

A significant number of people with heart disease will benefit from less invasive transcatheter heart valve replacements in future, finds a review of updated practices in *CMAJ (Canadian Medical Association Journal).*

The most effective treatment for aortic stenosis, a common heart condition that shows with angina, loss of consciousness due to lack of blood flow, congestive heart failure, or sudden death, is valve replacement. However, large cohorts of people are never referred for this surgery because they are deemed too high-risk even though the prognosis is grim without the treatment.

New technologies such as stent-based transcatheter valve replacement can now be performed on high-risk patients without the need for sternotomy (an incision through the sternum), a heart-lung bypass machine or stopping the heart. Patients can also recover in a step-down unit compared with monitoring and treatment in an intensive care unit.

This procedure will benefit the 3% of the general population over 75 years of age that have severe aortic stenosis, a fixed obstruction, and in the future, could potentially treat lower risk patients such as in the 2% of the general population that have a defect called bicuspid aortic valves.

“Stent-based transcatheter value replacement now offers patients a less invasive alternative with potentially reduced risks, which may be particularly beneficial for elderly, high-risk patients,” write Dr. Michael W. A. Chu, Division of Cardiac Surgery, London Health Sciences Centre (London, Ontario) and coauthors.

Transcatheter valve replacements should be performed by an experienced, technologically adept team of cardiac surgeons, cardiologists and anesthesiologists.

The authors conclude that transcatheter heart valve replacement is still evolving, although the more than 10 000 devices implanted worldwide have helped establish success of the procedure. More information on long-term results is needed to determine the future evolution of these techniques.

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