The heartfelt promise of TAVI
Valve procedure gives patients a new lease on life

When it comes to heart surgery, “cutting edge” means less cutting. By that definition alone, a relatively new procedure called “transcatheter aortic valve implantation” – or TAVI, for short – is indeed cutting edge.

The procedure addresses aortic stenosis, a condition that sees the narrowing of the aortic valve, often due to calcium build-up. If the aortic valve isn’t working properly, the heart can’t efficiently push blood out to the rest of the body.

“Prior to TAVI, surgery was the only option for repairing or replacing a valve. For low- and intermediate-risk patients, surgery still offers the best results,” explains Dr. Alan Menkis, Medical Director of the Winnipeg Regional Health Authority’s Cardiac Sciences Program, based at St-Boniface Hospital. “For older, frail, and other high-risk patients, TAVI offers great advantages. This is an ever-changing field and our TAVI heart team will continue to recommend and provide options to patients based on their individual needs.”

TAVI was first performed in 2002, and with the current method since 2006. It works like this: A small needle is used to gain access to the artery near the patient’s groin. Then, a catheter over a wire is moved through the artery all the way to the heart. At the end of the catheter is a balloon with a collapsed valve on it. When expanded, it widens the patient’s valve, pushing the calcium build-up to the sides. What’s left behind is a high-tech stent, with a replacement valve sewn in. The catheter comes out the way it went in, and the replacement valve begins working immediately.

“Compared to traditional surgery, this is safer and the results are better for certain patients,” says Dr. Menkis. “TAVI typically takes about 90 minutes and can sometimes be performed while the patient is awake. Without general anaesthesia, the recovery time is significantly shorter. Seeing patients recover the way they do is tremendously gratifying.”

TAVI has been an option at St-Boniface Hospital since 2012, and about two dozen procedures a year are performed. In October 2014, the Hospital performed a “valve-in-valve” TAVI. That means the patient already had her aortic valve surgically replaced years ago, and was now using TAVI to fix a problem.

“The patient had a leaky valve,” says Dr. Malek Kass, Head of the Structural Interventional Program and lead TAVI interventionalist. “We implanted a new valve using TAVI. It was very successful. In fact, the patient recovered so well that she was able to take a trip to the Caribbean this past winter – at the age of 86!”

Even though the technology is young, the statistics already show that TAVI can save lives. Dr. Menkis credits local success, in part, to the fact that the Cardiac Sciences Program didn’t embrace the procedure as soon as it was available.

“We wanted to see how TAVI was working elsewhere before we introduced it here, and we wanted to make sure that we had the right expertise,” says Dr. Menkis. “We learned a great deal from the experiences of others and the results have been remarkable.”

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