THE 2018 THORACIC SURGERY RESIDENTS ASSOCIATION AND SOCIETY OF THORACIC SURGEONS

TRAVELING FELLOWSHIP: TOTAL ARTERIAL GRAFTING IN CALGARY

To the Editor:

I (H.J.R.) would like to thank the Thoracic Surgery Residents Association and the Society of Thoracic Surgeons for generously supporting the traveling fellowship that facilitated my visit from February 26 through March 2, 2018, with Teresa Kieser, MD, PhD, at the University of Calgary Foothills Medical Centre. The fellowship has now supported traveling observerships for 4 cardiothoracic surgical trainees (Table 1).^{1,2} My goal was to gain exposure to total arterial grafting and intraoperative assessment of graft patency. The experience was the most educationally rich week of my training to date, and one that I will forever cherish.

Dr Kieser started the cardiac surgery program at Foothills Medical Centre in 1988 and is an adult cardiac surgeon with special expertise in total arterial revascularization, skeletonization of the internal thoracic arteries with the harmonic scalpel, and intraoperative assessment of graft patency. In 2003, Dr Kieser started total arterial grafting for all possible patients because of improved graft patency and patient survival. She received a doctorate for her thesis, "Building a Better Bypass With Emphasis on Bilateral Internal Mammary Grafting," in 2015.³ She maintains a prospective database, which includes 1500 consecutive patients from 2003 through 2017 and documents a frequency of total arterial grafting in 98% of bypass grafts in 95% of patients. In 2017, a total of 675 isolated coronary artery bypass grafting procedures were performed at Foothills Medical Centre: 106 were performed by Dr Kieser and 103 of these 106 (97%) used total arterial grafting.

My experience included 2 operative days, a consult day, a clinic day, and an academic day with coronary anastomosis skills simulation. Daily teaching rounds, twice-weekly multidisciplinary preoperative conferences, and comprehensive one-on-one discussions on the literature supporting arterial grafting were also part of the educational experience. There were 4 cases with a total of 9 bypass grafts,

TABLE 1. Thoracic Surgery Residents Association and Society of Thoracic Surgeons traveling fellowship awards

Year	Award recipient	Host surgeon
2015	Arminster Jasser, MD ¹ University of Pennsylvania	Joseph Coselli, MD Texas Heart Institute and Baylor College of Medicine Aortic surgery
2016	Brian Mitzman, MD University of Chicago	Robert Cerfolio, MD University of Alabama Robotic thoracic surgery
2017	Taufiek Konrad Rajab, MD ² Brigham and Women's Hospital	Shaf Keshavjee, MD Toronto General Hospital Pediatric lung transplantation
2018	Heidi Reich, MD Cedars-Sinai Medical Center	Teresa Kieser, MD, PhD University of Calgary Total arterial grafting

all of which used total arterial grafting. Intraoperative assessment of graft patency was used in all cases, both with transit-time flow measurement and with epicardial ultrasound with color Doppler.

It was an extraordinary luxury to have the full attention of a senior cardiac surgeon for 5 consecutive days. Her clinical outcomes and research really drove home the importance of total arterial grafting in achieving the best possible outcomes after coronary artery bypass grafting. In addition to sharing technical tips and tricks, such as selection of conduits, skeletonization of the internal thoracic arteries, graft configurations and graft lie, Dr Kieser helped me to develop a structured plan for integrating her techniques into my practice. We discussed challenges with arterial grafting, including technical complexity and operative times, as well as how to reduce sternal wound complications with infection prevention protocols and avoidance of bilateral internal thoracic artery harvests in obese female patients with diabetes. She shared important advice on the importance of clinical research and on balancing clinical, academic, and personal duties. I feel very fortunate to have met Dr Kieser and, thanks to this opportunity, to have her as a mentor.

It is with deep appreciation that I thank the Thoracic Surgery Residents Association, the Society of Thoracic Surgeons, and Dr Teresa Kieser for this special experience.

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Authors have nothing to disclose with regard to commercial support.

The traveling fellowship was funded by the Thoracic Surgery Residents Association and Society of Thoracic Surgeons.

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<https://doi.org/10.1016/j.jtcvs.2018.07.023>