It was 50 years ago, when Dr Christiaan Barnard, a South African cardiac surgeon together with his multidisciplinary team successfully performed the world’s first human-to-human heart transplantation at the Groote Schuur Hospital in Cape Town, South Africa. On 3 December 1967, Lewis Washkansky suffering from severe heart failure at the age of 53 received the heart from 25-year-old Denise Darvall, who tragically died in a car accident. Following this revolutionary operation, Dr Barnard became a true star in the international press quickly gaining celebrity status overnight.

In fact, this operation, which was developed by a group of American surgeons already in the 1950s and validated in a dog model by the famous US cardiac surgeon Norman Shumway at Stanford University in California in 1958, has become a milestone in medical history. And indeed, it was the beginning of a long journey during the next 50 years which was driven by courage, innovation and, importantly, persistence.

However, despite the tremendous media hype of this medical sensation, Louis Washkansky, the very first patient, died only 18 days after he had received his new heart. Many subsequent patients also died early, which resulted in a dramatic decrease in the number of transplants in the following years (from 100 in 1968, to only 18 in 1970), as many centres quickly recognized the poor postoperative outcomes and therefore abandoned their programs again. Although the surgical technique for heart transplant was mastered, it quickly became apparent that the real challenge was the body’s natural tendency to reject the new organ.

Hence, the following years were dominated by the quest and development for effective immunosuppressive drugs to make heart transplantation a viable treatment option to significantly improve patients’ survival and quality of life. Driven by an immense research effort in the field, this goal was accomplished by Jean-Francois Borel’s and Tohru Kino’s groups with their breakthrough discoveries of the calcineurin inhibitors Cyclosporine A and tacrolimus in the mid-1970s and 1980s. Consequently, as early as the late 1970s, many patients who had received new hearts were already surviving for up to 5 years and the continuous refinement of the immunosuppressive treatment regime increased patient survival times to more than 20 years in the following decades. This finally made heart transplantation the excellent and curative treatment option for end-stage heart failure that it is today.

Now, five decades later, on the 3 December 2017, cardiovascular physicians from all around the globe, representatives from all major international cardiothoracic societies and humanitarian organizations, as well as the top echelons of industry come together to celebrate the 50th anniversary of heart transplantation, a milestone in medical history. In 3 days long, prestigious event entitled ‘50 Years of Heart Transplantation: Courage and Innovation’ which is being held at Groote Schuur Hospital, Cape Town, South Africa, tribute will not only be paid to Christiaan Barnard for his milestone achievement, but also to all those who made this medical sensation possible and who contributed to the long development process to make heart transplant the therapy standard as it is today.

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