

The Past, Present and Future of Heart Transplantation

Presented by

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Wednesday, December 18, 2019

11:00pm – 12:00pm

HEC Lecture Hall 1, Pomona

Lecture Hall 2, Lebanon

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The field of heart transplantation has made undeniable progress since the first human-to-human heart transplant was performed more than fifty years ago in 1967. It has now entered an era of tremendous growth and innovation. Over 120,000 heart transplants have been performed since 1982 in the world. This ranks third amongst solid organ transplantation. Since 1990, the heart transplant volume has averaged between 4,000-5,000 cases/year. Interestingly, over the past 3 years there has been a steady uptrend. Survival after transplant has steadily improved with recent 1-year, 5-year and 10-year rates at approximately 90%, 80% and 65%, respectively. In addition to the technological and pharmaceutical achievements, proper patient selection, superb medical management, meticulous operative care, vigilant surveillance and responsive long-term follow-up can all be credited for the continuing success in heart transplantation. The future of heart transplantation is bright with the advent of newer immunosuppressive medications and strategies that may even result in tolerance. Much of this progress in heart transplant medicine is predicated on a better understanding of acute and chronic rejection pathways through basic science studies. The future will also include personalized medicine where genomics and molecular science will dictate customized treatment for optimal outcomes. The introduction of MCS devices has changed the landscape for patients with severe heart failure to stabilize the most ill patient and make them better candidates for heart transplant. As ex vivo preservation takes hold, we may witness an expansion of the donor pool through the use of donation after cardiac death (DCD) donors. In addition, further geographical donor heart sharing through ex vivo preservation may further decrease waitlist mortality by enabling longer distance donor hearts to be allocated for the sickest waitlist patient. It is no doubt an exciting time to be involved in the field of heart transplantation.