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EDITORIAL COMMENT

Asian Ethnicity Is Not a Risk Factor for Heart and Lung Transplantation*

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Among the various types of solid organ transplantation, lung transplantation, followed by heart transplantation, shows the worst outcomes.[1] Besides the severity of the underlying disease status of recipients, several factors affect post-transplantation survival, such as limited availability of living donors and high incidence of coexisting infections.[2] In heart and lung transplantation (HLTx), combined risk factors associated with both heart and lung diseases lead to challenges of perioperative and long-term patient management, which can further decrease post-transplantation survival.[3]

The International Society for Heart & Lung Transplantation reports a continuously decreasing number of HLTx procedures. There were more than 200 cases in the 1990s and <100 cases after 2005, with only 59 procedures performed in 2017.[4] Worse survival after combined HLTx compared with single heart or lung transplantation and difficulties in appropriate recipient and donor selection because of the shortage of donors might be the reasons for the declining trend of cases. In Asian countries, a traditionally conservative cultural background regarding organ donation has hindered widespread transplantation, especially multiorgan transplantations.[5] Between 2010 and 2018, 21 HLTx cases were performed in Korea, and only 2 cases were reported in Japan (**Figure 1**).[6] According to United Network for Organ Sharing data, the Asian population accounts for an extremely low proportion of HLTx.[7]

The long-held myth that Asian patients with smaller body sizes are more vulnerable during critical management has also affected the underuse of HLTx in Asian compared with Western populations. In this issue of *JACC: Asia*, research by Shudo et al[7] gives us important insight that outcomes after HLTx are similar to those among non-Hispanic White patients. Better compliance with optimal management strategies including self-care, immunosuppressive regimens, and surveillance protocols could affect equal or even better outcomes in Asian patients. For the successful treatment of life-threatening end-stage heart and lung disorders, 3 important determinants need to be considered: 1) appropriate recipient and donor selection; 2) optimal pretransplantation recipient care; and 3) maintaining the best level of post-transplantation management with a multidisciplinary team approach during treatment (**Figure 2**). Careful selection for HLTx candidates with end-stage heart and lung disorders but without evidence of irreversible other organ dysfunction is of the utmost importance. During management with inotropic agents, mechanical ventilation, or extracorporeal membrane oxygenation, optimal recipient management and adequate control of comorbidities, including infection, are crucial. When an available donor is matched, meticulous and multidimensional evaluation can lead to a better post-transplantation outcome. Finally, post-transplantation treatment with all the related departments could maximize patient survival. It should be emphasized that there is no perfect road to successful HLTx, and improvement of the survival rate can be the main driving force for

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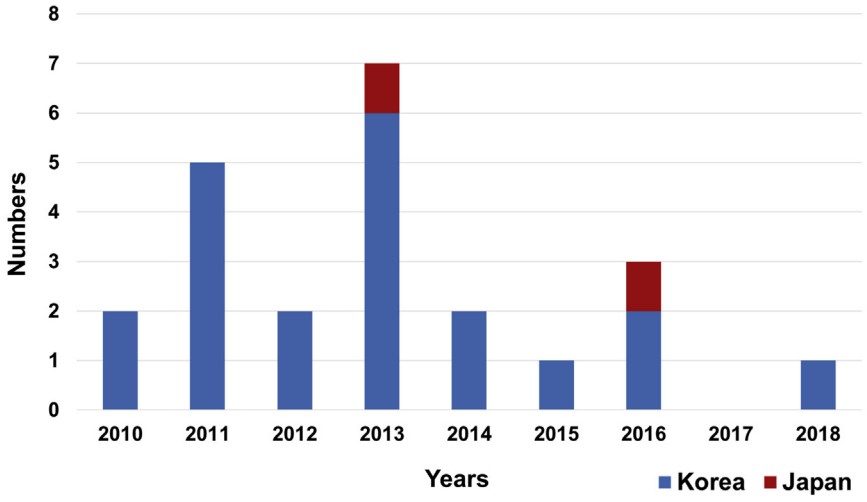
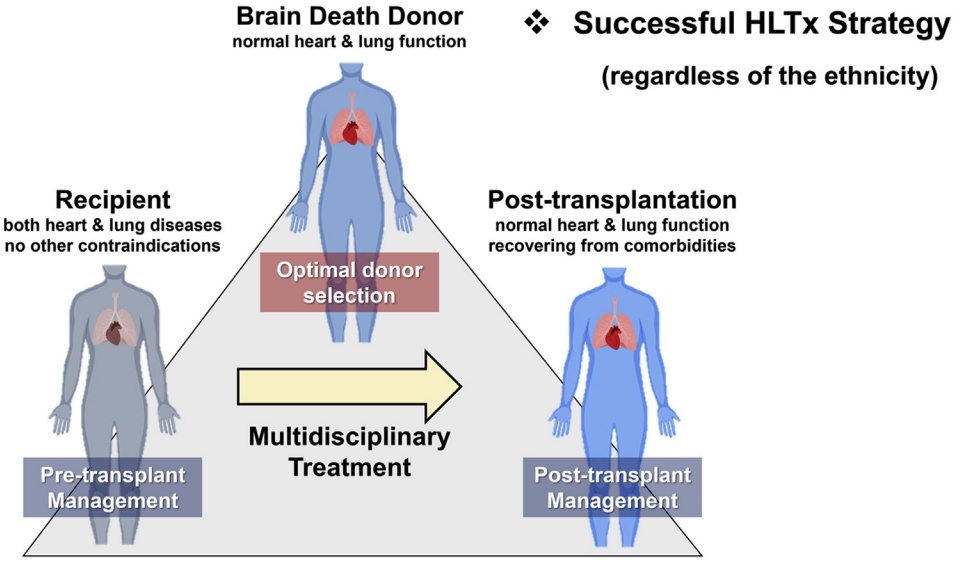
FIGURE 1 Heart and Lung Transplantation in Asian Countries (Korea and Japan)



Statistics of combined heart and lung transplantation performed in Korea and Japan in between 2010 and 2018 revealed limited cases, especially in Japan, considering the national population.

FIGURE 2 Successful Heart and Lung Transplantation Strategy



To ensure the best result after heart and lung transplantation (HLTx), a balanced approach with optimal donor selection and the best pre- and post-transplantation management using a multimodality team approach is required.

the expansion of HLTx worldwide, including Asian countries.

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