Letter to the Editor

Optimal therapeutic strategy using durable left ventricular assist device in Korea

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Lee and colleagues reported the first experience of durable left ventricular assist device (LVAD) implantation before the initiation of Korean national insurance coverage in 2018 (1). I would like to congratulate their successful LVAD therapy with favorable outcomes comparable to those reported in the international registry, despite relatively sick cohort with contraindication of heart transplantation. Several concerns should improve their findings.

Because all LVAD implantations were performed before the approval of Korean national insurance, patient profiles were unique (1). Now that medical insurance covers LVAD implantation, optimal patient selection, including preserved end-organ dysfunction and relatively stable hemodynamics assigned to INTERMACS profile 3, might be required to further improve clinical outcomes.

As device-related comorbidity, aortic insufficiency is one of the critical and progressive diseases that increase intra-cardiac loading and worsen systemic congestion (2). Repeated trans-thoracic echocardiography or monitoring of HeartWare waveform would be useful for early detection and follow-up of aortic insufficiency (3). The incidence of gastrointestinal bleeding was relatively high (1). Given the low incidence of gastrointestinal bleeding in Japan, we hypothesized that Asian patients might have a genetic resistance to gastrointestinal bleeding (4). Further studies are warranted to investigate the association between genetic type and bleeding complication.

Almost half of clinically stable LVAD patients have abnormal hemodynamics, which is associated with device-related comorbidities (5). Our team proposed a hemodynamic ramp test, during which medication and device speed are optimized considering hemodynamic profiles at each device speed, targeting to improve mortality and morbidity. Description of hemodynamic management in their team would strengthen the implication of their report.

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Footnote

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