

Asian Women in Transplantation - Gender Issues in Transplantation-Biologic Perspectives

Gender disparities in liver transplantation

Qin-Fen XIE

Sex disparities in liver transplantation have been well documented for decades. Women are disadvantaged by the current allocation system, epidemiology of liver disease, anthropomorphic differences, and several other contributing factors. The shortcomings of MELD-Na in estimating renal function in women and the smaller body size of women are the greatest contributing factors. Patients with PBC were more likely to be female individuals, have a lower MELD, and die on the waitlist. Women also experience lower rates of liver transplantation due to overall smaller size and shorter stature. The shifting demographics of liver disease have exacerbated sex disparities in liver transplantation, as NASH and ALD recently became the leading indications for liver transplantation. Higher baseline frailty likely also disadvantages women prior to listing. Additional factors include loneliness and implicit bias.

Proposed solutions include increasing organ supply, updating allocation policy, and reducing need for liver transplantation. Both living donor liver transplantation (LDLT) and split liver transplantation (SLT) were developed to address the critical shortage of organs. LDLT affords a demonstrated survival benefit at MELD-Na scores and is particularly well suited for patients with autoimmune liver disease and smaller patients, most of whom are women. The advantages of SLT (common in pediatrics) include greater suitability for smaller patients as well as reduced waitlist time and mortality. Systemic changes in allocation policy can also become the solution, including the MELD-Na-Shift, sex-adjusted sodium-adjusted MELD, and MELD 3.0 scores. Public health policies targeting risk factors for cirrhosis have been explored to reduce need for liver transplantation. Changes in taxation, food formulation, and marketing were suggested to limit harmful consumption of alcohol and sugary, processed foods to reduce ALD and NASH. Although many avenues for further research exist, it is imperative that we act now to address these disparities without further delay.