STUDENTS' CORNER
LETTER TO THE EDITOR

The evolving role of liver transplantation in managing polycystic liver disease

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Madam, Polycystic liver disease (PLD) is a rare genetic condition characterised by the presence of numerous cysts throughout the liver.[1] PLD was initially described in 1856 as a diseased state connected to polycystic kidney disease (PKD), and in 1925, it was suggested that PLD might exist independently of PKD. Most patients remain asymptomatic; however, some may develop clinical symptoms. The expansion of the liver and its strain on the surrounding organs cause PLD symptoms. Common symptoms of PLD include early satiety, postprandial fullness, gastroesophageal reflux, and digestive intolerance and due to these symptoms, the patient may decide to cut back on meals, which could result in severe malnutrition and weight loss.[2] In extreme cases, venous drainage blockage can cause portal hypertension, along with associated symptoms such as jaundice, ascites, splenomegaly, oesophageal varices, and encephalopathy.

Three types of primary therapeutic approaches are available for PLD: drug therapy, radiological or percutaneous intervention and surgery. Somatostatin analogues are recommended by the European Association for the Study of the Liver (EASL) decision-making flowchart for PLD patients who have a large number of dispersed small-to-medium-sized cysts.[3] For percutaneous therapy, cyst aspiration and sclerosis are performed for patients with a single giant cyst while transcatheter arterial embolization is to embolize the branches of arteries that supply blood to cysts resulting in control of disease progression.[1] Surgical procedures that include liver resection and liver transplantation, are usually considered for advanced cases. Some recent studies have brought attention to the role of liver transplantation in PLD, especially given the challenges in therapy and the requirement for successful long-term results. In this context, the results of a recent retrospective study done by Moein M et al. are worth considering. The study compared post-transplant outcomes of liver transplant recipients between 2000 and 2023, dividing the population into two subgroups. The findings highlight a notable improvement in the results of liver transplantation for PLD during the previous ten years, particularly in the 2011–2023 cohort. The prognosis shown by the graft and patient survival rates suggests that this therapeutic strategy has become a more viable course of treatment.[4] Additionally, a case report by Niibek M et al. describes a patient with a large polycystic liver who underwent successful liver transplantation. The liver weighed 14,75 kg and measured 53x37x39x16 cm. The Post-transplant liver function has remained satisfactory. This case clearly illustrates how liver transplantation is a highly successful therapeutic approach that greatly enhances the quality of life in patients with PLD.[5] It is important to note that more than half of patients with autosomal dominant polycystic kidney disease (ADPKD) have cysts associated with the liver. In such cases when the treatment is well-indicated, double kidney-liver transplantation promotes outstanding results and survival rates; however, this procedure is not as prevalent. Two years after the procedure, a survival rate of more than 70% was observed in research analysing the outcomes of four double transplants.[6]

Although there are differing views on the effectiveness of transplantation as a treatment for PLD, new developments in medicine have made it a more attractive option. Nonetheless, it is critical to address the opposing perspectives. A study by Kow AWC et al, highlighted the limitations of liver transplant in PLD. Due to organ shortage Eastern regions rely on living donor liver. Despite being safe, ethical considerations persist. Moreover, most liver transplant recipients must adhere to a lifetime of immunosuppressive therapy, which requires a significant adjustment in lifestyle such as frequent drug level monitoring, laborious and cautious meal preparation, and avoidance of crowded places in the early period posttransplant.[7] In order to detect both early and delayed complications, ultrasound is frequently used as a first imaging evaluation.

The diverse opinions on the efficacy of liver transplantation for PLD underscore the complexity of the condition and the need for further research to determine the most effective strategies. As the demand for liver transplantation continues to grow worldwide, more collaborative studies are required to address issues such as organ shortage,

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organ allocation, and long-term outcomes for recipients. Additionally, ongoing research is crucial to improving surgical techniques, reducing complications, and expanding the donor pool to meet the increasing demand.

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