

## Benefits of Normothermic Liver Preservation and Complications in Transplantation

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## DESCRIPTION

Liver transplantation has become a standard procedure for patients with end-stage liver disease, offering them a chance at a better quality of life and improved survival. However, patients with liver disease often have associated lung disease, which can complicate the transplantation process. In such cases, combined liver and lung transplantation may be necessary. Combined liver and lung transplantation is a complex surgical procedure that involves the transplantation of both organs from the same donor into a recipient. The success of this procedure depends on a number of factors, including the preservation of the organs prior to transplantation. The use of normothermic liver preservation has emerged as a promising technique for improving outcomes in combined liver and lung transplantation.

Normothermic liver preservation is a technique that involves maintaining the liver at body temperature while it is being prepared for transplantation. This technique has been shown to be effective in preserving the liver and reducing the risk of posttransplant complications. In combined liver and lung transplantation, the use of normothermic liver preservation can help to improve the quality of the liver and reduce the risk of complications during the transplantation process. One of the key advantages of normothermic liver preservation is that it allows for the assessment of the liver function prior to transplantation. During normothermic liver preservation, the liver can be monitored for signs of damage or dysfunction. This allows the transplant team to make informed decisions about whether or not the liver is suitable for transplantation. In addition, normothermic liver preservation can help to improve the quality of the liver by reducing the risk of ischemiareperfusion injury, which can occur when the liver is removed from the body and then perfused with blood during transplantation. For example, a study published in the Journal of Thoracic and Cardiovascular Surgery found that the use of

normothermic liver preservation was associated with improved lung function and a reduced risk of post-transplant complications in patients undergoing combined liver and lung transplantation. Another study, published in the Journal of Hepatology, found that normothermic liver preservation was associated with a reduced risk of primary graft dysfunction, which is a major cause of morbidity and mortality following liver transplantation.

Despite the promising results of these studies, there are still some challenges associated with the use of normothermic liver preservation in combined liver and lung transplantation. One of the main challenges is the need for specialized equipment and expertise to perform the procedure. In addition, normothermic liver preservation can be a time-consuming process, which can lead to delays in the transplantation process. Another potential challenge is the cost associated with normothermic liver preservation. This technique requires specialized equipment and personnel, which can increase the cost of the transplantation procedure. However, it is important to note that the long-term benefits of normothermic liver preservation, such as improved outcomes and reduced risk of complications, may outweigh the initial cost.

The use of normothermic liver preservation in combined liver and lung transplantation is a promising technique that has the potential to improve outcomes and reduce the risk of complications. While there are some challenges associated with this technique, such as the need for specialized equipment and expertise, the benefits of normothermic liver preservation may outweigh the costs. As such, further research is needed to explore the potential benefits of normothermic liver preservation in combined liver and lung transplantation and to develop strategies for improving the efficiency and costeffectiveness of this technique.

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