

Evidence Discussion (AB 42.2)

Liver Transplant, Living Donor Pre-Transplant Imaging

Living donor liver transplantation (LDLT) has become a widely accepted solution to alleviate the ongoing shortage of cadaveric livers for deceased donor liver transplantation (DDLT). Radiologic evaluation plays a crucial role in assessing both donor candidates and recipients to confirm their eligibility and determine the most suitable surgical approach.

A comprehensive pre-operative assessment of the vascular, liver volume, and biliary anatomy is vital for the safe and successful harvesting, transplantation, and long-term success of the graft. Computed tomography (CT) and magnetic resonance imaging (MRI) are the preferred imaging techniques for this purpose. These cross-sectional methods offer detailed views of the vascular and biliary structures, assess the hepatic parenchyma, and enable volumetric analysis.

LDLT evaluation typically combine MRI/MRCP and CT to leverage the higher spatial resolution of CT for arterial evaluation and the superior soft tissue, parenchymal and biliary analysis provided by MRI. Besides examining the liver parenchyma for abnormalities such as steatosis, a detailed evaluation of the hepatic volume, vascular and biliary system for significant anatomic variants is essential, as these variants can influence surgical techniques and outcomes for both recipients and donors.

References:

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