



Letter to the Editor

The Importance of Conventional Angiography in the Preparation for Living Donor Hepatectomy

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To Editors;

In Türkiye and other far east countries, where deceased donor donation rates are insufficient to meet the needs of patients on the transplantation waiting lists, this issue is being solved through living donor liver transplantation (LDLT). LDLT offers advantages compared to deceased donor liver transplants, such as direct organ procurement, the ability to perform the procedure under optimal conditions, and a reduced rate of primary organ dysfunction due to short cold ischemia time.^[1] However, LDLT cannot be performed for every recipient who applies with a living donor candidate due to donor and recipient incompatibilities, and only 30-55% of donor candidates are eligible as suitable donors.^[2] These incompatibilities can be broadly categorized under three headings: blood group incompatibility, volume mismatch, and anatomical incompatibility. Blood tests and dynamic cross-sectional imaging methods are the most crucial stages of living donor preparation. In cases where routine examinations fail to clarify certain conditions, advanced investigations, including conventional angiography or surgical exploration, may be required for the donor candidate. The evaluation of the vascular anatomy of the donor candidate's liver is largely

sufficient with three-phase multislice dynamic computed tomography (CT). In cases where arterial anatomy cannot be clearly assessed using CT, conventional angiography is crucial for defining the arterial anatomy, as it is of vital importance for both the donor and the recipient.

A 54-year-old male patient, who was indicated for liver transplantation due to cirrhosis developed on the basis of chronic hepatitis B, had a suitable donor in his 28-year-old son. However, the arterial anatomy of the donor's liver could not be clearly evaluated using dynamic CT. Conventional angiography was performed on the donor candidate to delineate the hepatic arterial anatomy. The angiography revealed that the liver was supplied by hepatic collateral circulation due to chronic stricture in the celiac trunk (Fig. 1).

Since the current situation was unsuitable for both right and left hepatectomy, the donor candidate could not be added to the liver paired exchange pool and was disqualified as a living donor after being informed that they were not a suitable candidate for living donor hepatectomy. As the donor candidate had no gastrointestinal symptoms, no intervention was performed on the celiac trunk. The re-

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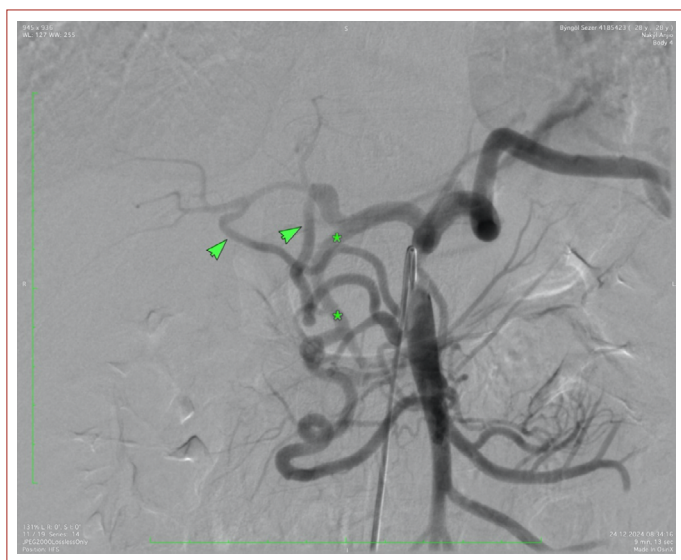


Figure 1. In selective superior mesenteric artery (SMA) injection, the celiac trunk is seen filling retrogradely through the GDA (asterisks) where the pancreaticoduodenal arcade is prominent, and two distinct arteries (communicating channels) connecting from the SMA to the right hepatic artery and hepatic propria (arrowheads) are seen. The anatomical course of these communicating channels is nearly similar to that of the hepatic artery variant that originates from the SMA. Therefore, these channels could be the embryonic remnants that form aberrant hepatic arteries.^[3]

recipient, who had compensated cirrhosis with a MELD-Na score of 16, was advised to find another donor and was discharged. The patient later presented with another donor candidate, and a successful LDLT was performed. The do-

nor and recipient were discharged without complications, following their intensive care and general ward processes.

As a result, if the donor hepatic artery anatomy cannot be clearly evaluated with dynamic cross-sectional imaging, invasive conventional angiography should be performed without hesitation. Proceeding to surgery without clearly defining the anatomy may lead to donor abortion, unnecessary anesthesia, and surgery.

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