



Letter to the Editor

Are In Situ Double Portal Vein Anastomosis or Unification ideal for Anomalous Portal Vein Reconstruction in Right Lobe Living Donor Liver Transplantation?

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Dear Editor;

We read with great interest the article by Shehta et al.^[1] regarding "Feasibility and outcomes of living-donor liver transplantation utilizing the right hemi-liver graft with portal vein anatomical variations". We would like to express the following thoughts regarding this article:

1. According to the Cheng classification,^[2] in type 2 anomalous portal venous branching, unification and anastomosis with the recipient portal vein are a process that is extremely prone to stenosis or thrombus. If unification is performed, the posterior and anterior sectoral branches of the right portal vein should be positioned as top and bottom (Fig. 1a and 1b). Then the corner sutures should be placed at both ends of the venoplasted suture line (Fig. 2a and 2b). In an anastomosis performed in this way, adaptation will be difficult and it will be possible for one or both of the portal vein branches of the right lobe to narrow. Even if the corner sutures are placed not on the venoplasty line, but at the point opposite it, adaptation problems will occur during anastomosis (Fig. 2c). There will be shrinkage in the recipient vena porta (Fig. 2d). In addition, during unification, forcing both

portal vein lumens of the right lobe to come closer together will result in narrowing of both lumens.

2. In autologous Y graft anastomosis, the recipient's portal vein remains clamped for a long time. In those who do not have adequate portosystemic shunt, problems such as edema in the intestines, hemodynamic instability and failure to close the abdomen are likely. Therefore, our recommendation is the use of homologous portal vein Y graft. Since our institute is a high-volume transplant center, in total hepatectomy, the portal vein is cut from its distal end branches before the portal vein anastomosis and the recipient portal vein is cut to obtain the Y portal vein graft. Y portal vein is kept in cryopreservation and is used the next right lobe LDLT with anomalous portal venous branching. Authors, in their own studies^[1] and in another study^[3], mention a 5.8 – 6.3% incidence of portal vein thrombosis, especially in the right lobe posterior portal vein, with autologous Y grafting. This is due to malalignment between the Y portal vein graft and the recipient's sectorial portal vein branches. In addition to the article we have previously published^[4], we are preparing homologous Y portal vein graft use in more than 50 cases

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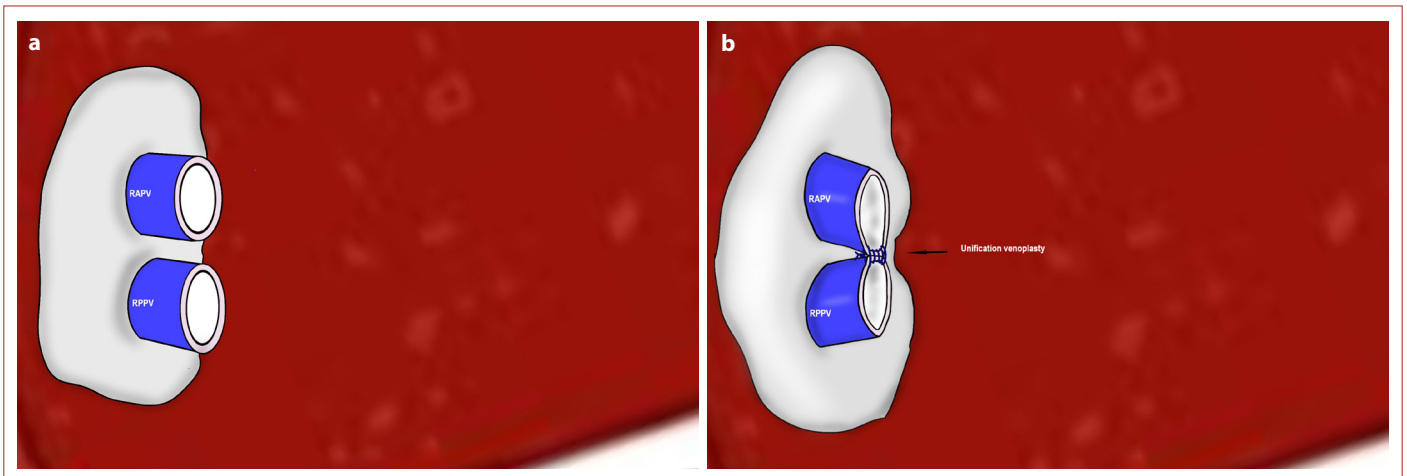


Figure 1. (a) Anterior and posterior sectorial portal vein branches of the right lobe of the liver. **(b)** Unification anterior and posterior sectorial portal vein branches of the right lobe of the liver.

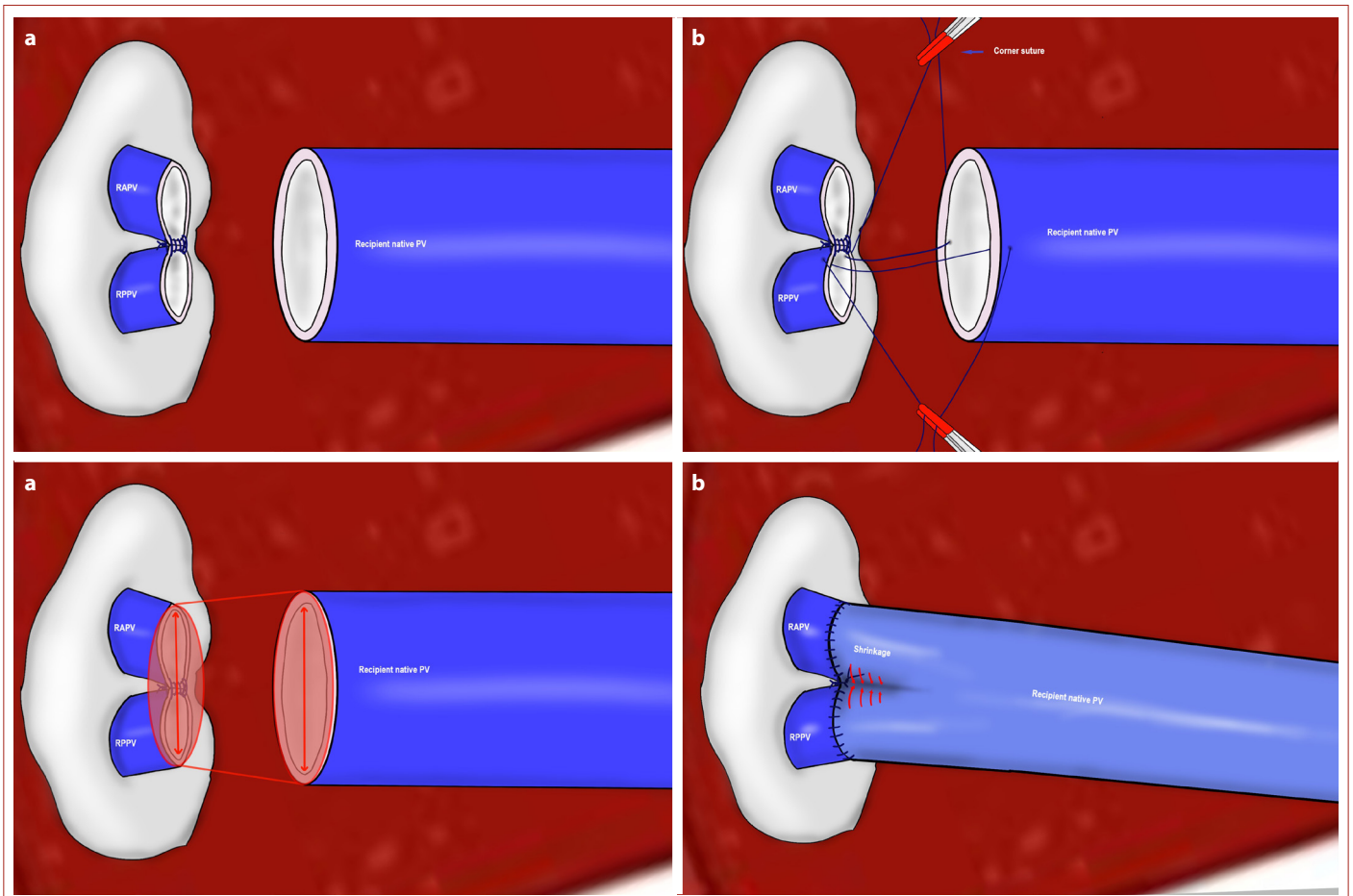


Figure 2. (a) Unified portal vein branches before anastomosis with the recipient portal vein. **(b)** The corner sutures were placed at both ends of the venoplasted suture line and to the recipient portal vein. **(c)** Even if the corner sutures are placed not on the venoplasty line, but at the point opposite it, adaptation problems will occur during anastomosis. **(d)** There will be shrinkage in the recipient vena porta after the anastomosis.

of anomalous portal venous branching in right lobe living donor liver transplantation and its excellent results. In this study, we especially will focus on very important tips regarding alignment.

3. The authors have presented the feasibility of double portal vein anastomoses. Double portal vein anastomoses can be performed with right and left portal veins or right anterior and right posterior portal veins of the

recipient. But, double portal vein anastomoses may also result in portal vein thrombosis because of an angulation of the main portal vein axis. Moreover, in cases where GRWR < 1 %, double portal vein anastomoses are prone to portal vein thrombosis due to rapid regeneration causing progressive malalignment.^[4] Angulations are inevitable in dual anastomosis due to length or shortness. The authors have never mentioned which landmarks they technically met.

Disclosures

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