LIVER TRANSPLANTATION 12:888–889, 2006



# Selective Coil Occlusion of a Large Arterioportal Fistula in a Liver Graft

**Olivier Detry,[1] Arnaud De Roover,[1] Jean Delwaide,[2] Robert F Dondelinger,[3] Michel Meurisse,[1] and Pierre Honoré[1]**

*[1]Department of Liver Transplantation and Surgery, [2]Department of Hepatogastroenterology, and [3]Department of Radiology, University of Liège, Liège, Belgium*

Received November 16, 2005; accepted November 30, 2005.

A woman, born in 1958, developed hepatitis B virus fulminant hepatic failure and underwent ABO blood group incompatible orthotopic liver transplantation in 1989 and was retransplanted with an ABO identical graft in 1992 for chronic rejection. Since her first liver transplantation she had received regular anti-hepatitis B surface antigen immunoglobulins. Hepatitis B virus antigenemia became positive in 1994. She received lamivudine therapy in 1997 and adefovir in 2004 for YMDD mutant reinfection.

During this whole period she underwent regular liver biopsies aimed to evaluate the recurrent hepatitis B virus hepatitis. In 2003 an abdominal computed tomography did not show any vascular abnormalities in the liver graft and two percutaneous biopsies were performed at that time for follow-up of the graft. In June 2004 a murmur was detected in her abdomen. A liver graft duplex ultrasound demonstrated an arterioportal fistula that was confirmed by computed tomography (Fig. 1). At that time this fistula was asymptomatic. The patient had no sign of portal hypertension, no ascites, and no hemobilia. No varix was demonstrated at esophagogastroscopy. She was informed of her fistula but as it was asymptomatic, it was proposed that she be regularly followed by duplex ultrasound. Nine months later the patient was readmitted for edema of the lower limbs and upper right abdominal discomfort, attributed to the fistula. Percutaneous coil embolization was performed (Fig. 2 and Fig. 3). This procedure allowed selective closure of the fistula. The symptoms described by the patient disappeared as soon as she came back

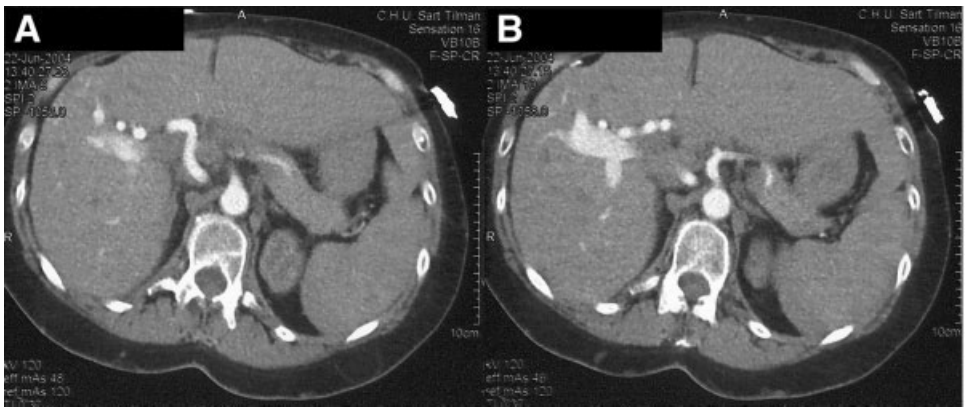


**Figure 1. Abdominal computed tomography showing at early arterial phase an enlarged hepatic artery (A) with early and retrograde filling of the portal vein through the right portal branch (B).**

Address reprint requests to Dr. Olivier Detry, Dept. of Liver Surgery and Transplantation, University of Liège, CHU Sart Tilman B35, B4000 Liège, Belgium. Telephone: 32 43667645; FAX: 32 43667069; E-mail: oli.detry@chu.ulg.ac.be

DOI 10.1002/lt.20695
Published online in Wiley InterScience (www.interscience.wiley.com).

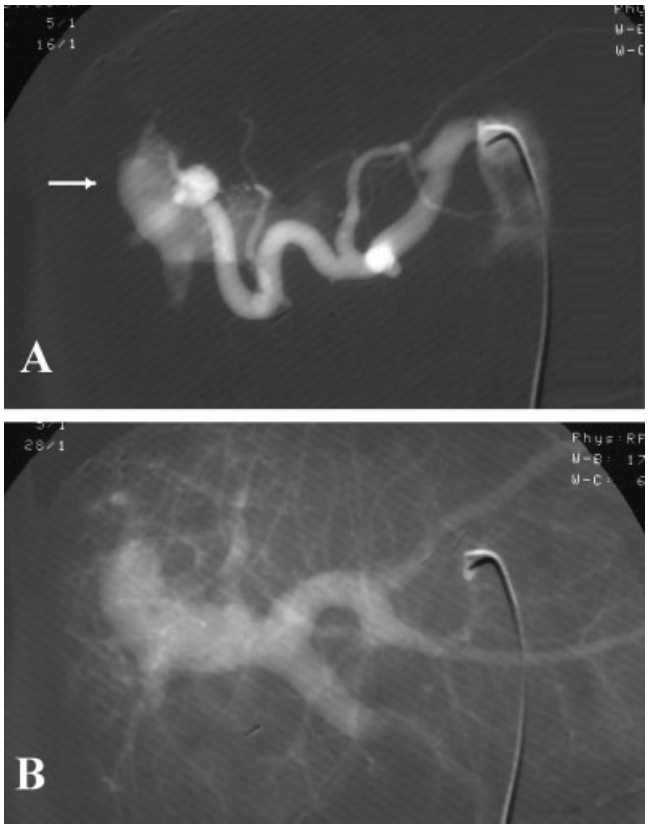


**Figure 2. Selective arterial angiography of the common hepatic artery demonstrating the arterioportal fistula (white arrow, A), and the retrograde opacification of the portal vein (B).**

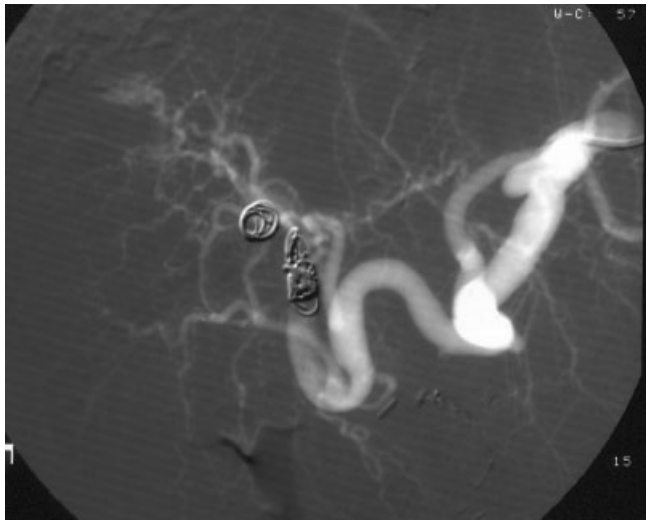

**Figure 3. Selective arterial angiography of the common hepatic artery after selective coil embolization of the arterioportal fistula, showing absence of portal vein opacification.**

cites. An arterioportal fistula may also induce hemobilia. Small and asymptomatic arterioportal fistulas should be managed conservatively, and percutaneous radiological intervention by transcatheter coil occlusion or detachable balloon embolization should be proposed in symptomatic arterioportal fistulas. Surgical procedures should be reserved for cases of extrahepatic fistulas.[2]

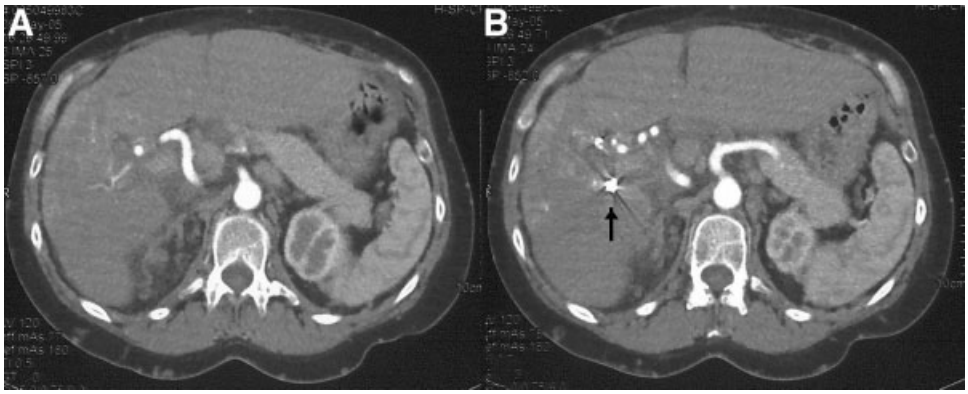


**Figure 4. Abdominal computed tomography after selective coil embolization of the arterioportal fistula, showing the disappearance of the portal vein opacification (A), and the presence of the coils (black arrow B).**

for the radiological unit. Six months later she is asymptomatic and her liver duplex ultrasound and abdominal computed tomography confirmed the absence of arterioportal fistula (Fig. 4).

An arterioportal fistula is a rare complication of biopsy of liver graft or native liver.[1] A large arterioportal fistula may cause reversal of portal vein blood flow and portal hypertension with esophageal varices and as-

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