Serial Needle Aspiration in Polycystic Liver Disease

We read with interest the article by Dr. J. V. Ferris reporting his treatment of a patient with polycystic liver disease by serial percutaneous ethanol injection [1]. He mentioned that percutaneous ethanol injection has been considered ineffective in treating extensive polycystic liver disease, resulting in severe symptoms. We report our experience with serial needle aspiration in a patient with extensive polycystic liver disease over a 10-year period.

A woman born in 1944 presented with severe abdominal pain, early satiety, and dyspnea and was diagnosed with polycystic liver disease in 1982. Surgical fenestration was performed in 1982 and in 1989. In 1989, biliary leakage occurred after surgical fenestration of 237 hepatic cysts, resulting in abdominal pain and fever lasting 3 months. Liver transplantation was recommended after a recurrence of abdominal pain, but the patient refused this treatment and was referred for percutaneous ethanol injection. In 1992, the eight largest cysts were treated by percutaneous catheter drainage and alcohol injection performed according to published techniques [2].

Symptoms recurred in 1993, and it was found that the largest treated cysts had been replaced by multiple smaller cysts (Fig. 1A). We subsequently performed serial needle aspiration without alcohol injection in 1993, 1994, 1995, 1996, 1998, and 2000, for recurrent symptoms (mainly abdominal pain and early satiety). Between 40 and 60 cysts were aspirated during each session, yielding 2–3 L of fluid and providing marked symptom relief. Symptoms again recurred in 2001, with abdominal pain and fever, and were accompanied by an elevation of alkaline phosphatase, bilirubin, and γ-glutamyltransferase levels. Portal hypertension with esophageal varices was also observed on fiberoscopy, and portocaval shunts, on CT (Fig. 1B). Liver transplantation was again recommended and was accepted by the patient. The explanted liver weighed 4.5 kg and contained multiple cysts. The patient is alive and complication-free 18 months after transplantation.

![Fig. 1A.](image1.png) 57-year-old woman with extensive polycystic liver disease. CT scans obtained during portal venous phase show innumerable bilobar hepatic cysts (A)

![Fig. 1B.](image2.png) 57-year-old woman with extensive polycystic liver disease. splenogastrorenal shunt with gastric varices (arrows, B) related to portal hypertension.
We believe that ethanol injection for extensive polycystic liver disease is not mandatory because treated cysts are replaced by multiple smaller cysts. In contrast, serial needle aspiration effectively relieved our patient's symptoms over a 10-year period. Liver transplantation is the only curative treatment for end-stage polycystic liver disease with altered liver function and portal hypertension, but serial needle aspiration can postpone the need for transplantation.