



Pediatric Biliary-Enteric Strictures

What is a pediatric biliary-enteric stricture?

The liver is an essential organ that helps the body rid itself of toxins, and it also plays an important role in converting food into energy for the body's cells. This energy production includes producing bile that allows the body to break down and absorb fat. Various diseases can cause significant liver failure, but fortunately, modern treatments allow physicians to transplant livers into children, offering the opportunity for a long and healthy life.

One of the most common problems that can develop after liver transplantation is a biliary-enteric stricture, a narrowing or blockage of the passages that drain bile from liver cells to the small intestine. Symptoms of biliary-enteric stricture include, pain, chills, fever, jaundice (yellowed skin), itching, nausea, vomiting, and pale stool.

In addition to blood tests and imaging with MRI, interventional radiologists can also find blockages using x-ray imaging and dyes to pinpoint and identify any problems in the biliary system.

Treatment

Once a blockage is identified, board-certified interventional radiologists are able to deliver minimally invasive treatments for biliary-enteric strictures with less risk, less pain, and less recovery time than traditional surgery.

Transhepatic balloon dilation

Transhepatic balloon dilation is safe and effective for the treatment of bile duct narrowing in children, and occurs in two phases. The first step to successfully opening the bile passages is to temporarily insert a tube into the liver and drain the backed-up fluid. An interventional radiologist does this by passing a needle through the skin and into the liver, using ultrasound and x-ray to guide his path. Once there, the IR physician uses contrast dye to watch the flow of bile through the ducts and pinpoints the problem area. The physician then relieves the congestion in the liver by allowing the fluid to drain through the tube and out of the body.

In the second phase, the interventional radiologist opens up the bile ducts over the course of multiple sessions (usually 2-3) for a more long-term solution. By using image-guided techniques (or techniques guided by live x-rays), the interventional radiologist directs tiny balloons to the strictures, at which point the physician carefully inflates the balloons to open the narrowed passage. Once the interventional radiologist determines that the balloon therapy leads to the normal flow of bile, the temporary tube is removed. To ensure that the bile duct remains open, the interventional radiologist will repeat imaging scans.