Pediatric Liver Transplant Program celebrates 30 years of caring for children

UCLA has one of the largest and oldest pediatric liver transplant programs in the United States, having performed almost 1,000 transplants since the program's founding in 1984. Prior to the advent of successful pediatric liver transplantation, few children with severe liver disease would survive.

These patients require assiduous pre-transplantation monitoring, often in our intensive care unit. Post-transplantation care involves long-term management, sometimes from infancy to adulthood. The UCLA Pediatric Liver Transplant Program is based on a cohesive, multidisciplinary team strategy. Care is provided by pediatric hepatologists with specific expertise in transplantation medicine, and liver transplant surgeons in consultation with a full range of pediatric sub-specialists. Specialized nursing and social work personnel are also essential team members.

Comprehensive liver transplant evaluation

Life-threatening pediatric liver diseases that may require transplantation include cholestatic liver disease (most often biliary atresia), metabolic disorders, acute liver failure and malignant tumors. Symptoms of liver disease in infants include hyperbilirubinemia of unclear etiology and, in older children, jaundice, hepatitis or abnormal liver function tests with unclear etiology.

Personalized care allows children to thrive

At UCLA, pediatric liver transplant patients typically resume the normal activities of childhood while remaining in close contact with the medical team. “Children who have liver transplants generally enjoy a good quality of life,” says Laura Wozniak, MD, an assistant clinical professor in UCLA's Liver Transplant Program. “Most patients go back to school after recovery from transplantation. They can participate in extracurricular activities with their peers, and many of our adolescents go on to attend college.”

The post-transplantation protocol involves highly individualized care. Patients vary significantly in medical management and the types of supportive services required.

“Not all patients need the same immunosuppressant regimen,” Dr. Wozniak explains. “UCLA has decades of experience and an outstanding team of physicians and support staff — fellows, social workers and nurse coordinators — who are available 24 hours a day. We partner with the primary care clinicians for these children and work closely with them to address any and all of their post-transplant needs.”
We provide both emergent and non-emergent liver transplant evaluations. Each patient is assessed by a team that includes a pediatric hepatologist, transplant surgeon, nurse coordinators and social workers. Psychosocial evaluation is required to provide families with a thorough understanding of the surgery, long-term prognosis, post-transplantation care and the impact on the family. Patients are also assessed and treated for other medical problems that may be present.

Non-emergent liver transplant evaluations are typically performed on an outpatient basis over the course of several days or a few weeks depending on medical urgency. In emergent cases, the evaluation can be accomplished within 24 hours.

**Pre-transplantation care**

Chronic liver disease can sometimes be managed outside the hospital setting for many years. Pediatric hepatologists at UCLA have developed protocols for medical management that can delay the complications of chronic liver disease.

For these children, pre-transplantation care involves medical services to optimize the child's health, such as therapies to maximize nutritional status.

For children presenting with acute liver failure, urgent hospitalization with the option for state-of-the-art critical care facilities is essential to the effort to sustain life until an organ can be found.

**Novel surgical options**

Following evaluation and testing, cases are reviewed by a multidisciplinary committee and a decision about listing for transplantation is made. Over the past two decades, UCLA has helped pioneer the expansion of available allografts and donor options through the development of novel surgical techniques. Options include:

- Whole liver: transplantation of an entire cadaveric organ
- Segmental graft: a cadaveric adult liver is divided between a pediatric recipient and an adult recipient
- Reduced-sized graft: a segment of an adult cadaveric liver is transplanted into a pediatric patient
- Living related: transplantation of a liver segment donated by a living relative or individual with matching tissue characteristics

**Individualized immunosuppressive therapy**

Advances in surgical techniques and immunosuppressant therapies have dramatically improved the long-term prognosis for pediatric liver transplant patients. Five-year liver graft survival rates now exceed 80 percent, while five-year patient survival rates are nearing 90 percent.

UCLA’s Division of Pediatric Gastroenterology, Hepatology and Nutrition is among the leaders in clinical care and research. Ongoing research is aimed at improving medication adherence and investigating biomarkers for immune monitoring.