

Liver Transplantation

What is liver transplantation?

Liver transplantation is an operation performed when a person's liver condition has deteriorated to the point that they are experiencing life-threatening problems. It is performed by surgically removing the diseased liver and replacing it with part of a liver or a whole liver from another person. The new liver is obtained from either a person who is legally brain dead or from an adult living person who donates a part of his/her liver. The person who has received the transplant will then need to take medication indefinitely to prevent his/her body from rejecting the new liver.

What causes liver failure?

Children can develop either acute (sudden onset) or chronic (persisting for months or years) liver disease that may require liver transplantation. Although many chronic conditions can be treated with medications, sometimes the liver fails in spite of this. Causes of acute liver failure include infections such as Hepatitis A or B virus as well as medications. Sometimes the cause of liver failure is unknown. Chronic liver disease can occur for many reasons. In babies, biliary atresia (absence of open bile ducts) and genetic problems are the main causes. In children, chronic viral hepatitis (inflammation of the liver caused by a virus), autoimmune liver disease (when a person's antibodies attack the liver due to an abnormal immune response) or genetic disorders are reasons for liver failure that may require transplantation. Certain liver tumors can also be treated by transplantation.

SPECIAL INSTRUCTIONS:



What are the symptoms of liver failure?

In acute liver failure, the child will develop yellow eyes (jaundice), bleeding due to poor blood clotting, and eventually lethargy, confusion and even coma. In chronic liver disease, the child may have poor growth, severe itching, fluid in the abdomen (ascites), an enlarged spleen, and bleeding from swollen veins (varices) in the esophagus.

How are decisions made about donor livers?

There is a nonprofit, scientific national organization (United Network of Organ Sharing, UNOS) which maintains the national waiting list for donor organs. Their goals are fairness to all and good outcomes for as many people as possible. Patients are evaluated by their transplant center, and depending on how sick they are and the probability of their disease being successfully treated with transplantation, they are matched by UNOS to donor organs as they become available. Patients are treated equally, regardless of ethnicity, gender or economic status. In the case of living donation, a healthy adult who wants to donate will undergo testing to determine if they are a suitable candidate.

Liver Transplantation continued

How is a liver transplant performed?

When the donor is a live person, one group of surgeons will remove part of the healthy liver from the donor while the other group is removing the diseased liver from the child. When the donor is deceased, the child is admitted to the hospital while the liver is transported there. The healthy liver will be placed in the child's abdomen, and the surgeon reconnects all of the blood vessels and bile ducts. The child is then given medications to prevent the rejection of the new liver. In uncomplicated cases, the child may be in intensive care for 2-3 days and in the hospital for 7-14 days. The main risks right after surgery are bleeding, clotting of the artery to the liver, and poor function of the new liver.

What is life like after a liver transplant?

The child is expected to live a normal life except that he/she needs to take daily medication to prevent rejection. Regular doctor visits to monitor the liver function and watch for medication side effects are also very important. A few special precautions are necessary to avoid infections. Long term risks are rejection of the liver, infections, and an unusual cancer of the lymph glands called post-transplant lymphoproliferative disease (PTLD). Most of these complications are treatable if discovered early which is why good medical follow up is so important. When transplanted children become teenagers, they need to start learning how to assume responsibility for life-long care of their organ gift.

For more information or to locate a pediatric gastroenterologist in your area please visit our website at: www.naspghan.org

IMPORTANT REMINDER: This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) is intended only to provide general information and not as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult your doctor about your specific condition.



LINKS:

American Liver Foundation:

<http://www.liverfoundation.org/education/info/transplant/>

National Digestive Diseases Information Clearinghouse:

<http://digestive.niddk.nih.gov/ddiseases/pubs/livertransplant/>

United Network for Organ Sharing:

<http://www.unos.org/resources/patientResources.asp>

Department of Health and Human Services Website for Organ Donation:

<http://www.organdonor.gov/>