Testing

These scans, X-rays and lab tests may need to be done from time to time after your transplant. Many of these tests should be well known to you as they were part of your pre-transplant evaluation workup.

Procedures

Chest X-Ray

It is common to have a chest X-ray right after transplantation. A chest X-ray may be done if you have respiratory symptoms such as a lasting cough (productive or dry), chest pain, shortness of breath, a bad cold (sore throat or runny nose) or possible infection, during your recovery.

Ultrasound

This test uses sound waves to look for abnormality of your transplanted liver. A gel is put on the abdomen over the area of the liver and a probe -shaped like a microphone- is moved gently over the abdomen, allowing images to be displayed on a computer screen for the doctor to view. This test will be performed if there is any question of blood clots in the blood vessels of the liver, bile duct problems or possible rejection.

Liver Biopsy

A liver biopsy is a procedure in which a small piece of tissue is removed from the liver with a needle from the body for exam under a microscope by a pathologist. A liver biopsy will be performed when rejection is suspected.

An increase of the liver function tests can mean rejection however there are many other causes for these lab values to raise including infection or bile duct problems. For this reason, a biopsy of the transplanted liver may be arranged to decide the possible cause of the abnormal labs and provide information to help us administer proper treatment.

Percutaneous Transhepatic Cholangiography (PTC)

A PTC is a procedure in which a needle is introduced through the skin and into the liver where dye (contrast) is injected so the bile duct structures can be viewed by X-ray. A PTC may be done when there is elevation of the total bilirubin or other liver tests. Elevation of these tests may suggest a narrowing or block of the bile duct inside or outside the liver.

Endoscopic Retrograde Cholangiopancreatography (ERCP)

An ERCP is a procedure to allow the doctor to diagnose and treat problems in the liver, gallbladder, bile ducts and pancreas. The procedure combines X-ray and the use of an endoscope - a long, flexible, lighted tube. The scope is guided through the patient's mouth and throat, then through the esophagus, stomach and duodenum.

Testing, continued

The doctor can look at the inside of these organs and find any abnormalities. A tube is then passed through the scope, and a dye is injected to allow the internal organs to appear on an X-ray. If narrowing or block of the bile duct is found, it can be opened by placing a tube across the narrowing or the block.

Endoscopy

An endoscopy is a procedure that uses an endoscope to diagnose or treat a condition of the upper gastrointestinal system. The endoscope is put in through the mouth.

Colonoscopy

A colonoscopy is a procedure that uses a colonoscope to diagnose or treat a condition of the lower gastrointestinal system. The colonoscope is put in through the anus.

Ileoscopy

An ileoscopy is a procedure that uses an endoscope to diagnose or treat a condition in the small intestine. The scope is put in through the ileostomy.

Magnetic Resonance Imaging (MRI)

An MRI is a diagnostic procedure that uses a combination of large magnets, radiofrequencies and a computer to show detailed images of organs and structures within the body. MRI does not use radiation for this image.

Computed Tomography (CT)

A CT scan uses X-rays to make detailed pictures of structures inside the body.

Lab Tests

Lab Values

The transplant office will make arrangements for you to have your labs drawn at a hospital convenient for you. At the time those arrangements are made, we will give the lab permission to release those lab results to you if you should ask. The lab values are also faxed to the transplant office to be reviewed by the transplant team.

Following is a list of lab values we will be tracking. Lab result ranges may differ from one lab to another. Your lab results may fall outside of the normal range, but may be normal for you. You can get lab results from your local lab or through One Chart|Patient. Lab instructions will be given to you upon discharge.

Please let us know which local lab you will be using. The lab should be open on holidays and weekends in case we need to draw lab work during those times.

Testing, continued

Test	Normal Range	Comment
Hemoglobin (Hgb)	10–16 gms/dl	Measurement of the oxygen carrying capacity of your blood Hematocrit.
Hematocrit (HCT)	30–46%	Measurement of relative volume of cells and plasma in blood White Blood Count.
White Blood Count (WBC)	4,000–10,000/ul (Usually reported out as 4.0-10.0)	Measures the body's white blood cell count and defense against infection causing agents.
Platelet Count (Plat)	150,000–400,000/ul (Usually reported out as 150-400)	Measures the number of platelets in your blood which are important for blood clotting.
Blood Urea Nitrogen (BUN)	8–40 mg/dl	Measurement of your kidney function.
Creatinine Serum (Scr)	0.6–1.8 mg/dl	Measurement of the amount of sodium in blood.
Sodium (NA)	135–145 mmol/L	Notify transplant office of a persistent drop in Na.
Potassium (K)	3.6–5.0 mmol/L	Measurement of the amount of potassium in blood.
Bicarbonate	20.0–31.0 mmol/L	Measurement of the amount of bicarbonate in blood.
Glucose	65–110 mg/dl	Measure of the amount of sugar in blood.
Total Bilirubin	0.1-1.3 mg/dL	Measurement of bilirubin in blood - may become elevated if liver is not functioning properly.
Alanine Aminotransferase (ALT)	11-66 U/L	ALT is measured to see if the liver is damaged or diseased.
Asparatate Aminotranferase (AST)	15-46 U/L	AST is measured to see if the liver is damaged or diseased.

Nebraska Medicine

Testing, continued

Test	Normal Range	Comment
Gamma Glutamic Transpeptidase (GGTP)	8-78 U/L	GGTP is measured to see if there is damage to the bile ducts or bile flow in the liver.
Prothrombine Time and International Normalized Ratio (PT/INR)	10-14 seconds/1.0	Measurement of how long it takes for blood to clot.
Albumin	3.4 - 5.4 (g/dL)	Measurement the amount of this protein in the clear portion of the blood.
Cyclosporine Level	Varies	Measurement of the amount of cyclosporine in blood.
Tacrolimus Level	Varies	Measurement of the amount of tacrolimus in blood.
Rapamune Level	Varies	Measurement of the amount of sirolimus in blood.
Everolimus Level	Varies	Measurement of the amount of everolimus in your blood

*Lab result ranges may differ from one lab to another.