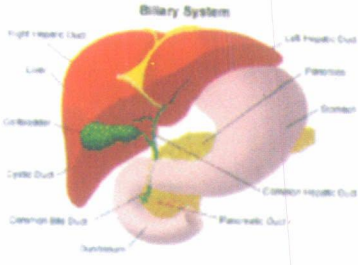
SAIFEE HOSPITAL

under the auspices of Saifee Hospital Trust Reg. No. E-5448 (Bom)

DEPARTMENT OF NUCLEAR MEDICINE

Liver Imaging Patient Information



Using nuclear medicine to look for liver abnormalities

The liver is the largest organ in the body, It is located in the upper right side of the abdomen, beneath the diaphragm, and on top of the stomach, right kidney, and intestines, Shaped like a cone, the liver is a dark reddish-brown organ.

The liver holds about one pint (13 percent) of the body's blood supply at any given moment. The liver consists of two main lobes, each made up of thousands of lobules, These lobules are connected to small ducts that connect with larger ducts to ultimately form the hepatic duct The hepatic duct transports the bile (fluid that helps break down fats and gets rid of wastes in the body) produced by the liver cells to the gallbladder and duodenum (the first part of the small intestine).

The liver carries out many important functions, such as:

- making bile - fluid that helps break down fats and gets rid of wastes in the body
- changing food into energy
- clearing the blood of drugs and other poisonous substances
- producing certain proteins for blood plasma
- regulating blood clotting

What is a Liver Scan?

A liver scan is a specialized nuclear medicine procedure used to examine the liver to identify certain conditions or to assess the function of the liver. A liver scan may also be used to follow the progress of treatment of certain conditions, This procedure may also be referred to as a liver-spleen scan because the spleen often is examined as well due to its proximity and close functional relationship to the liver.

A liver scan is a type of nuclear medicine procedure, This means that a tiny amount of a radioactive substance is used during the procedure to assist in the examination of the liver. The radioactive substance, called a radionuclide (radio pharmaceutical or radioactive tracer), is absorbed by normal liver tissue, The liver will absorb about 80 percent to 90 percent of the radionuclide dose and the spleen about 5 percent to 10 percent The remainder of the radionuclide is absorbed by the bone marrow.

The radionuclide used in liver scans is usually a form of technetium, Once absorbed into the liver tissue, the radionuclide emits a type (if radiation, called gamma radiation, The gamma radiation is detected by a scanner, which processes the information into a picture of the liver.

By measuring the behavior of the radionuclide in the body during a nuclear scan, the physician can assess and diagnose various conditions, such as tumors, abscesses,metastasis, hematomas; organ enlargement, or cysts, A nuclear scan may also be used to assess organ function and blood circulation,

The areas where the radionuclide collects in greater amounts are called "hot spots," The areas that do not absorb the radionuclide and appear less bright on the scan image are referred to as "cold spots."

Who is it for?

A liver scan may be performed to screen for diseases such as cancer, hepatitis, or cirrhosis. Lesions such as tumors, abscesses, or cysts of the liver or spleen may be seen on a liver scan. A liver scan may be performed to assess the condition of the liver and/or spleen after trauma to the abdomen or when there is unexplained pain in the right upper quadrant of the abdomen. Enlargement of the liver or spleen may be seen on a liver scan.

A liver scan may also be used to assess response to therapy for liver disease and/or to monitor the course of liver disease. Portal hypertension (elevated blood pressure within the liver's circulation) may be detected with a liver scan when more of the radionuclide is absorbed by the spleen rather than the liver.

There may be other reasons for your physician to recommend a liver scan.

How do you prepare?

- Your physician will explain the procedure to you and offer you the opportunity to ask any questions that you might have about the procedure.
- You will be asked to sign a consent form that gives your permission to do the procedure. Read the form carefully and ask questions if something is not clear.
- Generally, no prior preparation, such as fasting or sedation, is required prior to a liver scan.
- Notify the nuclear medicine physician if you are allergic to or sensitive to medications contrast dyes, or iodine.
- If you are pregnant or suspect you may be pregnant, you should notify your physician
- Based upon your medical condition, your physician may request other specific preparation.

How is it done?

You will be asked to remove any clothing, jewellery, or other objects that may interfere with the procedure.

An intravenous (IV) line will be started in the hand or arm for injection of the radionuclide.

The radionuclide will be injected into your vein. The radionuclide will be allowed to concentrate in the liver tissue for approximately 30 minutes.

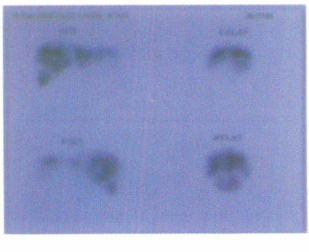
You will be asked to lie still on a scanning table, as any movement may affect the quality of the scan.

The detector will be placed over the right upper quadrant of the abdomen in order to detect the gamma rays emitted by the radionuclide in the liver tissue.

You may be repositioned during the scan in order to obtain views of all the surfaces of the liver.

When the scan has been completed, the IV line will be removed.

While the liver scan itself causes no pain, having to lie still for the length of the procedure might cause some discomfort or pain, particularly in the case of a recent injury or invasive procedure such as surgery. The technologist will use all possible comfort measures and complete the procedure as quickly as possible to minimize any discomfort or pain.



After the test

You should move slowly when getting up from the scanner table to avoid any dizziness or light headedness from lying flat for the length of the procedure.

You may be instructed to drink plenty of fluids and emptY your bladder frequently for about 24 hours after the procedure to help flush the remaining radionuclide from your body.

The IV site will be checked for any signs of redness or swelling. If you notice any pain, redness, and/or swelling at the IV site after you return home following your procedure, you should notify your physician as this may indicate an infection or other type of reaction.

You may resume your usual diet and activities, unless your physician advises you differently

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