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## **Fever and Hepatosplenomegaly**

**Objectives : the objectives of this lecture are to know :**

- Symptoms
- Causes and risk factors
- Diagnosis
- Treatment

# Overview

Hepatosplenomegaly (HPM) is a disorder where both the liver and spleen swell beyond their normal size, due to one of a number of causes.

The name of this condition — hepatosplenomegaly — comes from the two words that comprise it:

- hepatomegaly: swelling or enlargement of the liver
- splenomegaly: swelling or enlargement of the spleen

Not all cases of HPM are severe. Some may be cleared up with minimal intervention. However, HPM can indicate a serious problem, such as a lysosomal storage disorder or cancer.

## Roles of the liver and the spleen

The liver has a variety of roles including detoxifying your blood, synthesizing proteins, and fighting infections. It also has a key part in producing both amino acids and bile salts.

Your body needs iron to produce red blood cells, and your liver processes and stores that iron. Perhaps the most well-known of your liver's roles is the processing of your body's waste matter, which can then be excreted.

The spleen is one of your body's organs that is, by and large, less understood by most people. The spleen has a key place in your immune system. It helps it to identify pathogens, which are bacteria, viruses, or microorganisms capable of causing diseases. It then creates antibodies to fight them.

Your spleen also purifies the blood and is made up of red and white pulp necessary to produce and purify blood cells. Learn even more about the spleen.

## Symptoms

People with hepatosplenomegaly may report one or more of the following symptoms:

- fatigue
- pain

Other symptoms, which may be severe, include:

- abdominal pain in the upper-right region
- tenderness in the right region of the abdomen
- nausea and vomiting
- swelling of the abdomen
- fever
- persistent itching
- jaundice, indicated by yellow eyes and skin
- brown urine
- clay-colored stool

## Causes and risk factors

Splenomegaly is caused by hepatomegaly about 30 percent of the time. There are many different potential causes of liver disease:

## Infections

- acute viral hepatitis
- infectious mononucleosis, also known as glandular fever or the “kissing disease” and caused by the Epstein-Barr virus
- cytomegalovirus, a condition in the herpes virus family
- brucellosis, a virus transmitted via contaminated food or contact with an infected animal
- malaria, a mosquito-borne infection that can be life-threatening
- leishmaniasis, a disease caused by the parasite *Leishmania* and spread through the bite of a sand fly
- schistosomiasis, which is caused by a parasitic worm infecting the urinary tract or intestines
- septicemic plague, which is caused by a *Yersinia pestis* infection and can be life-threatening

## Hematological diseases

- myeloproliferative disorders, in which the bone marrow produces too many cells
- leukemia, or cancer of the bone marrow
- lymphoma, or a blood cell tumor originating in lymphatic cells
- sickle cell anemia, a hereditary blood disorder found in children in which hemoglobin cells are not able to transfer oxygen
- thalassemia, an inherited blood disorder in which hemoglobin is formed abnormally
- myelofibrosis, a rare cancer of the bone marrow

## Metabolic diseases

- Niemann-Pick disease, a severe metabolic disorder involving fat accumulation in cells
- Gaucher's disease, a genetic condition that causes fat accumulation in different organs and cells
- Hurler syndrome, a genetic disorder with increased risk of early death through organ damage

## **Other conditions**

- chronic liver disease, including chronic active hepatitis
- amyloidosis, a rare, abnormal accumulation of folded proteins
- systemic lupus erythematosus, the most common form of the autoimmune disease lupus
- sarcoidosis, a condition in which inflammatory cells are seen in different organs
- trypanosomiasis, a parasitic disease transmitted via the bite of an infected fly
- multiple sulfatase deficiency, a rare enzyme deficiency
- osteopetrosis, a rare inherited disorder in which bones are harder and denser than normal

## **Diagnosis**

These are a number of tests that may order to help make a definitive diagnosis of hepatosplenomegaly. These are:

CBP and ESR and retics count: Hemolytic disease. malignancies

Serological tests : Typhoid fever, brucellosis , visceral leishmaniasis

- an ultrasound, which is typically recommended after an abdominal mass is found during a physical exam
- a CT scan, which can reveal an enlarged liver or spleen as well as surrounding organs
- blood tests, including a liver function test and a blood clotting test
- an MRI scan to confirm diagnosis after physical examination

## Treatment

Treatments for hepatosplenomegaly can vary from person to person depending on the cause of the condition.