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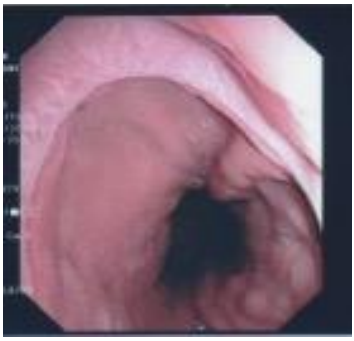
# ESOPHAGEAL VARICES

The esophagus is the flexible tube that carries food from the mouth to the stomach. Through the neck and the chest. Varicose veins, whatever there are legs or esophagus, are irregularly dilated veins with a thin wall. Those in the legs, which are common, visible, and well known, developed under the skin. Those of the esophagus, invisible from the outside, thrive under the lining of the gastrointestinal tract in contact with the food. This lining is called the mucosa. Varicose veins are in the lining of the esophagus itself, between the mucous membrane and the muscles that form the outer wall of the esophagus. The contraction of these muscles is responsible for moving food down the esophagus.

Esophageal Varices



Similar to varices in the legs, esophageal varicose veins results from poor blood circulation. Like legs varicose, they can crack and leak blood, a process that is inappropriately called a rupture.

Esophageal varicose veins are just normal esophageal veins which are enlarged and increase the pressure of the blood they carry. The main cause of this increase pressure is portal hypertension (see 2016 news letter). The veins of the portal system carry blood to the liver.

Portal hypertension therefore occurs when the passage of blood through the liver is obstructed by a portal vein thrombosis, or by an obstruction of the small vessels of the liver, or by a thrombosis of the hepatic veins (**Budd-Chiari syndrome**). The obstruction of the small vessels of the liver is mainly due to a chronic disease leading to cirrhosis (diabetes, viral hepatitis, alcohol). Rarely, the obstruction is due to a disease affecting the vessels first (portal venopathy obliterative).

In other words, having found esophageal varicose requires a careful examination of the portal vein, the hepatic veins and the liver itself to find the cause.

ln case of portal hypertension, the esophageal veins are not the only ones to dilate, far from it. Varicose veins form in many places in the abdomen. But esophageal varicose veins and stomach varicose veins are in practice the only ones that can crack in a hollow space (the lumen of esophagus) and results in bleeding. Other signs of portal hypertension which usually are coming with esophageal varicose veins are gastric varicose veins, decreased blood platelet,enlarged spleen which is not often perceptible to the patient but is easily detected by echography. Patients with portal hypertension (even with enlarged spleen and low platelets) do not have and may never have esophageal varicose. The reason for these differences is not known.

Esophageal varicose veins do not cause any digestive problems. They are totally insensitive and do not prevent the esophagus from propelling food in any way. They do not cause heartburn or reflux from the stomach into the esophagus. The only consequence is that they can crack and cause digestive bleeding.

The diagnosis of esophageal varicose veins is made exclusively by digestive endoscopy. Other methods less unpleasant for the patient are currently not enough reliable.

While the blood pressure in esophageal varicose is constantly increased, it is not known why bleeding from them is only intermittent and rare. This is probably because the mechanisms that trigger cracking are poorly understood. It is likely that several abnormalities must occur simultaneously for cracking to happen. These abnormalities are, on the one hand, an increase in blood pressure in the varicose veins and, on the other hand, a thinning of the varicose veins wall and the mucous membrane covering them.

But it is known that cracking is not due to abdominal pressure increase during exercise or physical exertion, nor to the passage of any food, coughing or vomiting, gastric acid reflux, ulcers of the esophageal mucosa, poor blood clotting or hemophilia.

Known characteristics predicting a higher risk of varicose vein rupture in the future are: larger size, redness on their surface, severe liver disease. When blood pressure in the portal circulation can be measured, the risk of cracking is known to be zero below 12 mm of mercury (normal portal pressure is 5mm of mercury). On the other hand, the risk is not proportional to the increase in the portal pressure above this threshold, which still puzzles specialists.

Varicose veins cracks may be manifested by bloody vomiting (called hematemesis); or by black stools (called melena), or by discomfort, especially when standing, or by simple anemia, or by several of these signs at the same time. The amount of red liquid discharged from the mouth is many times that of bleeding because the stomach immediately starts to secrete a lot of water when there is blood in.

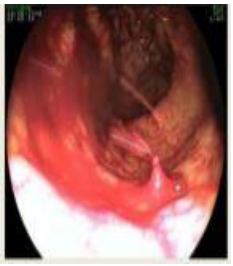
Emergency actions must be taken at home: lay the patient down with legs in the air, call the ambulance, and make sure that the respiratory track is clear.

Although bleeding due to cracking is always very impressive, it is much less serious than an accidental artery wound because the pressure of the blood in the portal system is much lower than in the arteries and the bleeding therefore tends to stop spontaneously.

However, you still need to go to an hospital emergency room to receive simple but appropriate cares. They are based on intravenous therapy and transfusions if necessary, administration of antibiotics, endoscopy to check the mechanism of the digestive bleeding, and endoscopy again to do the first steps to block the source of the bleeding.

When the liver is performing well, and the usual cares have been implemented, the evolution of a bleeding by cracking of the esophageal varicose veins is always favorable.

## Crack bleeding

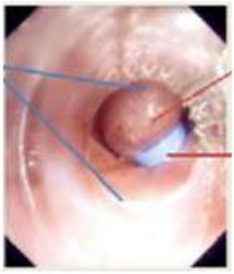


On the other hand, when the functioning of the liver is markedly disturbed, the cracking of esophageal varicose veins is a life-threatening complication, due more to liver failure than to the volume of blood lost.

Doctors have long sought to prevent the cracking of varicose veins. There are two main ways: lowering the portal pressure with drugs (mainly **propranolol** and **nadolol**); plugging the varicose veins by various endoscopic means, the most commonly used being the placement of small elastic rings to strangle them (endoscopic elastic ligation).

These solutions are offered to patients with large varicose veins or varicose veins with redness. Not all varicose veins can be ligated at once. Several out-patient cares are therefore necessary, under general anesthesia, approximately one month apart. The number varies according to the volume of varicose veins to be tied off. This is painless for the patient, apart from a some tugs for a few hours after the medical act.

Variceal ligation




It is rare to use TIPS to treat esophageal. This interventional radiology device reduces the portal pressure by placing a conduit that bypass the obstructed area (portal vein, liver or hepatic veins).

Photos: centre hépato-biliaire, hôpital Paul Brousse

Décembre 2017
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