

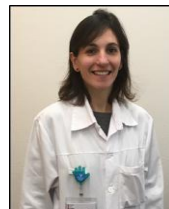
Abdominal Surgery for Liver Vessels Patients

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Décembre 2018

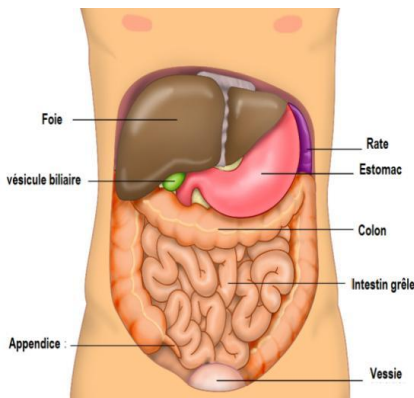
Abdominal surgery includes all surgical operations treating disorders of organs located in the abdomen, including the abdominal wall. It therefore includes operations on the digestive, renal and urinary or gynecological systems.



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Most common operations are removal of the gallbladder (also called cholecystectomy), removal of a portion of the colon or appendix (e.g., in case of the acute appendicitis), and removal of the abdominal wall (e.g., hernia repair). Anyone may need surgery at some point in their life, but there are special considerations for patients with Liver Vessels Diseases.

1 What are the particularities of liver vessel patients to be taken into account when surgical operation is necessary

a. Portal hypertension

Portal hypertension is the main complication of vascular liver diseases. Portal hypertension occurs when the blood flow through the liver is disturbed or even stopped by a portal vein thrombosis or hepatic vein thrombosis (Budd-Chiari syndrome) or damage to the small vessels of the liver (porto sinusoidal vascular disease).

The main manifestations of portal hypertension are the development of varicose veins and ascites. These two manifestations must be taken into account when a surgical operation is necessary.

Varicose veins are normal veins, but their size is increased due to a blood pressure increase. The most common varicose veins are located in the esophagus, but they can also be present under the skin and in the entire abdominal cavity (around the gallbladder or stomach). The presence of large intra-abdominal varicose veins can make surgery more complex, especially if the varicose veins are located close to the organ to be operated, because the risk of bleeding is increased. The presence of intra-abdominal varicose veins can expand the technical difficulty of an abdominal surgery operation.

Ascites is the accumulation of fluid in the abdominal cavity. Ascites flare-up is common after surgery for patients with portal hypertension. Usually the ascites attack is transient and disappears within a few weeks after surgery with medical treatments. Nevertheless, ascites can make post-operative management more complex. In particular, ascites can delay scar closure and increase the risk of infection after surgery. Sometimes ascites persists after surgery.

It is preferable that the surgical operation be performed by a surgical team which has the expertise in the management of patient with portal hypertension.

b. The anticoagulants



Liver vessels patients are frequently treated with anticoagulants because of portal or hepatic vein thrombosis, and/or because of a prothrombic condition (a disease increasing the risk of thrombosis).

Anticoagulants increase the risk of bleeding during an invasive procedure like a surgical operation

It is recommended that you consult your doctor prior to the operation, who will assess whether a transient discontinuation or adjustment of the anticoagulant treatment is possible before the surgical operation.

2. What are the risks after abdominal surgery in people with porto sinusoidal vascular disease?

Output from an European survey.

Porto sinusoidal vascular disease is a disease of the small vessels of the liver that can lead to portal hypertension. This disease is frequently associated with diseases affecting organs other than the liver, such as immunological diseases, chronic infections, or prothrombotic conditions.

A recent study by the European Network for Liver Vessel Disease Research (VALDIG) evaluated the impact of surgery during porto sinusoidal vascular disease.

Between 2002 and 2017, 44 patients with porto sinusoidal vascular disease were followed thru 10 European Centers, 45 surgical operations have been performed. The patient's average age was 53 years. 55 % of the patients had also extrahepatic disease. 16 patients had ascites at the time of surgery.

The evolution after surgery is summarized below.

- Post-operation outcomes were simple for 22 patients
- Complications of liver diseases were the most frequent for 16 patients
- 12 patients presented. 2 patients got a rupture of esophageal varices.
- The outcome was favorable for 16 patients.
- 9 patients had severe postoperative complications after surgery, including 4 severe hemorrhages. But none of the bleeding was related to varicose veins.
- Unfortunately four patients died within 6 months after surgery.
- The frequency of complications was higher in patients with preoperative ascites and/or renal failure and/or extra hepatic disease associated with porto sinusoidal vascular disease

-In conclusion, abdominal surgery is possible for patients with a porto sinusoidal disease. Nevertheless we do recognize that complications and deceased are higher than normal population.

We must keep in mind that abdominal surgery for patients with a porto sinusoidal disease ,while possible, is a risky operation and must be driven by a Reference Center with a strong collaboration between hepatologists and surgeons.

The balance risks/benefits must be evaluated for making the decision to operate

In conclusion, abdominal surgery is most often possible for patients with liver vessels diseases. I may be necessary to go through the taking care by a Reference Center. The close collaboration between hepatologist and surgeons will optimize the preparation of the surgery and the management of the postoperative period.



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