

Introduction to Post Liver Transplant Complications



Introduction to possible complications

1. Post liver transplant hemorrhage

The highest risk of bleeding is in the first 48 hours after transplantation. It can occur in the abdomen or the gastro-intestinal tract.

Intra-abdominal bleeding

Cause:

Intra-abdominal bleeding is often secondary to coagulopathy and portal hypertension, and difficult hemostasis during surgery. Late hemorrhage may occur as a result of severe infection causing disruption of a vascular anastomosis.

Treatment:

1. Correct the clotting problem by giving blood products.
2. Hemostasis by open surgery.

Gastrointestinal bleeding

Cause:

Gastrointestinal bleeding resulting from stress ulcers, gastritis, duodenitis, colitis or high dose of steroid after

operation, most commonly occur in the first 3 months after transplantation.

Treatment:

1. Antacid will be prescribed in the early post-operative period and patient should follow the regime according to doctor's prescription.
2. Endoscopic hemostasis or surgery.
3. If there is massive bleeding, angiogram and embolization are necessary.

2. Vascular stenosis or thrombosis

Hepatic artery stenosis or thrombosis

Cause:

Related to the arterial anastomotic technique during surgery or tension after anastomosis.

Signs and symptoms:

Derange liver function, altered mental status, hypotension, coagulopathy, fever, chills, jaundice and abdominal pain.

Treatment:

Urgent CAT scan or arterial angiogram to detect thrombus.
If detect or suspect thrombus:

1. Urgent operation to inspect, remove thrombus and reconstruction of anastomosis.
2. Infusion of anti-thrombolytic agent if indicated
3. If treatment fails, re-transplantation will be required.

Portal vein stenosis or thrombosis

Cause:

May be caused by existing of portal hypertension or portal vein thrombus before surgery.

Signs and symptoms:

May present with deranged liver function, delayed clotting time, massive ascites, signs of portal hypertension and variceal bleeding.

Treatment:

1. Thrombectomy and revision of the portal vein anastomosis in the early post-operative period.
2. Percutaneous dilation by angiography may be needed in the presence of portal vein stenosis to correct the condition.
3. If liver function is severely compromised, re-transplantation is indicated.

Vascular thrombosis is a serious complication. It can damage liver graft function. Therefore, early detection is very important. At present, the liver transplant surgeons will do the ultrasound abdomen for every post-operative liver transplant patients daily so as to detect the problem earlier. See below photo 1



Photo 1

3 Bile duct stricture or obstruction

Cause:

Bile duct stricture is a common problem after transplantation. Bile duct anastomosis site is the common site of stricture. Risk factors include viral infection, ischemic injury, ABO incompatibility, persistent rejection and bile duct infection.

Signs and symptoms:

Fever, chills, jaundice, abdominal pain and pruritus

Treatment:

1. Balloon dilatation of the stricture by Endoscopic Retrograde Cholangiopancreatography (ERCP).
2. Percutaneous Transhepatic Biliary Drainage (PTBD).
3. Anastomosis stricture can be repaired by surgery.

4 Bile leakage

Leakage from the bile duct anastomosis site or cutting plane of liver.

Cause:

Technical factor or thrombosis of hepatic artery

Signs and symptoms:

Fever, abdominal distension and pain, bile coming out from the drainage tubing

Treatment:

1. Administer antibiotic.
2. Endoscopic Retrograde Cholangiopancreatography (ERCP).
3. If the leak occurs at the anastomosis, the anastomosis may have to be revised.

5. Infection:

Cause:

The transplanted patient might experience bacterial, fungal or viral infection following operation. Immunosuppressant medications administered to prevent rejection of the graft will predispose the patient to a higher risk of infection. Severe infection will lead to sepsis, multi-organs failure, resulting in death.

Signs and symptoms:

Fever (Body temp. up to 37.6 °C or 100 °F), chills and malaise, shortness of breath, severe abdominal pain or distension, severe vomiting or diarrhoea.

Treatment:

1. Personal hygiene is essential.
2. Avoid contacting patients with infectious disease.
3. Prophylactic anti-infective medications are administered intra-operatively and post-operatively.
4. Consult the doctor if there is any sign and symptom of infection.

Currently, liver transplant team will prescribe antibiotic, anti-viral and anti-fungal medications for 3 months after liver transplant. For renal impairment patient, our doctor will adjust those medications individually.

6. Post liver transplant rejection

Causes:

After liver transplantation, your body's immune system will be activated to combat against your new liver causing rejection. Immunosuppressant medications are required to prevent rejection.

Signs and symptoms:

For early rejection, most of them do not have any signs and symptoms, but for late rejection, there may have:

1. Yellowing of eye and skin
2. Dark colour urine
3. Fever
4. Pain at liver area

Treatment:

1. Immunosuppressants to prevent rejection such as Tacrolimus (FK506), Mycophenolate mofetil (MMF) etc.
2. Patient should follow the regime according to doctor's prescription.

If the following symptoms occur, please contact our liver transplant centre as soon as possible:

1. Diarrhea for over 24 hours
2. Nausea or vomiting that stops you from taking medications

Don't worry. If you follow up according to our schedule, your blood result which was taken on the day of follow up will be screened by our team doctors. We shall contact you if any problems arise.

*****End*****