

COMPLICATIONS AFTER TRANSPLANT

A GUIDE FOR PATIENTS/FAMILIES



This brochure provides information about Complication after transplant, its long term problems & treatment. It is designed to respond to questions most frequently asked by patients.



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What are Early Problems After Transplant?

- **Infection:**

The WBCs are at their lowest until the new marrow begins to function. You are much more susceptible to infection during this time. Medications will be given to control any infection.

- **Mucositis:**

It is the injury of the mucosal lining of the mouth and gut and is very painful, and prevents eating and drinking. Mucositis is treated with pain medications plus intravenous infusions to prevent dehydration and malnutrition.

- **Acute Graft versus Host Disease:**

Another complication seen in allogenic transplants is acute graft versus host disease (GVHD). Some signs of GVHD include changes in the skin, liver and / or gastrointestinal tract. There are medications to prevent or control GVHD.

- **Bleeding:**

Problems with bleeding may also develop when the platelet count is too low. Platelet transfusions will be given to help control the bleeding.

- **Kidney and Liver problems:**

You will be on a number of medications throughout your hospitalization. Most of these medications are broken down by liver and excreted through your kidneys. There are blood tests to closely monitor your kidney and liver function. The doses of medication will be adjusted as necessary. Another problem that may develop in the liver is **veno-occlusive disease (VOD)**. This causes obstruction and blood flow from the liver. This condition may be reversible.

- **Graft Failure:**

If the new bone marrow doesn't function adequately and the blood cell counts do not rise, this is considered a graft failure. This may be due to a viral illness, damage to the new bone marrow or for other unknown reasons.





What are Long Term Problems After Transplant?

Late complications can be caused by high-dose chemotherapy, radiation therapy, chronic GVHD, or problems resulting from the original disease. Some of the long-term side effects include:

- **Gonadal Dysfunction:**

Sterility is a potential side effect in patients receiving high dose chemotherapy and radiation. Sterility means that you may be unable to produce children; it does not affect sexual function. Female patients need to be followed by a gynecologist. Physical changes you may experience are decreased or absent menstrual periods, decreased vaginal secretions, and decreased hormone (estrogen) levels. Male patients' sperm production may be decreased or absent.

- **Cataracts:**

Patients who have received total body irradiation (TBI) may experience cataract formation one or more years after transplant. They can be removed as soon as they develop.

- **Pulmonary Complications:**

Long-term survivors of transplantation may develop pulmonary (lung) abnormalities secondary to high-dose chemotherapy, radiation and chronic GVHD.

- **Rejection:**

This complication is related to allogenic transplant. It is rare in patients with leukemia common in patients with aplastic anemia who have been treated previously with blood transfusions. The period of risk is usually 2 to 4 months after transplant.



- **Relapse:**

Relapse remains a major problem associated with bone marrow transplant. Relapse may occur any time following BMT, but it is most likely to occur 1 to 2 years post transplant. The risk of relapse decreases after 2 years.

- **Infections:**

Herpes simplex and herpes zoster are common viral infections that occur post transplant. They usually appear as sores on the lips or in the mouth or small blisters on the lips, face or back. There may be itching, pain and fever with the virus. Vaccines may be given if you are exposed to anyone having this kind of infection within 96 hours of the exposure.

- **Bleeding:**

Platelets are one of the last types of blood cells to return to a normal level after your transplant. It might take weeks to months for your new bone marrow to make enough platelets so you no longer require platelet transfusions. Signs of a low platelet count may include:

- Excessive bruising
- Petechiae (pinpoint red spots on the skin)
- Bleeding gums
- Nosebleeds
- Blood in your stool (may be red or black)
- Blood in your urine

- **Secondary Malignancy:**


The risk of another type of cancer resulting from radiation and chemotherapy that accompany BMT has been documented in a small number of patients.



- **Chronic Graft versus Host Disease (GVHD):**

Chronic GVHD occurs later than acute GVHD and it appears to affect sites different from those affected by acute GVHD. Chronic GVHD develops in many organs throughout the body approximately 100 days after transplantation. Diagnostic tests for chronic GVHD may include biopsy of the skin and / or oral mucosa, pulmonary function studies, and liver function blood tests. Treatment of chronic GVHD generally includes immunosuppressive therapy (Prednisone, Cyclosporine), and antibiotics to prevent infections.

- **Oral Mucosa** – The inside of the mouth is often affected. Symptoms include taste changes, dry mouth, and inflammation, redness and ulcerations of the mouth and tongue. Oral chronic GVHD may cause mucous membranes to appear white. Self care measures include :
 - Practice good mouth care for relieving inflammation. Avoid mouthwashes that contain alcohol because they will sting and irritate your mouth.
 - Keep the lips lubricated to prevent cracking and bleeding.
- **Esophagus and Gastrointestinal tracts** – The lining of the esophagus and G.I. tract is often affected. Symptoms may include painful and / or difficult swallowing and sometimes pain beneath the breast bone. Self care measures include :
 - Eat small meals frequently and drink lots of fluids.
 - Make sure you receive good nutritional counseling from a dietitian.
- **Vagina** – Changes within the vagina often occur. Symptoms may include inflammation, obstruction of menstruation and dry vagina. Self care measures include:
 - Use water soluble vaginal lubricants.
 - Make sure to receive follow-up care from a gynecologist.

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- **Lungs** – Lung changes may be associated with chronic GVHD. This may limit the ability of the lungs to transfer oxygen and can cause shortness of breath. Self care measures include:
 - Participate in a pulmonary rehabilitation program.
 - Do not smoke and avoid all respiratory irritants.
 - Stay indoors on cloudy days.

 - **Immune system** – Dysfunction of the immune system may continue in patients with chronic GVHD, and recovery is slower in patients with chronic GVHD. Self care measures include:
 - Avoid crowds and people with colds and flu.
 - If your temperature is greater than 38.3° C or 101° F, call your doctor immediately. If antibiotics are started early, the infection can be controlled.
 - Eat well and get plenty of rest.

For further information, please call:

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Aga Khan University Hospital
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Tel: 486-4290 or 486-4204

Emergency Ward
Aga Khan University Hospital
Karachi.
Tel: 486-1090