

“A guide to what you should know about graft-versus-host disease while on your transplant journey!”

— BMT Survivor

CHAPTER 9



Graft-Versus-Host Disease (GVHD)

Complications of Acute GVHD

Chronic GVHD Targets

Chapter 9

What is Graft-Versus-Host Disease?

Graft-versus-host disease (GVHD) can develop in patients who receive a transplant from an unrelated donor or relative, including histocompatible (HLA) matched siblings and parents. It occurs when the donor's cells, called T lymphocytes, do not recognize the recipient's cells and begin attacking the recipient's tissues. The severity of GVHD can range from mild to severe, and be acute and/or chronic. The chances of getting GVHD are dependent on several factors including HLA matching, age and gender of the donor and recipient. Medications, called immunosuppressants, will be given to you before, during and after transplant in order to prevent, suppress and minimize the degree of GVHD, although it may still occur.

Complications - GVHD

GVHD occurs when the stem cells from the donor recognize your body as new and different from the body they came from and react to it. If graft versus host disease occurs early on after the transplant it is called acute GVHD. If it develops a length of time after transplant it is called chronic GVHD.

Acute GVHD

Some signs of acute GVHD include changes in the skin, gastrointestinal tract and/or liver. There are different drugs given to help prevent GVHD from developing which include Cyclosporin, Prednisone, Methotrexate, Mycophenolate Mofetil (CellCept, MMF), Sirolimus and Tacrolimus (Prograf, FK506). Before your transplant your doctor will decide which combination of these medications will work best to prevent you from developing GVHD.

Skin: Skin involvement may be present on part or all of the body. This may appear as a red rash with or without itching/burning. It may look similar to sunburn. Common areas are the neck, ears and shoulders, palms of hands and soles of feet.

Self-care measures:

- Use skin moisturizers and nonabrasive soaps.
- Use sunscreen and avoid prolonged exposure to the sun.
- Wear sunglasses and long sleeve shirts

Liver: Your doctor will monitor your liver function with blood tests frequently after your transplant. You may notice yellowing of the skin or eyes if your liver functions are abnormal.

Self-care measures:

- It is important to continue your prescribed medications to prevent GVHD.

Gastrointestinal tract: You may experience nausea, vomiting, abdominal cramps, diarrhea and loss of appetite.

Self-care measures:

- Avoid spicy and fatty foods.
- Eat small frequent bland meals.
- Avoid dairy.
- Keep skin around the rectum clean.
- Protect skin with barrier cream.

If you are concerned about the possibility that your new transplant may be rejected, please discuss this with your doctor.

Chronic GVHD

GVHD is an immunologic reaction in which donor T-lymphocytes (a type of white blood cell) react against the host tissue of the recipient. Chronic GVHD occurs later than acute GVHD and it may affect different sites than those affected by acute GVHD. Chronic GVHD may develop in various organs throughout the body any time starting 100 days or more after transplant.

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 targeted at the GVHD, as well as other therapy to prevent or treat infections.

Organ System and Common Targets of Chronic GVHD

Chronic GVHD may affect many organ systems and common targets may include the following:

Skin: The skin is affected in more than 95 percent of patients with chronic GVHD. Symptoms may include itching, burning, hyperpigmentation (darkening of skin), redness and flakiness. Skin involvement may be present on part or all of the body. Hair loss and nail ridging may occur. You may experience a decrease or loss in the ability to sweat.

Self-care measures:

- Use skin moisturizers and non-abrasive soaps.
- Use sunscreens and avoid prolonged exposure to the sun.
- Practice exercise programs recommended by a physical therapist in order to prevent contracture of joints (inability to straighten joints such as knee, elbow, hip).

Liver: Your doctor will monitor your liver function with blood tests frequently after your transplant. You may notice yellowing of the skin or eyes if your liver functions are abnormal.

Self-care measures:

- It is important to continue your prescribed medications to prevent GVHD.

Mouth: 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:

- Practice good mouth care for relieving inflammation. Rinse mouth at least four times daily with a bland rinse.
- Avoid mouth rinses with phenol, astringents, or alcohol.
- Avoid tobacco, alcohol, or irritating foods such as those that are acidic, hot, rough and/or spicy.
- Keep your lips moist to prevent cracking and bleeding. You can use water or waxed (non-petrolatum) based moisturizers to protect lips.
- Keep up fluid levels. You do not want to get dehydrated.
- Use artificial saliva to relieve dry mouth. Ask your doctor or dentist to recommend something you can use.

Eyes: Radiation may affect the tear ducts and cause decreased production of tears. Symptoms include burning, itching, light sensitivity and a sensation of grittiness in the eye.

Self-care measures:

- Use artificial tears to relieve dryness of the eye. Your eye doctor can recommend a product to use.
- Wear sunglasses whenever you will be in sunlight or bright lights.

Esophagus and Gastrointestinal (GI) Tract: The lining of the esophagus and GI tract is often affected. Symptoms may include painful and/or difficult swallowing and occasionally pain beneath the breastbone.

Self-care measures:

- Eat small meals frequently and drink liquids before swallowing solids.
- Request a visit from a dietician to learn more about how to eat to decrease your GI symptoms.

Vagina: Changes within the vagina often occur. Symptoms may include inflammation, or obstruction of menstruation due to strictures (narrowing) and dryness. Vaginal atrophy (decrease in size) may result in painful intercourse. If you do experience pain with intercourse, report this to your doctor.

Self-care measures:

- Use water-soluble vaginal lubricants.
- Make sure to receive follow-up care from a gynecologist and request sexual counseling as needed. Your doctor may recommend a vaginal dilator to prevent vaginal atrophy and keep the tissues soft.

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:

- Do not smoke and avoid all respiratory irritants.
- Stay indoors on smoggy days.

Immune System: Dysfunction of the immune system may persist in patients with chronic GVHD and immune recovery is slower in patients with chronic GVHD. Lack of an adequate immune system means you have very poor protection against all infections and may experience more colds and flu.

Self-care measures:

- Avoid crowds and people with colds and the flu.
- If your temperature is greater than 38.3°C or 101°F, call your doctor immediately.
- Eat well and get plenty of rest.