

Information for Patients

Graft versus host disease and the eyes

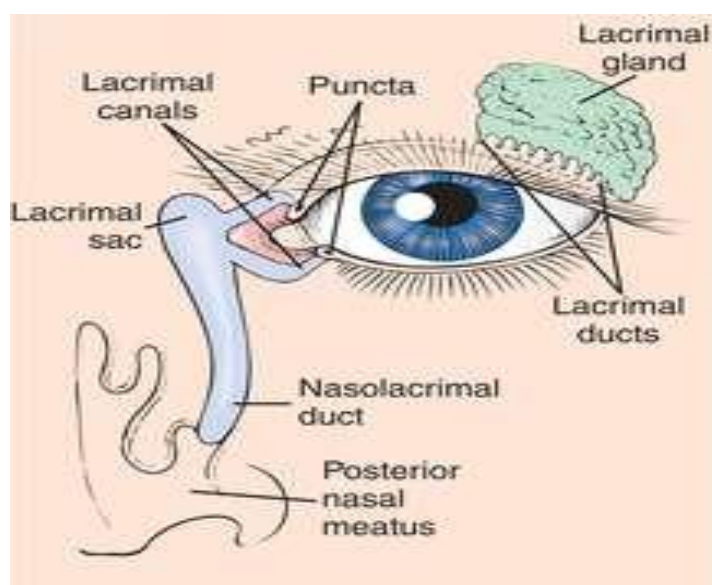
What is graft versus host disease?

Graft versus host disease (GvHD) can happen after a bone marrow or stem cell transplant using cells taken from a donor. GvHD does not mean that the transplant has failed but it suggests that the immune cells from the donor (graft) recognised the tissues and organs of the recipient (host) as 'foreign' and mounted an attack against them.

GvHD can affect one part of the body or several. This leaflet focuses on eye problems associated with GvHD. Importantly, every patient's experience of GvHD is different and this information should be used together with the care provided by the medical and nursing team.

Eye problems in graft versus host disease

It is common for GvHD to affect the glands that produce tears in the eyes. As a result, the eyes might not be making enough tears or the tears produced could be of poor quality. The normal function of the tear is to keep the front surface of the eye wet and lubricated, so any shortage of tears can make the eyes feel sore, gritty, tired or feel as if they are burning. Redness and itchiness can also be present.



It is unusual for GvHD to affect the vision, although some people complain of mild light sensitivity and slight blurring of vision. Rarely, GvHD can cause significant and persistent inflammation of the surface of the eye. This can lead to scarring which can affect the cornea (clear window of the front of the eye), resulting in decreased vision.

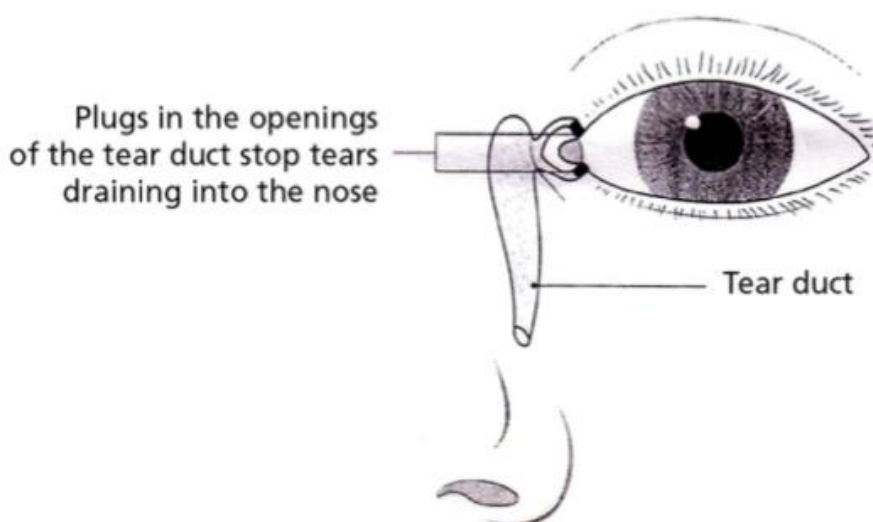
What are the treatments available?

A variety of treatments are available for GvHD and the type of treatment depends on the severity of symptoms and the body parts affected. From the eye point of view, the goals of GvHD treatment are:

- To lubricate the eye.
- To reduce the amount of tears drained or evaporating.
- To reduce inflammation at the surface of the eye.

Tears are important for the health of your eyes, and every time we blink a protective coating of tears is spread like a film on the surface of the eye. This thin layer of tears is called the tear film. GvHD can cause inflammation of the tear glands leading to problems with the amount and quality of tears. As a result, the tear film is abnormal and the front surface of the eye is dry. Tear substitutes can be used to treat this. In mild cases, over the counter artificial tear drops can help. If a patient has severe symptoms and needs to use eye drops more than four times a day, preservative-free eye drops are recommended. Eye ointments can also be used to lubricate your eyes, but these can often cause blurred vision. Therefore, it is typically recommended to use these only at night, before going to bed.

More severe cases could require measures to reduce the drainage of tears from the surface of the eye. Tears are normally drained through small openings in the corners of the eyes near the nose. A soft plastic plug (punctal plug) can be fitted into these small drainage holes to prevent the natural tears from draining and to keep the front of the eye moist. If a more permanent solution is required, surgical sealing of the drainage holes (punctal cauterization, sealing using heat) might be considered.



In addition to lubrication and reduction of tear drainage, some GvHD patients could benefit from measures to control the evaporation of tears. This can be done by using specialist contact lenses (scleral lenses) that can help maintain a reservoir of fluid that continuously bathes the front surface of the eye. These contact lenses are specially made for patients with dry eyes and are even suitable for people who do not usually tolerate standard contact lenses.

Specialist medication might be required in some cases. This can take the form of eye drops containing either steroids or other medications that help control the immune system (such as cyclosporine). The aim of these eye drops is to decrease the inflammation at the front surface of the eye. Although these are usually safe, side effects such as cataract and raised pressure within the eye can occur. Therefore, this group of treatments should only be used under the supervision of an ophthalmologist in an eye clinic.

GvHD patients often benefit from tablets containing low doses of an antibiotic called doxycycline. These help to control eye surface inflammation and have to be used for a minimum of three months. Rarely, serious side effects can occur and doxycycline should not be used during pregnancy or in children.

What can I do to help myself?

- Use artificial tears and ointments - available over the counter - as the first line of treatment. Avoid artificial tears with preservatives if you need to apply them more than four times a day.
- Avoid dry conditions and increase moisture in the air when indoors (for example by using a humidifier).
- Wear glasses or sunglasses that fit close to your face.
- Avoid rubbing your eyes – use a drop of artificial tears instead if your eyes are itchy.
- Take supplements of omega-3 fatty acids, or use dietary sources (such as oily fish).
- If you have co-existing blepharitis (inflammation of the rims of your eyelids), perform lid hygiene on a regular basis. Please see the leaflet on blepharitis for further information.

Because each patient is different the information contained in this leaflet is a general guide only. If you require any further information, please speak to a member of the nursing or medical staff treating you.