
Postoperative Chemosis

When we look at an eye, we see a colored area with a very dark circle at the center and whiter part of the eye on either side of the colored part. The colored part is actually a tissue plane called the iris and it is covered by a clear shell called the cornea. The dark circle at the center is the pupil, a hole in the middle of the iris. In different lighting, our iris moves, making the pupil larger in low illumination to let more light in and smaller in bright light to minimize dazzle. In this section, however, we are interested in the “white” parts of the eye seen on either side of the cornea and iris.

What we are looking at when we see the whiter part of the eye is the “skeleton” of the eye called the sclera, a thick, double-layered connective tissue ball covered by a thin, loosely attached, essentially transparent membrane called the conjunctiva (con-junk-tie-vah). Between the conjunctiva and the sclera is a “potential space.” A good example of a potential space is the inside of an envelope. The envelope is usually flat, but things can be easily slid into the envelope, making it bulge. Similarly, fluid slid into the thin layers of the conjunctiva and between it and the sclera can cause a bulge. Such a swelling of the conjunctiva is called chemosis (key-moh-sis) and may appear as clear or lightly colored blister on the eye or give the eye a very watery appearance.

Chemosis can be very annoying, but is generally not dangerous to the eye except in two situations. The first is if there is significant chemosis directly adjacent to the cornea which can lead to an irregular tear film protecting the cornea and a “dry eye” situation, and the other is if the chemosis is to such a degree that the eyelids do not cover the swelling during regular eyelid blinking and closure. In the latter case, the conjunctiva becomes poorly lubricated and swells even more. The more it swells, the more it dries out, and the more it dries out, the more it swells. Both of these cases are treated with aggressive lubrication.

Chemosis can develop from a number of different causes. These include primary inflammatory reactions, usually a toxo-allergic reaction to an eye drop or ointment, reactions to an allergen in the environment, eyelid swelling from any of a [number of causes](#) which spills across to the adjacent conjunctiva, inflammation within the eye, and local viral, bacterial, fungal, or mycobacterial infections.

Definitive treatment requires recognition of the inciting factor, but sometimes this is very difficult to identify. There are also several symptomatic treatments which are sometimes used, including fluid drainage, ablation of the potential space by heat-induced scarring or pressure, injections with hyaluronic acid to spread the fluid into better drained and fluid-absorbing areas.