

Understanding Prolonged Postoperative Eyelid Swelling

Following eyelid surgery, causes of prolonged eyelid swelling may be divided into two groups:

1. **Pre-existing conditions exacerbated by surgery**

This is the most common cause of post-operative eyelid and conjunctival (eye surface) swelling. Various systemic diseases, medications, and allergies create chronic eyelid swelling. Rosacea and other related skin disorders are a frequent cause, but any condition predisposing to eyelid swelling before surgery may cause prolonged swelling afterwards.

2. **Problems directly related to the eyelid surgery**

- **Cold Urticaria**

A urticarial reaction (hives) is a type of systemic inflammation that sometimes results from a severe allergic reaction, but may also have other causes such as leukemia, syphilis, rubeola, varicella, and hepatitis. Hives, areas of raised, red swelling may involve just the skin or may to the respiratory tract, gastrointestinal tract, and cardiovascular system. Some individuals will have an urticarial reaction to severe cold, as might happen post-operatively with ice-cold compresses. Prompt diagnosis and cessation of exposure to excessive cold will rapidly resolve signs and symptoms.

- **Lymphedema**

Arteries bring oxygenated blood to tissues, veins bring blood low in oxygen back to the heart, and between arteries and veins there is often a network of tiny vessels called capillaries. The capillaries are particularly leaky, and fluid that seeps out of the capillaries into the surrounding tissues is collected in a fine network of very fragile vessels called lymphatics. The lymph fluid taken up into the lymphatics is filtered through lymph nodes to remove cells, viruses, bacteria, etc. and then returned to the veins. If the tiny, fragile, essentially invisible, and unpredictably located lymphatic vessels are damaged during surgery, fluid that leaks out of the capillaries will take a long time to be collected, leading to tissue swelling called lymphedema (limf-ee-dee-mah). The regrowth of damaged lymphatic vessels may take weeks to months. Treatments for lymphedema around the eyes include patience as lymphatic vessels regrow, exercises of eyelid squeezing and facial movement, specialized lymphatic massage, injections of hyaluronidase to facilitate fluid spread to areas where the lymphatics are still functioning, and sometimes surgery.

- **Meibomian Gland Dysfunction**

Eyelid surgery may cause swelling along the edge of the eyelid, temporarily closing oil gland ducts. As the oil continues to be produced, but is not able to be released into the tear film protecting the eye, both eyelid and eye surface swelling may occur. Treatments are focused at thinning the consistency of the oil being made and diminishing the swelling along the oil gland ducts. Attention must also be given to keeping the eye surface comfortable and safe until the tear film quantity and quality returns to normal.