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Cryosurgery (Icy Cold Surgery)

INFORMATION FOR PATIENTS UNDERGOING TREATMENT FOR BENIGN/MALIGNANT LESIONS

Cryosurgery refers to surgery accomplished through the application of intense cold to cause tissue necrosis (death of cells) by rapid freezing. The skin cells die because of the rapid formation of ice crystals in the cell's interior, which disrupts the cell's energy making machinery.

To produce the rapid freezing a material called liquid nitrogen is used. This liquefied air is at a temperature of -196°C or -321°F , which is extremely cold, so cold that it actually feels hot (or burns) when applied to the skin. The sensation is similar to that which occurs when your finger sticks to a metal ice cube tray. In our office, liquid nitrogen cryosurgery is used to treat warts, some types of acne lesions and various types of benign or malignant (cancerous) skin tumors.

From some types of benign and malignant (cancerous) skin tumor or tumors in certain locations, liquid nitrogen cryosurgery is one of the preferred forms of treatment. The liquid nitrogen is applied longer and repeatedly to get a deeper, more complete freeze of the skin. This usually destroys the tumor or cancer cells and a zone of surrounding normal skin. Because the area treated may be large, it will take some time to heal... usually 2 to 4 weeks, depending on the size and depth of skin destroyed by the freeze. During the healing phase, soak or compress the area with warm water. This should be done 3 or 4 times a day at first, and then less frequently as the oozing slows down. A light coating of antibiotic ointment (Polysporin, Neosporin, or Bacitracin ointment) should be applied after each wash, soak or compress. A light dressing may be worn during the early stages. Healing leaves a generally acceptable scar. Cryosurgical treatment of most tumors or skin cancers is as effective as other commonly used techniques, but as with treatment of cancer, some are not cured and tend to recur. Then repeat treatment with liquid nitrogen or some alternative therapy will be needed. If you are treated for skin cancer, follow-up visits to observe the skin area are required to be scheduled.

Complications of Cryosurgery

Post-treatment throbbing pain may occur several to 24 hours after treatment. Usually elevation of the area and mild, non-aspirin analgesics (like Tylenol) will help.

The scar may be hypo-pigmented (lighter skin color than the surrounding normal skin).

With very deep treatment, blood vessels may be seen in the scar.

Keloids or large raised scars – certain people who tend to form this type of scar usually do so regardless of the type of procedure done.

Bleeding several days after cryosurgery very rarely occurs. Apply a clean pressure bandage for 20 minutes and if bleeding (more than slight oozing) persists, notify the office or go to your nearest emergency room.

Infection rarely complicates cryosurgery because the freezing also kills the bacteria. Some oozing and crusting are to be expected. It may be necessary to apply antibiotic ointment (Polysporin, Neosporin, or Bacitracin ointment) to treat or prevent an early infection. If pus or bad odor develops, you may have an infected wound and a course of internal antibiotics will be needed. If you think you have an infection, notify the office.

Sometimes the small nerves under the skin are frozen, producing numbness or weakness in the area supplied by the nerve. Fortunately, the nerve sheath remains in tact and the nerve fibers frequently regenerate. However, since nerves grow slowly, this regeneration may take a number of months.

If you have any questions or problems, please contact our office at (856)-358-1500.

Thank You,

Dr Ingrid P. Warmuth & Staff