AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

BASIC COSMETIC DERMATOLOGY COURSE THE DARK SIDE OF DERMAL FILLERS – INFLAMMATORY AND VASCULAR FILLERS COMPLICATIONS: HOW TO AVOID AND TREAT

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As with any procedures, complications can occur with dermal fillers. Most occur immediately after injections and are temporary. The two serious complications are inflammatory nodules which can be allergic reaction, infective or biofilm and vascular complications which can lead to tissue necrosis and blindness. Fortunately they are rare but must be avoided as they lead to serious consequences.
Inflammatory nodules are delayed onset nodules (after one month or longer) and may be an immune response to the filler material and /or infection related (including biofilm) Fibrotic nodules may arise from stimulatory products like poly-L-lactic acid and calcium hydroxylapatite. They are painless, usually palpable but not visible and they appear weeks to months following treatment and can last for years. Where HA fillers are used and in the absence of active infection, hyaluronidase can be used. Non HA nodules may respond to oral or intralesional steroids. If steroids are not enough, many patients will respond to the addition of 5-FU to the corticosteroids. In cases of repeated failure of other therapies, surgical excision is the treatment of choice for inflammatory nodules
Biofilms must be excluded from inflammatory nodules as the treatment is different. Bacteria cultures are often negative and molecular techniques eg polymerase chain reaction or fluorescence in situ hybridization are used where biofilm involvement is suspected. Strict aseptic techniques are necessary to prevent biofilm formation. Once formed biofilm are treated with antibiotics which includes clarithromycin 500 mg plus moxifloxacin 400 mg twice daily for 10 days, or ciprofloxacin 500–750 mg twice daily for 2–4 weeks, or minocycline 100 mg once daily for 6 months.
Impending tissue necrosis or blindness may occur as a result of inadvertent injection of filler into vessels supplying the mucosa or the skin or the retina, resulting in vessel occlusion. Necrosis may also occur secondary to local edema or to occlusion of adjacent vasculature secondary to the hydrophilic properties of the product. All injectors must be familiar with the signs of skin necrosis and the appropriate therapy. Hyaluronidase injection is given. Apply warm compress to facilitate vasodilation and add topical nitroglycerin and aspirin. If there are ocular symptoms (blurred vision, loss of vision, or ocular pain), the patient has to be urgently referred to the ophthalmologist. Where possible patient should be referred for hyperbaric oxygen therapy.