

## Shifting Trends in Cutaneous and Aesthetic Surgery: A Need for Caution and Regulation

There has been a tremendous paradigm shift taking place in cutaneous and aesthetic surgery in the last two decades. A marked shift from invasive to minimally invasive techniques has revolutionised the practice of aesthetic surgery. This is particularly evident in aesthetic rejuvenation of the periocular region. The serendipitous discovery of botulinum toxin diminishing wrinkles by the ophthalmologists Carruthers and Carruthers probably fuelled this shift.<sup>[1]</sup> The next was the easy availability of nonallergenic, readily available fillers like hyaluronic acid which lead to their widespread use in facial rejuvenation.

Our symposium in this issue focuses on periocular rejuvenation from the oculoplastic perspective.<sup>[2-5]</sup> Understanding the basic anatomy of the eye and the hills and valleys of the under eye is crucial to a systematic approach to periocular rejuvenation with the focus on individualised treatment.<sup>[2]</sup>

A physician rejuvenating the periocular region must be aware and well trained to prevent or minimise complications and manage them if they occur. The article by Hwang<sup>[3]</sup> focuses on complications in the periocular region. The most dreaded complication while using fillers is blindness due to intraarterial injection. The areas with the highest risk associated with visual complications include the glabellar region, forehead, nasal region, nasolabial folds and temple in that order because arteries in these high-risk areas have a direct communication with the ophthalmic artery.<sup>[3]</sup>

Dark eye circles or periocular melanosis is another common complaint in the periocular region. The article by Vrcek *et al.*<sup>[4]</sup> reviews the multifactorial aetiology of dark under eye circles and provide a comprehensive review of management strategies. The choice of treatment depends on the individual aetiology and should be decided accordingly. A wide array of treatment modalities is available ranging from camouflage to lasers and light, chemical peels and fillers to invasive surgical options.

Though the use of injectables has made rejuvenation of the periocular region less complex, it must be realised that botulinum toxin, fillers or lasers cannot fix everything and traditional surgeries like blepharoplasty still play a role. The paradigm shift in blepharoplasty is again to be as conservative as possible with preservation of volume and fat. The buzzword here is targeted sculpting and the article by Scawn *et al.*<sup>[5]</sup> describes the basics of blepharoplasty, emphasising the need to be conservative. Photographic documentation of the eye is another important aspect of aesthetic surgery practice. It is important to use standardised techniques as even small variations cause drastic changes in the photos, which can lose their relevance and impact. The article on clinical photography for the periocular region discusses criteria that must be followed to obtain consistently reproducible images.<sup>[6]</sup>

The realization that the aging face is not only a gravitational descent of soft tissue but primarily a volume loss of skin, soft tissue, muscle and bone is the next paradigm shift that propelled the minimally invasive approach. The liquid facelift without skin excision or operative tightening techniques made facial rejuvenation a much more accessible procedure to patients desiring to look younger without incisions, excisions and sutures.<sup>[7]</sup>

Another changing trend is the use of isotretinoin in patients undergoing surgical procedures. Traditional guidelines of prohibiting cutaneous surgical procedures while the patient was on isotretinoin were based on early reports of keloids and delayed wound healing in these patients.<sup>[8]</sup> Recently, there have been few publication on the safe use of lasers in patients on isotretinoin.<sup>[9,10]</sup> The need of the hour is a proper validation of these recent trends. Mahadevappa *et al.*,<sup>[11]</sup> report their findings of a multicentric trial involving 183 patients across 11 centres, with a total of 503 interventions on Type IV-V

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skins, which typically have a higher risk of keloid formation. Diverse procedures such as chemical peels, laser resurfacing with CO<sub>2</sub> and Erbium YAG laser, laser hair removal, microneedling, skin biopsy, subcision and excisions were carried out. Keloids were observed in two patients (0.4% of interventions), one patient with a cumulative isotretinoin dose of 2100 mg was undergoing glycolic acid chemical peel and developed a keloid on the face and a distant site on the trunk. The second case was a patient with a cumulative dose of 4000 mg of isotretinoin who developed a keloid following radiofrequency ablation of a compound nevus on the face. Hence, the traditional belief of increased risks in surgery in patients on isotretinoin clearly needs a rethink, along with more evidence.

These shifting trends in minimally invasive surgery have also put aesthetic rejuvenation in the hands of minimally trained aestheticians and physicians. It has also shifted out the procedures from the traditional operation theatre room setting to the office procedure setting and minimally equipped medispas. Hence, there is an urgent need for caution and regulation to ensure that seemingly simple procedures are not carried out by unqualified personnel in poorly equipped clinics, particularly when dealing with the eye and the face.

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