

Risk Assessment and Prevention of Complications in Aesthetic Surgery

Cutaneous and aesthetic surgery is generally considered as low-risk surgery with respect to patient morbidity and mortality. However, a majority of adverse events go unreported due to a lack of regulation and poor enforcement as many aesthetic procedures are performed in non-medical or quasi-medical settings such as spas and beauty parlors. Most individual physicians and even hospitals tend to brush these adverse events under the carpet due to the fear of adverse media publicity. There is also a low rate of reporting poor outcomes and adverse events in journals and conferences as physicians generally tend to present their best outcomes, rather than highlighting poor results. Most of the complications reported are those occurring following another physician's treatment, rather than one's own! In this issue, Rai *et al.*^[1] report on the dreaded and rare complication of fat necrosis on the face following autologous fat injections. Microlipofilling or autologous fat injections is becoming a popular procedure for facial volume replacement following ageing and dermal defects following acne scars and facial hemiatrophy. Meticulous techniques with strict aseptic precautions are mandatory to prevent such complications. Avram *et al.*^[2] outline the potential side effects of follicular unit extraction, a technique that is being widely used for hair transplantation. Though seemingly a simple procedure it can lead to side effects particularly with inexperienced hands.

It is of utmost importance to prevent complications in aesthetic surgery as the primary aim of the patient is enhancement of looks. Such a patient will not tolerate complications as compared to a patient undergoing other surgical procedures. Hence, the aesthetic surgeon must diligently follow all steps to minimize the incidence and severity of adverse events. The first step towards prevention is risk assessment, which is the process of evaluating a potential adverse effect that can occur from an intervention.^[3] Cosmetic surgery subjectively, has higher risks as patients are inherently well and have high expectations from interventions. Risk assessment should include a general, cutaneous, medical, and psychiatric evaluation [Table 1]. Patients

Table 1: Important factors in risk assessment in aesthetic surgery

General assessment	Medical assessment	Psychiatric assessment	Cutaneous assessment
Smoking	Pallor	Psychiatric	Skin type I-VI
Allergies and drug reactions	Diabetes	comorbidities	Scars and keloids
Concomitant medications	Hypertension	Fussy patients	Facial herpes simplex
Previous surgeries	Systemic disorders	Unrealistic expectations	Thin dry skin
Pregnancy and lactation			Thick oily skin
Delayed wound healing			Sensitive skin
Immunosuppression			Postinflammatory hyper- and hypopigmentation
			Photosensitive disorders

at higher risk of complications should be treated cautiously, preferably with minimally invasive techniques.

High risk practices such as using unapproved products, off-label procedures, inadequate facilities, and failure to supervise staff performing procedures can lead to greater incidence of adverse events and litigation. The physician must maintain proper records, consent forms, and photographs to be safe. Patients also must be well-informed about potential complications as a knowledgeable patient can detect early warning signs of adverse events and appropriate action can be taken well in time. Safe practices and guidelines should be followed as a matter of habit and not as knee jerk reactions when in trouble.

The registry system of reporting adverse events in aesthetic surgery should be started and encouraged. It can become an important tool in monitoring side effects as it is an anonymous reporting system. Physicians can honestly fill the forms reporting their adverse events without the burden of adverse publicity.

To conclude, a proper risk assessment, a skilled physician following meticulous surgical techniques and a well-informed patient are the best prescriptions to prevent complications in aesthetic surgery.

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