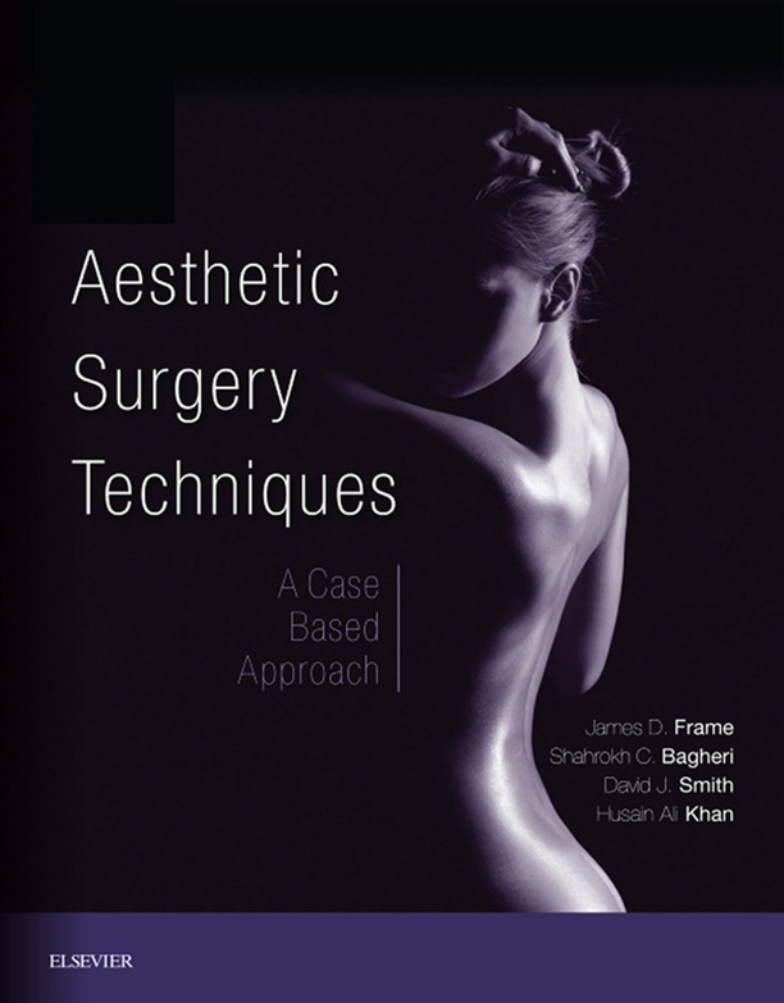
Aesthetic
Surgery
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A Case
Based
Approach
James D. Frame
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Aesthetic Surgery Techniques

A Case-Based Approach

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Aesthetic Surgery Techniques

A Case-Based Approach

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Video Contents

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Preface

This book is dedicated to all those who suffer from deformity and disfigurement and seek an opportunity to improve their appearance and restore function. The skills of the Aesthetic Surgeon in helping Cosmetic Surgery patients, as illustrated in this book, can be translated to helping those such individuals. It is up to the Surgeons to learn these specialty skills and put them into practice. This concept is known as Aesthetica and our book, with elaborate illustrations and videos, provides many tips and tricks on how to improve as a Surgeon and, more importantly, improve patient outcomes. Congratulations to Elsevier for their insight and support throughout.

There is no substitute for clinical experience in aesthetic medicine and surgery. It is the Hippocratic responsibility of those with experience to enhance the knowledge base of those embarking on their new careers. We (the editors) represent the current interdisciplinary approach to educating for the many specialties associated with the beauty industry.

A clinician's aesthetic practice should represent her or his fundamental roots in medical training. There must be limitations to the unqualified extension of practice, all in the patients' best interests.

There are many traps for the unwary clinician that can be largely circumvented with an understanding of the needs and realistic expectations of the patient. The dysmorphic and psychologically vulnerable patient must be identified and protected from harm at all times. Similarly, if a surgeon can provide for an appropriately selected patient's desires, then modern aesthetic medicine and surgical practice can be immensely satisfying and rewarding.

Like many surgical disciplines, the practice of aesthetic surgery has evolved by developing improved surgical techniques to meet increasing patient expectations. In most cosmetic procedures, the vast majority of advances are from the teaching of surgical skill sets to younger surgeons through operative training, textbooks, lectures, and symposia. The difficulty of developing randomized or prospective cohort studies and multicenter analyses for aesthetic procedures contributes to the progression via more traditional modes of teaching. Aesthetic surgery is unique due to constantly changing trends, as well as the racial and regional ethnic preferences that drive patient desires to achieve what is considered an aesthetic result.

There are few books that deliver a case-based approach to common aesthetic problems, particularly with a global perspective. The topics included in this book are based on the basic competencies recognized for hands-on training of an aesthetic surgeon and include the latest tips and tricks in the aesthetic and beauty industry. The authors are selected from experienced clinicians across the globe, and each presents cases that are easily identified in a normal practice, describing their technique and outcomes with minimal but relevant bibliography and operative videos.

We the editors hope that the inquiring clinician will be stimulated to improve his or her best practice.

JDF
SCB
DJS
HAK

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JDF
DJS

This project would not be possible without the deduction and hard work of our contributors, all of whom, without hesitation, offered their time and expertise to realize this unique textbook of Aesthetic Surgery. We thank you for your kind contribution and time. We would like to also acknowledge the team at Elsevier whose continuous support throughout this project has once again resulted in an outstanding publication for the readers of Aesthetic Surgery.

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PART 1

Introduction

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1

Informed Consent: Protecting the Patient and the Surgeon

Neal R. Reisman MD, JD, FACS
Hugh Henderson FRCS

The Process of Informed Consent

Neal R. Reisman MD, JD, FACS

The process of informed consent is very important to the practice of plastic surgery. Not only is it a requirement from a legal standpoint, but it should assist in clarifying goals and expectations. Understanding informed consent is a process and not specifically the document that becomes signed; the process should include not only the surgeon, but the team interacting with the patient. There are legal standards that every jurisdiction adheres to defining requirements in accomplishing informed consent. The majority of states in the United States follow a "reasonable patient" standard which defines informed consent information necessary for a reasonable patient to make an informed decision. The minority standard is what a "reasonable physician" deems appropriate to accomplish informed consent. Such standards do not mean that all information pertinent to a procedure must be discussed but only such information as a reasonable prospective patient would need to understand to make an informed decision. Practices spend much time creating and discussing informed consent. The reality is that there are very few litigation cases specifically lost on a lack of informed consent. It is important to have the consent discussion and documents in the patient's language. In addition to language issues, the bigger task is having the patient "understand" what the risks, hazards, inherent risks, and concerns are. The understanding of this information becomes the main issue in creating and achieving informed consent. A mere signature at the bottom of the document only demonstrates that the patient signed it and not that it is understood.

Informed consent documents present and discuss death and significant morbidity. It may be difficult for a jury to believe the plaintiff is objecting to a scar or a less than desirable result when they have understood and signed to say that they acknowledge that death is an acceptable risk. The scar seems much less significant. Herein lies the challenge to achieve informed consent, and I suggest to accomplish the legal requirement by going beyond the document itself and using the discussion to better interpret and decide whether goals can be reached.

The reasonable patient would inquire about the different procedures suggested, their complications and inherent risks, anesthesia concerns, drug interactions, cost and expenses, and the risk of doing nothing. It behooves the practice to see the prospective patient more than once and to utilize multiple learning style techniques in providing necessary information. There are many learning styles, but the most common three are visual, auditory, and kinesthetic. Understanding is enhanced when all three styles are incorporated in the informed consent process. Many patients are visual learners and achieve understanding by looking at photographs, schematics, and other tools the patient can see. One must be cautious in not having photographs interpreted as a warranty of results but rather representative of different aspects of the procedure. Demonstrative tools should clearly not be presented as the prospective patient's result but rather a general representation. Patients may bring in their own photographs of goals and expectations that are helpful in defining their desires, but these should not be made part of or included in the medical record. Auditory learners are the next most common group. The auditory learner listens in great detail to describing information pertaining to the procedure, follow-up, and care. Your words paint a picture for them, achieving a better understanding of the procedure and inherent risks. Often the more detail you can provide in advance, the more comfortable the patient is with the entire event. The third learning style is the kinesthetic learner. This can be more of a challenge in discussing how the procedure specifically relates to the patient and past experiences the patient can recognize. An example might be, when attempting to determine size goals in a breast augmentation, to have the patient reflect on a past pregnancy where breast size dramatically increased. The patient may disclose that they liked their shape as they reached a full C in size, but the full D size they reached was too large. Such a personalized experience and understanding significantly helps the patient in understanding options and achieving their goal.

Achieving informed consent can be a team event. The surgeon has the responsibility to discuss aspects of the treatment; however, some portions can be delegated to the office team nurse or coordinator. In my opinion it is difficult to allow or delegate others beside the surgeon to discuss and obtain informed consent when these non-surgeon team members have not received the training or credentials, or had the privilege to ever perform such surgeries. It is wise to develop a team approach in presenting such information, with the patient coordinator and the nurse confirming and corroborating the surgeon's discussions.

The details of the informed consent document should reflect the discussions had on the multiple visits prior to the actual procedure. I have chosen to divide the document into general risks and specific procedure risks to help the patient understand what is involved.

General risks of surgery include healing issues, delayed or undesirable results, bleeding, infection, scarring, pain, complications related to anesthesia, cardiac pulmonary, deep venous thrombosis (DVT) and sequelae, allergic reactions, drug reactions, and unsatisfactory results, to name some of the included discussions. Additional general advisories relate to smoking and its negative effect on healing, off-label US Food and Drug Administration issues, the negative effects of sun exposure, and general concerns in the postoperative period relating to travel and family interaction. Additional discussions should include the possible need for additional surgery, the importance of patient compliance, a revision policy covering how long and what, and a separate financial disclosure document covering patient responsibility, cosmetic surgery component, present and future expenses, and cancellation policy. The revision policy should include the period of time after surgery in which a revision will not incur a fee. Ten months after surgery might not be unreasonable for the surgeon to consider a scar revision without additional fees while five years later might be unreasonable. In addition, the limitations of a revision would only cover the performed surgeries and not additional areas or procedures. Revision of an abdominal scar might be appropriate but additional liposuction or a body lift would not be considered a 'revision'. Lastly it is wise to state the revision policy will only be effective when the patient attends their postoperative appointments and adheres to recommended care. Non-compliance waives the revision policy. A communications consent is important to document and acknowledge how the practice may communicate with the patient. This should include permission for telephone numbers, email choices, texting and cell phone permissions, and social media and other methods. A general consent should also include the use of photographs to be kept by the practice and commercial photograph consent should any patient medical information or likeness be used for marketing, advertising, or educational purposes. The general Health Insurance Portability and Accountability Act (HIPAA) consent would not be adequate for any use beyond practice storage. The commercial consent is specific regarding where the likeness would be used, for how long, and for what purpose.

Specific procedural consent should include technical and specific information relevant to the selected treatment question. This is the area where specific options related to the procedure and patient choices are covered. Inherent risks and complications specific to the procedure should be outlined carefully and in an educational fashion. Choices offered to a patient or demanded by a patient should fall within a peer-approved appropriate selection choice. I have issues with the propriety of less than desirable options being selected by the patient. One might say that a patient cannot consent to a negligent procedure. The surgeon has a duty to protect the patient, sometimes from themselves. Remember that the informed consent standard is a reasonableness standard. That is, what a reasonable physician or a reasonable patient would want to discuss or know for the patient to make an informed decision. Many have utilized a checklist to cover the large amount of information that may be necessary in a complex case. The concern with a large checklist is that one item may be unintentionally omitted. If that is the one complication the patient suffers, the perception may be that it was omitted intentionally. Educational aids to assist with visual, auditory, and kinesthetic learning are valuable. The concern is not to create a warranty, either express or implied. An express warranty includes a specific demonstrative in the medical record that establishes an agreed-upon result. Patients bring pictures from magazines and the Internet as a goal for their expectation. While these are valuable, I would suggest they not be made part of the medical record. Similarly your preoperative and postoperative photographs should clearly represent a range of results and not imply specific results for this patient. An implied warranty can be more confusing, as it relates to expressed concerns and desires the patient has that are not negated or addressed. An example might be an important meeting 2 weeks following surgery that must be attended. Failing to offer rescheduling or a disclaimer that meeting attendance may not be possible may establish an implied warranty that the patient will be able to attend. I like the additional paragraph "no warranties express or implied are included and the patient understands what can and cannot be done and, understanding this, elects to proceed."

Additional information as part of this informed consent process includes a financial disclosure statement and a surgical revision policy statement. Finances are always significant to the patient, and misunderstandings are quite common. It is important to have a separate document that incorporates expectations of named procedure, estimated time, and fees including surgeon, anesthesia, facility, and any additional costs that may be incurred, such as devices and instrumentation. The patient should understand and acknowledge such a document in advance of the procedure. The revision policy is also important to avoid misunderstandings. Despite best intentions patients may heal quite differently and unexpectedly. I like the revision policy to include an understanding that the patient is required to be compliant and not miss follow-up appointments or postoperative suggestions of care. The surgeon can certainly for some period not charge for agreed revisions, but there may be additional charges for anesthesia, facility, or devices. I do not believe that not billing is an admission of negligence and have advised adding a clause in the policy manual stating "from time to time, as an executive decision, fees may be waived, discounted, or not created."

There are so many aspects of the informed consent document; I do not want to minimize its importance. I would, however, seize the opportunity to have a robust and complete discussion with the prospective patient about their goals and desires and use this interactive informed consent process to determine if such goals are realistic and achievable. Avoid letting the patient dictate care and procedure selections unless such choices are well within an appropriate peer-accepted range. Failed expectations still remain a leading cause of unhappy patients

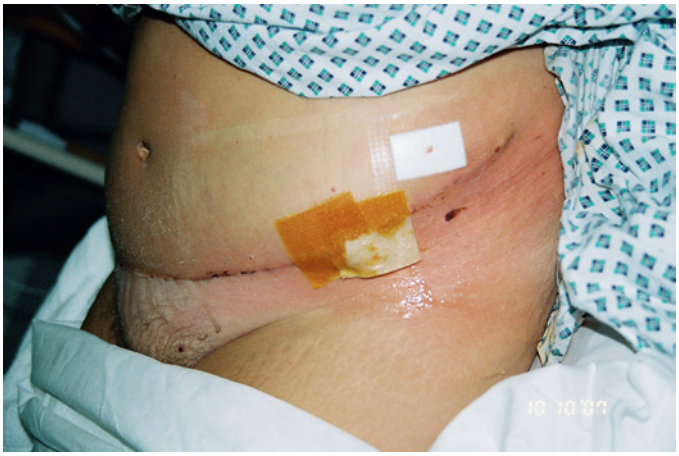

FIGURE 1.1 An infected abdominoplasty wound.

and litigation. The wise old statement "if I tell you in advance of a complication and you get it, I look smart, where if I tell you the same statements after your complication I'm making excuses" becomes significant when complications occur. Use the informed consent process as an educational tool, recognizing learning styles as well as the dialogue assessing patient goals. Such a process often results in an educated, content, and satisfied patient and a successful postoperative course.

Informed Consent: Protecting the Surgeon

Hugh Henderson FRCS

The Legal Situation

"Justice must not only be done, but must be seen to be done," and so it is with informed consent. Surgeons need written proof about what they have advised a patient. You are as often as not assumed guilty until you prove your innocence (Fig. 1.1).

Courtroom Scenario

"Well Mr. Jones, did you really spend 45 minutes explaining this operation to Mrs. Smith or only the 10 minutes as she alleges? Did you think to make note of the duration of your consultation and did you give her any written information about the common risks of what you were proposing? Did you show her photographs and suggest a second consultation to ensure that she really understood…?"

If you want to avoid this sort of courtroom confrontation with an aggressive barrister, you must get a watertight informed consent which will convince a judge that the patient was well informed and able to make a considered decision about whether to have the operation and that the patient understood the risks. Different surgeons have different ways of achieving this and there are no mandatory or statutory rules about how to do it. You can make a close record of what your verbal discussion covered, you can enclose it in a letter to the general practitioner, or you can give it to the patient in the form of an information sheet that you can prove was actually delivered to the patient. You can get photographs in hard copy on which you and the patient have drawn to show the areas to be treated and the type of changes that you agree will be attempted.

FIGURE 1.2 Breast augmentation: the available implant options to be discussed with a patient.

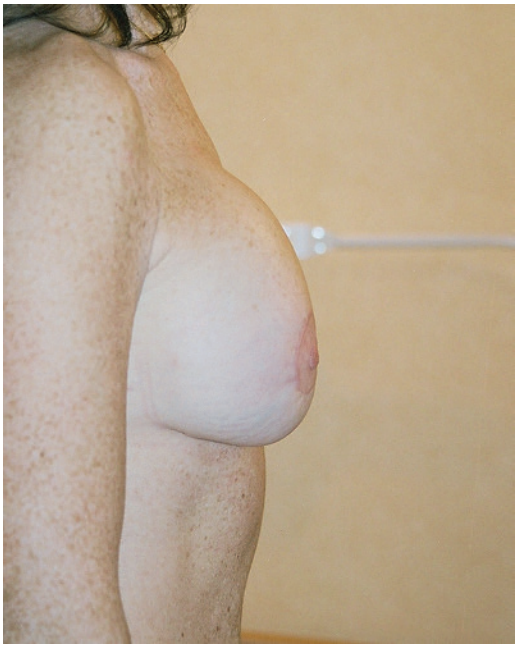

FIGURE 1.3 High right breast implant and sliding ptosis of breast tissue. Patient unaware that this could happen after augmentation mastopexy.

A recent court of appeal ruling (The Montgomery Case)[1] not only expects you to inform the patient of the details of the operation which you have agreed, but also requires that you have explained all the alternative options and their merits and demerits (see Fig. 1.2).

Patients tend to remember only 50% or less of what they are told verbally in an initial consultation. The longer the consultation, the more likely that they will "switch off" after a certain time and forget important points. A lot of surgeons think that one consultation is sufficient, but if you test a patient's knowledge of what has been discussed in that first consultation, you will be saddened to find that they haven't really taken in quite a lot of important matters (Fig. 1.3).

If you give them one consultation plus a detailed information sheet and then test them, their knowledge is much better. If you give them one consultation and an information sheet and make sure they read it and then see them for a second consultation, most patients will have absorbed everything you want them to know and you will have obtained proper informed consent. Just because it is logistically difficult to arrange a second consultation, it is not an excuse for not arranging one. I have dealt with over 1000 medical negligence cases, and I know that at least 200 of these would have never occurred if there had been a second consultation before the day of surgery.

Most hospital consent forms nowadays include reference to whether an information sheet has been given. This is recognition that information sheets are important in the consent process. Although information sheets are not mandatory as yet, I think they should be because they can contain a lot more information than is mentioned or highlighted in an oral consultation. My own policy has always been to write information sheets as comprehensively as possible so that a lawyer will have a hard time trying to prove lack of consent. They can be equivalent to a second consultation and can be included on your website or sent to a patient in advance of the first consultation or given to the patient at the time of the first consultation.

Are tick lists proof of adequate discussion? It is only too easy for a surgeon in a hurried consultation to speak to a patient and then at the end of the consultation when the patient has left to tick all the boxes. A more trustworthy way of using a tick list is to give the patient a copy of your tick list at the time of the consultation and invite them to tick the subjects off and to sign it and hand it back to you as evidence that these points have been discussed. It is also wise to record the length of time spent going through this tick list.

It is important to indicate a percentage risk of occurrence of the various complications you describe. It is also vital to discuss the potential consequences of the complications rather than simply giving a list of the name of complications. Thus, for example, in breast reduction it is sensible to tell a patient that most infections are of minor consequence but about 1% to 2% of breast infections after breast reduction can be absolutely devastating and can ruin the result and cause months of pain and morbidity.

It is important to establish the financial consequences of complications. Who will pay for "re-dos"? Some hospitals cover the costs of complication for 1 month postoperatively. This must be discussed and explained. Emphasize that you won't insure the patient for life. Some patients think they deserve free correction years after their initial surgery.

It is essential to write down exactly what the patient asked for in their own words rather than your translation of what you interpret that they are asking for. The very first record that you make of the consultation should be what the patient is actually asking for. It is remarkable how few surgeons actually do this. I have been involved in lots of medico-legal cases in which the surgeon has failed to record what the patient actually requests. If you don't record it, the patient can come back and blame the surgeon for doing the wrong operation. They can say that they never asked for what the surgeon has recommended. Therefore, if their request is ambiguous, then you must clarify it. "I want nicer fuller breasts" could mean lots of different things, but it doesn't necessarily mean breast augmentation. The patient might subsequently say, "Doctor I never asked you to make my breasts bigger, I simply asked you to lift them to make them look fuller." Having recorded what the patient is asking for, you should then record the topics of discussion in relation to this request. It is quite possible that the patient will change their mind as a result of this discussion and you should then record what their secondary request is. You must also record what you have recommended and why and then, separately, what has been agreed.

It is always sensible to show photographs of both good and bad results so that you can never be accused of showing atypically perfect results.

If a patient decides to have an operation, but wishes to delay it for more than a few weeks, it is essential to see them again for a brief reminder consultation a few days before the operation. This is to remind you, the surgeon, and also the patient of what has been agreed and of the risks, and it gives the patient the chance to ask further questions.

If a patient asks you for a little bit of extra surgery on the day of the operation, you have the dilemma of causing offense by refusing or putting yourself in jeopardy if you haven't sorted it out properly in advance.

Summary

1. Record the time of the start of the consultation and its duration.
2. Write down what the patient first asked for, not what you think might suit them.
3. Write down the options for treatment.
4. Write down what you recommend for them.
5. Write down what you agree to do.
6. Write down the risks and separately the percentage occurrence of the complications and the consequences of the complications.
7. Give a comprehensive information sheet.
8. Insist upon a second consultation to run over what has been discussed already, emphasizing the risks.
9. Discuss the costs of surgery, the financial consequences of dealing with complications, and who is going to pay for this.

Reference

1. Montgomery (Appellant) vs. Lanarkshire Health Board (Respondent) (Scotland) before Lord Neuberger, President, Lady Hale, Deputy President, Lord Kerr, Lord Clarke, Lord Wilson, Lord Reed, Lord Hodge. Judgement given on 11 March 2015. Heard on 22 and 23 July 2014.

2

Aesthetic Medicine: Surgical Pearls

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Introduction

Aesthetic medicine comprises all medical procedures that are aimed at improving the physical appearance and satisfaction of the patient, using noninvasive to minimally invasive cosmetic procedures.

These aesthetic procedures consist of:

- injections of neurotoxins
- dermal fillers/fat grafting
- chemical peels
- radiofrequency
- cryotherapy
- lasers and intense pulsed light (IPL)
- ultrasound treatment
- platelet-rich plasma (PRP)

The author used a combination of these procedures for nonsurgical rejuvenation. This chapter provides an overview of each of these with their clinical implications, recommended indications, management, advantages, and disadvantages.

Multimodality Nonsurgical Rejuvenation With a Regional Approach

Botulinum Toxin (Botox)

In aesthetic medicine botulinum toxin (see Table 2.1 and Fig. 2.1) is the most commonly used nonsurgical treatment worldwide. In 2014, 4.89 million Botox treatments were done worldwide. Its popularity is due to its excellent safety record and predictable outcomes.

Commercially available botulinum toxin A are:

- onabotulinum toxin A (Botox)
- abobotulinum toxin A (Dysport)
- incobotulinum toxin A (Xeomin)

Dilution

- 1 B.U. = 2.5 s.U
  1 vial of Dysport (500 s.U) + 2.5 mL saline = 20 U/0.1 mL
  (can be rediluted in the syringe with 1:1 ratio to create a concentration of 10 s.U/0.1 mL)
- 1 vial of Botox (100 U) + 2.5 mL of saline = 4 U/0.1 mL
  30- to 32-gauge needle (a smaller needle is preferred in sensitive patients)
  4 U Botox = 10 U Dysport

PREPROCEDURE MANAGEMENT OF NEUROMODULATORS

- Conduct an assessment of the patient.
- Note the location and depth of rhytids.
- Obtain a history of the patient's concerns.
  - Brow position is important.
  - Check for the presence or absence of compensatory brow elevation.
  - Check for blepharochalasis and dermatochalasis.
  - Check for collagen depletion.
  - Measure the width of the forehead (a wide forehead would need more neuromodulator/Botox).
  - Assess strength of frontalis muscle and length of corrugator.
- Take a preoperative photograph.
- Apply a eutectic mixture of local anesthetics (EMLA) 30 minutes prior to procedure.
- Give counseling about potential complications.
- Obtain consent.

Table 2.1 Uses of botulinum toxin in aesthetic medicine

Dynamic rhytids	• Forehead horizontal lines • Glabellar vertical lines • Periocular rhytids (crow's feet) • Hyperdynamic orbicularis/pretarsal orbicularis (under the eyes) • "Bunny" lines • Perioral (smoker's lines)
Diminishing the depressor activity of certain muscles	• Lateral fibers of orbicularis (brow elevation) • Depressor septi (nasal tip elevation) • Platysma (Nefertiti lift) • Mentalis (chin deformity) • DAO (for marionette lines)
Hypertrophic muscles	• Masseter • Nasalis (alar flare muscle) • LLSAN ("gummy" smile and alar flare) • Masseter • Deltoid • Medial head of gastrocnemius

DAO, Depressor anguli oris; *LLSAN,* levator labii superioris alaeque nasi.

POSTOPERATIVE CARE FOR NEUROMODULATORS

- The lumps on the area injected will go down in 15 to 30 minutes.
- Do not rub or apply pressure on the area that was injected with Botox.
- For 6 hours, avoid bending or stooping down; instead lie down flat on your back.
- Do not go to the gym or do any sports until the next day.
- Follow up after 10 days.
- Take a postoperative photograph.

Hyaluronic Acid (Fillers)

Adding volume along with short-scar face lift has largely overtaken surgical correction for midface. The choice of filler is dependent on the anatomy of each individual and the specific treatment goals. Injectable soft-tissue fillers are durable, well tolerated, and potentially reversible in unfavorable clinical outcomes. Small-particle hyaluronic acid (HA) with lidocaine (Restylane Silk, Galderma, Uppsala, Sweden) is used for submucosal implantation for lip augmentation and dermal implantation for correction of perioral rhytids. Side effects are generally mild and transient.

PREPROCEDURE MANAGEMENT

- Conduct a general assessment of the patient.
- The patient should avoid aspirin (any product containing acetylsalicylic acid), vitamin E, and other dietary supplements, including gingko, evening primrose oil, garlic, feverfew, and ginseng, for 2 weeks.
- The patient should also avoid blood thinners such as aspirin, ibuprofen (Advil, Motrin), and naproxen (Aleve, Naprosyn) 1 week before the treatment.
- Enquire about history of cold sores (or fever blisters) prior to treatment.
- Optionally, the patient can start taking an Arnica tablet for 1 week prior to treatment and 4 days posttreatment. The standard dosage is three Arnica tablets (30 CH) three times a day 30 minutes before or after a meal.
- Enquire about allergy or sensitivity to lidocaine.
- Mild bruising is common and can last 7 to 14 days.
- Take a preoperative photograph.
- Apply EMLA 30 minutes prior to the procedure.
- Give counseling about potential complications and obtain consent.

POSTOPERATIVE MANAGEMENT

- Follow up after 2 weeks for touch-up.
- Take a postoperative photograph.
- Counsel the patient that the volume will go down by approximately 20%.
- Give Voltarol for pain relief.
- Massage with Arnica.
- Avoid hot beverages after the dental block (for lip augmentation).
- Avoid cold compression to prevent headache (in the temporal area).
- Minimize movement of the treated area.
- Avoid applying heat to the treated area until bruising or any swelling has resolved.
- On the day of treatment, avoid activities that cause facial flushing including consuming alcohol, hot tub or sauna use, exercising, hot wax, and tanning. Avoid extreme-cold activities, like skiing or hiking outdoors.
- Gently apply a cool compress or wrapped ice pack to the treated areas for 15 minutes every few hours as needed to reduce discomfort, swelling, or bruising up to a few days after treatment. When bruising occurs it typically resolves within 7 to 14 days.
- Results last approximately 6 to 12 months.
- For more than 4 cc of filler used, prednisolone 40 mg with Nexium 40 mg daily for 2 days after meals may be considered.

Upper Face

Forehead and Brow Rejuvenation (Fig. 2.2)

ASSESSMENT (TABLE 2.2)

- Check the brow position (this is important).
- Check for the presence or absence of compensatory brow elevation.
- Check for blepharochalasis or dermatochalasis.
- Check for collagen depletion.
- Assess the strength of muscle.
- Measure the width of the forehead.

TECHNIQUE

- The brow elevator (frontalis) and depressors (corrugator, procerus, depressor supercilli [DSC] for the medial brow and the superolateral fibers of the orbicularis oculi for the lateral brow) should be treated as a single unit to prevent brow ptosis.
- Preventing brow ptosis should be the priority.