Patient Safety in the Office-Based Surgical Setting

Editor’s note: My thanks to the moderator, Robert Singer, MD (board-certified plastic surgeon and ASAPS member (La Jolla, CA), and to panelists Jeffrey L. Apfelbaum, MD (board-certified anesthesiologist, Chicago, IL); Charles E. Hughes III, MD (board-certified plastic surgeon and ASAPS member, Indianapolis, IN); and Geoffrey R. Keyes, MD (board-certified plastic surgeon and ASAPS member, Los Angeles, CA) for sharing their opinions and clinical experience.

Dr. Singer: Enhancing patient safety has been an ongoing effort of the American Society for Aesthetic Plastic Surgery, the Aesthetic Surgery Education and Research Foundation, the American Society of Plastic Surgeons, and the Plastic Surgery Educational Foundation. The panelists will be presented with hypothetical clinical situations as a means of highlighting and discussing some current safety concerns, as well as asked to provide their recommendations for maximizing patient safety.

The first case involves a 58-year-old man who is scheduled to undergo a face lift and bilateral upper- and lower-lid blepharoplasty (Case 1). His preoperative blood pressure is 165/95 mm Hg. He prefers that the surgery be performed in an office-based setting. Dr. Hughes, what concerns would you have, and what approach to this patient would you take?

Dr. Hughes: I am assuming that this patient’s increased blood pressure was ascertained in the preoperative examination and that he previously was unaware of the problem. However, even if he was taking medication for high blood pressure and his hypertension represented anxiety, I would want his internist to evaluate his condition to make certain that all issues had been addressed. Normally, with input from the internist and treatment to reduce the patient’s blood pressure to a normotensive level, I could certainly proceed. If the internist agrees that it would be reasonable to perform surgery in an office-based setting once the blood pressure is reduced to a normal range, I think you can proceed without a problem.

Dr. Singer: There is some concern that the incidence of untoward events is higher in office-based surgery. Dr. Keyes, could you address that?

Dr. Keyes: A recent study by the American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF) demonstrates that the incidence of complications in the accredited office setting is much lower than has previously been suggested. The study tracked 1378 significant sequelae in

Case 1: 58-year-old man

Desired surgery: Face lift, neck lift, blepharoplasty; patient prefers surgery in an office-based setting

History: Blood pressure on preoperative visit was 165/95 mm Hg

Follow-up: Patient experiences chest pain in the recovery room
more than 411,670 procedures, which is an incidence of about 0.33%. This is really a very good track record for the office-based setting.

**Dr. Singer:** Did those statistics compare favorably with data from major hospitals and multispecialty freestanding ambulatory surgical centers?

**Dr. Keyes:** One of the problems in assessing the relative risk of unanticipated sequelae in patients who have been operated on in an office-based facility versus those occurring in patients operated on in a hospital is that hospitals do not publish statistical data on their unanticipated sequelae. To date, there has been no centralized vehicle for collecting data on unanticipated sequelae. The AAAASF data, on the other hand, were collected by an Internet-based quality-assurance and peer-review program that included reports from 621 office-based surgery centers. These reports were from accredited facilities in which all the operating surgeons have privileges to perform the same procedures in a hospital as they perform in an outpatient facility.

**Dr. Singer:** Dr. Apfelbaum, assuming that the patient underwent the workup Dr. Hughes recommended and that he is now normotensive, what concerns would you have for his safety after surgery?

**Dr. Apfelbaum:** I think that depends entirely on the preoperative assessment of the patient. If his physical status is American Society of Anesthesiologists 1 or 2, which means that he has no systemic disease or only mild disease that is well controlled, his increased blood pressure may simply be the result of “white-coat syndrome” and will resolve spontaneously. After surgery, the concerns are similar to those for any patient undergoing this procedure, be it in a hospital or in an office-based practice. Typically, procedures that involve a shared airway—in this case procedures of the face, neck, and eyes—can present some unique morbidity after surgery.

**Dr. Singer:** Let’s assume that this patient was prescribed antihypertensive medication, that he was normotensive during the surgery, and that after surgery his systolic blood pressure in the recovery room is 165 mm Hg. Dr. Hughes, what would you do with respect to monitoring him after surgery? Would you let him go home? How would you monitor him subsequently?

**Dr. Hughes:** If he was normotensive before surgery, I would want to see him normotensive after surgery before sending him home. Narcotics are frequently used in these procedures, and that can be a bit of a factor. Usually I would want him to remain in a recovery room until his blood pressure was stable and normal again and the effects of pain medication had worn off before I would send him home. If there was difficulty in reestablishing an acceptable blood pressure, I would consult his internist.

**Dr. Singer:** If his pressure remained above a level with which you are comfortable, let’s say above 155/95 mm Hg, what would you do?

**Dr. Keyes:** If there was a persistent blood-pressure problem, I would call the internist to discuss the patient’s condition and then decide whether additional medications would be indicated or whether he should be hospitalized.

**Dr. Hughes:** If the patient still has an increased blood pressure, some consideration could be given to admitting him for the night to an accredited facility where his P O₂ and blood pressure could be carefully monitored. I would also discuss the situation with his family.

**Dr. Singer:** Dr. Apfelbaum, let’s assume that this individual is now in the recovery room—that he went through surgery well and is normotensive—but chest pain and shortness of breath develop. What would you do at that point?

**Dr. Apfelbaum:** A lot would depend on his history—that is, whether he had ever had chest discomfort in the past or experienced shortness of breath. Certainly I would monitor his vital signs—oxygenation and ventilation, as well as dynamic changes in blood pressure and pulse.
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For an individual who complains of chest discomfort, follow-up with a 12-lead electrocardiogram is needed, for example, for signs of ischemia, which might account for a change in baseline values. Any uncertainty demands hospitalization.

**Dr. Singer:** The second patient is a 26-year-old woman who desires breast augmentation (Case 2). She is healthy, with no significant medical history. She began using birth-control medication this past month. The patient runs 4 miles 3 times a week, is 5 ft 6 in, and weighs 125 lb. Her mother had a history of deep-vein thrombosis (DVT). Dr. Hughes, what concerns would you have about this patient?

**Dr. Hughes:** I feel that this patient has a significant risk for DVT. As suggested in the literature, during a woman’s first year on birth-control medication, DVT or clots may be slightly more likely to develop. I would follow the recommendations of most contraceptive manufacturers and hematologists and take the patient off birth control for a month before surgery. She should not resume oral contraceptive use until 2 weeks after surgery or until she is fully ambulatory.

**Dr. Singer:** Taking the patient off birth control pills has some trade-offs, and not everyone would advocate it. Dr. Keyes, do you feel the same way about this patient? Would you operate on her?

**Dr. Keyes:** I agree with Dr. Hughes. This patient has a moderate risk for pulmonary embolism, and discontinuing her birth-control pills for a month before surgery is a wise precaution. I would also like to know a little more about her mother’s medical history, such as whether she had any abnormal coagulation factors, just to complete the clinical picture.

**Dr. Hughes:** Dr. Hughes, would you do any additional screening, such as a hematology evaluation or a workup for a congenital predisposition to DVT?

**Dr. Keyes:** I would do exactly what Dr. Keyes suggested. I would want to get a little more information about her mother before I would put the patient through further evaluation. I am not certain that we would gain a lot from further screening unless the mother had a specific entity that predisposed her to DVT. Given a negative history for the patient and presumably for the mother as well, I don’t know that there is an advantage in further workup. I think the key is to be certain the patient understands the importance of going off birth-control medication and follows through.

**Dr. Singer:** The next patient is a 48-year-old woman who is planning to fly in 1 day before her surgery—a 6-hour flight (Case 3). She weighs 150 lb and is 5 ft 5 in. She has a negative medical history. She wants an extreme makeover: face lift, mastopexy, rhinoplasty, and abdominoplasty. Dr. Hughes, what are your concerns with respect to this patient?

**Dr. Hughes:** I think that we have 2 issues here. The first concern is operating on someone right after a 6-hour flight that involves prolonged immobilization in the relatively cramped space of an airplane, which predisposes the patient to DVT. I would recommend that the patient come in a day or two ahead of time and do some walking around and make certain she is back to normal. If there was any concern about her condition, I would perform a venous ultrasound.

**Dr. Singer:** Dr. Apfelbaum, do you have any concerns about anesthesia in a patient such as this one who has just taken a 6-hour flight?

**Case 2: 26-year-old woman**

**Desired surgery:** Breast augmentation  
**History:** 5 ft 6 in, 125 lb; runs 4 miles 3 times a week; began taking birth-control pills 1 month ago; mother has history of DVT

**Case 3: 48-year-old woman**

**Desired surgery:** “Extreme makeover” (face lift, mastopexy, rhinoplasty, abdominoplasty)  
**History:** No significant medical history; flying in (6-hour flight) 1 day before surgery
Dr. Apfelbaum: In my view, patients scheduled for surgery after a long flight should be ambulatory for at least 48 to 72 hours before the procedure. The literature certainly demonstrates that these individuals are at risk for DVT, especially if they were flying coach. They are also at risk for significant dehydration if they have been on a plane for 6 hours without fluid replacement.

Dr. Hughes: Another issue raised by this case is the duration of surgery. When we review most of the major morbidity and mortality studies in aesthetic surgery, a common theme is a lengthy surgical session. In this patient, much depends on how much you are going to do in each of the surgical areas. In most instances, to combine all 4 procedures in a reasonable time would be difficult for even a very skilled surgeon. I would tell the patient that we should break the surgery up into at least 2 sessions.

Dr. Singer: Dr. Keyes, do you feel differently about that?

Dr. Keyes: No, I agree with Dr. Hughes completely. Performing this many procedures, including the mastopexy and abdominoplasty, is too much for 1 session.

Dr. Apfelbaum: Considering morbidity from the anesthesia perspective, duration of surgery per se is not a substantive factor. However, the numbers of procedures performed, the amount of work that is done, and the different parts of the anatomy involved can dramatically increase morbidity for these patients. Morbidity from a rhinoplasty that took 6 hours is likely to be considerably less than morbidity after an 8-hour procedure for an extreme makeover. Fluid shifts must be considered. The patient might have difficulty breathing through the nose because of the rhinoplasty, but to that difficulty must be added a sense of the patient’s distress because of the face lift and possibly some splinting because of the abdominoplasty. Clearly the number of potential postoperative complications goes up with the number of surgical sites.

Dr. Singer: Dr. Keyes, from your point of view is the issue the particular combination of surgeries?

Dr. Keyes: I frequently do combination surgeries, but I am cautious about which procedures I perform in combination. Evidence increasingly indicates that multiple procedures associated with abdominoplasty have a higher incidence of DVT and pulmonary embolism.

Dr. Singer: Dr. Hughes?

Dr. Hughes: I would certainly agree. When we reviewed statistics from a survey of board-certified plastic surgeons on a national basis for 5 years up to 2001, we found that surgery involving a combination of abdominoplasty with other procedures dramatically increases the risks involved.

Dr. Singer: One must define what type of abdominoplasty is being performed, because a miniabdominoplasty in which only a small wedge is removed isn’t going to have the same level of morbidity as a full abdominoplasty. Do you agree?

Dr. Hughes: That’s correct.

Dr. Singer: Dr. Apfelbaum, you raised the issue that lengthy surgery doesn’t necessarily increase morbidity. Does an 8-hour elective surgery basically have the same risk as a 3-hour elective surgery? Is there a certain period beyond which you start to become more concerned about increased morbidity?

Dr. Apfelbaum: Obviously we become concerned when a surgery lasts a considerable amount of time, but assuming that fluid shifts, blood loss, and the number of surgical sites are modest, there does not appear to be a postoperative difference from an anesthetic-morbidity perspective between a 2-hour procedure and a 3- or 4-hour procedure. If the duration of surgery were 12 hours, we might expect increases in morbidity. The anesthesiology literature seems to indicate that little difference in morbidity exists between a 2-hour procedure and a 4-hour procedure, which are standard durations of surgery in an office setting. There is no recent scientific literature concerning the safety of 6-hour procedures.

Dr. Singer: Dr. Keyes, are there any guidelines from the plastic surgery societies or AAAASF with respect to recommended time limits for elective procedures?

Dr. Keyes: The issue is really not the total time of the procedure as much as it is the other considerations that Dr. Apfelbaum has mentioned. In addition, the adequacy of postoperative recovery—patient monitoring and the amount of time the patient remains in the recovery area before being discharged—are extremely important. So if you per-
form a 7-, 8-, or 9 hour operation in an outpatient setting, you need to start early in the morning to permit an adequate recovery period—2, 3, or 4 hours, or perhaps longer, with qualified staff supervision. Also, consideration could be given to transfer to an appropriate facility for 24-hour stay monitoring.

**Dr. Singer:** Dr. Apfelbaum, it has been mentioned that perhaps a better way to approach this patient would be through serial procedures with serial anesthesia. How long would you wait between 2 major surgeries and 2 general anesthesias, assuming that the first one took 4 or 5 hours and that the second will be of equal duration?

**Dr. Apfelbaum:** Given the types of morbidities that we are most concerned about from a surgical perspective and the shorter-acting faster-emergence anesthetics that are available today for use in the office setting, there is no reason to hesitate to repeat an anesthetic within weeks or even days of the first.

**Dr. Singer:** Which anesthetics are you speaking about, specifically?

**Dr. Apfelbaum:** In an office setting, intravenous medications such as propofol would be used for both induction and maintenance of anesthesia. Analgesics and perhaps a hypnotic — for example, a short-acting opioid — are added. An inhalation anesthetic may be preferred by other physicians in the office setting. Desflurane or sevoflurane, with or without nitrous oxide, is an acceptable choice, depending on the type of procedure. The recovery profile is every bit as rapid after these agents as it is after the administration of intravenous anesthetics.

**Dr. Singer:** Let’s assume that this patient had sequential procedures, recovered well, and is going to return home on another 6-hour flight. For how long would you ask this patient to remain in your community before allowing her to take such a long flight?

**Dr. Hughes:** I usually ask out-of-town patients who undergo a 2- to 3-hour procedure to stay in the area for at least 48 hours after they are fully ambulatory. For more extensive procedures in which ambulation is delayed, I may ask them to stay as long as 2 weeks.

**Dr. Singer:** Dr. Keyes, let’s assume that one of the procedures performed was a face lift. For how long would you ask that patient to remain in the community before allowing her to fly home?

**Dr. Keyes:** I would ask the patient to stay at least a week. There is a remote possibility of postoperative bleeding after that time period, so the patient must be instructed not to lift or strain with luggage. The pressurized cabins of today’s aircraft are designed to maintain a relative altitude of 5000 to 8000 feet. With the exception of patients with cardiovascular problems, who might experience dyspnea as a result of increased oxygen saturation, most patients should be able to travel after 1 week. I would want to have taken out most of the sutures and to be sure that the patient had stabilized and her wounds were healing well.

**Dr. Singer:** This patient also had an abdominoplasty and a mastopexy. Dr. Hughes, what precautions would you advise her to take with regard to her flight back?

**Dr. Hughes:** I would recommend that she get up and do some walking at least every 30 minutes. With any luck she will have a smooth flight so that she won’t have to have her seat belt on at all times. I would ask patients who have undergone combined abdominoplasty and mastopexy to stay in the area for 2 weeks after surgery, even though we have no hard evidence that a need for this exists. I find it best to be very frank with patients, who will comply with recommendations if they understand why you are concerned and what the risks are. Even at a late stage of recovery, I think, sitting in a plane without moving for 6 hours poses a significant risk.

**Dr. Singer:** Dr. Keyes, do you think that wearing an abdominal binder during air travel is a benefit or a potential problem?

**Dr. Keyes:** I wouldn’t want the patient to wear garments underneath her clothing that compress her too much, because you do want her to move freely. However, I think an abdominal binder can be adjusted for the patient’s comfort. An additional precaution is to have the patient take some aspirin before getting on the plane, provided that recovery is sufficiently advanced that you have no concerns about bleeding.

**Dr. Hughes:** Patients who are flying need a pair of good support stockings that provide support from the ankle to above the knee.
Dr. Singer: Our next hypothetical case involves a 52-year-old woman—para 3, gravida 3 (Case 4)—who is 5 ft 3 in and weighs 180 lb. She wants contouring of the flanks, thighs, hips, buttocks, back, and arms, plus abdominoplasty, to be performed in an office-based facility. She has a history of phlebitis during pregnancy but no DVT. Dr. Keyes, tell me about your concerns and your precautions with regard to this woman.

Dr. Keyes: Any patient with a body-mass index (BMI) of 30 or greater is at increased risk for morbidity. With a patient such as this one, you really must question the risks and benefits of surgery. This woman has a BMI of at least 30. The history of phlebitis during pregnancy is another concern that puts her in the moderate- to high-risk category for the development of a pulmonary embolism, as does the fact that she is over the age of 40. Such patients have a predisposition to pulmonary embolism, so I think the combination of lipoplasty with abdominoplasty poses a real problem for her.

Dr. Singer: Would you consider performing sequential procedures if the patient had tried to lose weight, had stabilized her weight, and was exercising regularly?

Dr. Keyes: If the patient persisted in wanting surgery after losing weight, I would remove her panniculus to provide her some incentive to lose additional weight. I don’t think I would consider performing lipoplasty on somebody with this BMI. However, that is just my personal preference.

Dr. Singer: Dr. Hughes, do you feel differently?

Dr. Hughes: Dr. Keyes has made a very valid point, and I think that this patient may well be a good candidate for weight counseling. This patient is in a high-risk category. Even if you performed contouring only, you would have to consider volume limits. I would not remove more than 5000 cc from a patient such as this one in a single session. If the 5000-cc range of lipoplasty volume were approached, I would have the patient stay overnight in an accredited postoperative-monitoring facility or hospital.

Dr. Singer: That would be in a facility that was accredited and licensed for that purpose, or a hospital?

Dr. Hughes: Yes, absolutely.

Dr. Singer: Dr. Hughes has brought up the issue of the volume of aspirated-fat removal. What are your feelings about how much you are willing to remove at one time in an office-based facility?

Dr. Keyes: In my view, removal of a total fat-aspirate volume greater than 5000 cc should be performed in a hospital setting or with the intent to have the patient monitored in an appropriate facility after surgery. In addition to monitoring of vital signs after surgery, monitoring of urinary output and intravenous fluid intake are of utmost importance.

Dr. Singer: Dr. Apfelbaum, given this patient’s history of phlebitis during pregnancy and a concern about the development of DVT, what added intraoperative precautions would you advise from an anesthesiologist’s point of view?

Dr. Apfelbaum: I would not be enthusiastic about doing this type of procedure on this particular patient in an office-based setting. Her BMI is at least 30, she is over the age of 40, and the procedure is complex. Each of these issues raises a red flag. With the 3 combined, particularly the BMI and the type of procedure, the risk of postoperative complications is substantial. Frankly, I would not get to this point. I would advise a series of smaller operations, and only then would I make an assessment of how well prepared the patient is for surgery. If, for example, the preoperative assessment reveals that she engages in a high level of physical activity, this factor would, of course, be a positive indication for surgery.

Dr. Singer: Dr. Hughes, let’s assume for the moment that you have assessed this patient and you...
Dr. Hughes: First, I agree with Dr. Apfelbaum that this patient is not a good candidate for surgery in an office-based facility. With respect to abdominoplasty, I always have sequential-compression devices readily available, and they are routinely used in any procedure lasting 2 hours or more. I would probably also use these devices in any patient at risk for DVT. I would construct a walking plan for the patient and impress on her the need to begin walking immediately after surgery.

Dr. Singer: Dr. Keyes, what are your indications for the use of sequential-compression stockings?

Dr. Keyes: I use sequential-compression stockings on all of my patients. I recognize that this is probably unnecessary in many cases, but I can’t see any downside to it.

Dr. Apfelbaum: I think stockings are certainly indicated for this particular patient and for patients who undergo abdominoplasty lasting 2 hours or longer. I also agree with Dr. Keyes: I don’t see any downside in applying the stockings for prophylaxis. But I don’t know whether the scientific data support the need to do so in 100% of patients. The use of low molecular weight heparin, Lovenox (Aventis, Kansas City, MO) should be considered in the treatment of higher risk patients.

Dr. Singer: The next case involves a 55-year-old woman who is 5 ft 6 in and weighs 150 lb (Case 5). She underwent bariatric surgery 2 years ago; at the time, she weighed 300 lb. Her weight has remained stable with the use of an exercise regimen, and she is taking an appetite suppressant, phen-fen—phentermine-fenfluramine. She wants abdominoplasty, thigh lift, mastopexy, brachioplasty, and a face lift in the wake of her massive weight loss. Dr. Hughes, what approach to this patient would you take?

Dr. Hughes: In discussing this case, we will revisit some of the issues we have covered in previous cases, but these issues are very, very important. These procedures must be done sequentially, not in one surgery. I find that the postbariatric patients are more fragile, even 2 years after surgery, than patients who haven’t undergone massive weight loss. Even though phen-fen is illegal, patients do obtain it, sometimes through the Internet. Unfortunately, because they know it is a neuroleptic drug, they don’t usually admit to using it. I have had the experience of discovering that a patient is using it just before the surgical procedure, when the anesthesiologist is present and he or she finally decides to confess. We have had to cancel surgery for several patients who have been using this appetite suppressant until they have been off it for 2 weeks. I think that if I were to operate on this patient, I might recommend that these procedures be done sequentially and not combine any of them.

Dr. Singer: Dr. Apfelbaum, many patients take diet medications. What are your concerns, from an anesthesiologist’s point of view, and how would you approach this particular case?

Dr. Apfelbaum: We are always concerned about appetite suppressants such as phen-fen. The concern is for asymptomatic pulmonary hypertension, which can be fatal even without surgery and anesthesia. With regard to other appetite suppressants, we must be aware of the particular supplements the patient is taking. Some supplements and medications stimulate the sympathetic nervous system, which can lead to significant dehydration or systemic volume depletion. Patients who take them are often severely volume-constricted before surgery.

Dr. Singer: Dr. Keyes, your practice is in California, an area where post–bariatric-surgery body-contouring surgery is becoming increasingly popular. Do you have any viewpoints that differ from those of other surgeons?
expressed or any other precautions that you would take?

**Dr. Keyes:** In this patient, the obvious consideration is to stop the use of the phen-fen. I would want to have a complete cardiovascular workup performed and would even consider asking a cardiologist to perform an echocardiogram to make sure no valvular disease was present.

**Dr. Singer:** The next patient is a 65-year-old man who is 5 ft 10 in and weighs 185 lb (Case 6). He has type 2 diabetes that is well controlled with the use of oral hypoglycemic drugs. He is normotensive. He underwent a total hip replacement, without problems, 2 years ago. The patient would like to have a neck lift and blepharoplasty as an outpatient. He prefers anesthesia with propofol, rather than a general anesthetic, in an office-based setting. Dr. Apfelbaum, what concerns do you have with regard to the administration of propofol?

**Dr. Apfelbaum:** This patient’s preference for propofol demonstrates a failure to understand the dangers of the use of this medication. Sedation/analgesia and anesthesia are parts of a continuum. The patient progresses from a state of mild sedation to moderate sedation to deep sedation and, finally, to general anesthesia very, very quickly. Propofol, which is easy to administer, can provide any of the 4 categories of anesthesia I just mentioned. During the course of a lengthy procedure with propofol, we often find the patient crossing the line and going everywhere along that spectrum. The patient can slip quite easily from mild sedation to moderate sedation, or from moderate sedation to deep sedation, or even from deep sedation to general anesthesia. Laypeople and some physicians and nurses think that propofol only induces sedation, yet, using propofol alone, an anesthesiologist can put a patient under general anesthesia completely, even though the patient is not intubated and does not have a laryngeal-mask airway. It is my view—and also the view of the AAAASF, which has taken a strong position on this issue—that propofol should be administered only by individuals who have training in anesthesia. In fact, the recommended guidelines for use of propofol in the package inserts of both trade and generic manufacturers in the United States clearly note that this drug should be administered only by someone with training in general anesthesia.

**Dr. Singer:** Dr. Keyes, what are the AAAASF’s new guidelines with regard to how propofol can be administered?

**Dr. Keyes:** The AAAASF recently raised its standard to say that if you are going to use propofol in your facility, it must be a class C facility or be upgraded to a class C facility to comply with the issues Dr. Apfelbaum just mentioned.

**Dr. Singer:** And is an anesthesia provider required for a class C facility?

**Dr. Hughes:** Dr. Apfelbaum, how do your views fall into line with what Dr. Keyes stated?

**Dr. Apfelbaum:** My own view is that propofol should be administered only by individuals who have had training in the administration of general anesthesia. It should be administered by an anesthesiologist, by a CNRA under the supervision of a physician, or by an anesthesiology assistant under the supervision of an anesthesiologist. These methods would really be the only 3 methods that I believe afford a reasonable margin of safety for the patient.

**Dr. Singer:** Dr. Hughes, this patient has controlled type 2 diabetes. What precautions would you take before surgery, or would you decline to operate on him?

**Dr. Hughes:** I would operate, but I would want clearance before surgery from his endocrinologist and any evaluation the endocrinologist thought might be important. In the

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**Case 6: 65-year-old man**

- **Desired surgery:** Neck lift and blepharoplasty (outpatient)
- **History:** 5 ft 10 in, 185 lb; type 2 diabetes, controlled with an oral hypoglycemic drug; uncomplicated total hip replacement 2 years ago; prefers anesthesia with propofol
Midwest, we have had some major problems with use of propofol. In the institutions where I work, propofol can only be used by an anesthesiologist or CRNA with direct guidance by an anesthesiologist. We follow that same rule in our accredited outpatient facility and accredited office facilities. Unfortunately, the impression has developed that propofol is a very easy sedation anesthetic. I don’t feel that it’s a sedation anesthetic at all; it’s a wonderful general-anesthetic agent.

**Dr. Singer:** Dr. Keyes, let’s assume that the patient has been cleared by his endocrinologist. What would you do intraoperatively and in the immediate postoperative period and recovery room with regard to monitoring his level of blood sugar?

**Dr. Keyes:** First I would discontinue his oral hypoglycemic the day before surgery, because it has a long half-life, and that way we would be sure he had adequate blood sugar coming into surgery. I would check the blood sugar immediately before surgery and then after surgery. I think either will work, but I definitely would prescribe a prophylactic antibiotic regimen for this patient.

**Dr. Singer:** Dr. Keyes, this is a patient who not only has diabetes but who also has undergone hip replacement. Would you also administer antibiotics?

**Dr. Keyes:** Yes, I would also give preoperative, intraoperative, and postoperative antibiotics.

**Dr. Singer:** We have brought up several key patient-safety issues. Problems and untoward results can occur in a hospital or free-standing multispecialty ambulatory center, not just in an office-based surgical facility. With respect to the duration of surgery, at this point the data seem to be insufficient to serve as a basis for definitive standards rigidly limiting duration of surgery. Safety certainly depends on the type of surgery, the general status of the patient, and his or her age and history. The other area in which data are insufficient is combination surgeries. Although no firm standards exist, common sense and good surgical judgment should always be exercised. Some questions also exist with regard to birth-control pills and hormone replacement as risk factors in the development of DVT. All of these areas need more careful evaluation in the future, and they are areas in which ASERF will be encouraging directed research.

**References**


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