Three techniques are used for eye removal: evisceration, enucleation, and exenteration. Each procedure has specific indications, and each procedure has its advantages, disadvantages, and complications.

The loss of an eye is not trivial and can be very traumatic for the patient; special care should be given to ensure that all preoperative and postoperative concerns are addressed.

Let’s review each procedure and discuss care of the anophthalmic socket.

**Enucleation**
Enucleation is the removal of the entire eye. Indications for enucleation include intraocular tumors (most commonly melanoma and retinoblastoma) which are unable to be controlled with other methods and blind eyes after trauma.

The advantage of an enucleation is it gives a good specimen for the pathologist to determine evidence of spread beyond the eye. The disadvantages of enucleation are it is a longer surgery than evisceration, and the normal anatomy of the orbit is not retained, which predisposes the patient to postoperative complications.

Enucleations are considered after trauma in situations of a blind eye. In
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Eye removal

Understand procedures | EVISCERATION

this case, enucleation is performed within two weeks of the trauma to prevent sympathetic ophthalmia.

Sympathetic ophthalmia is a rare condition in which the untraumatized eye becomes inflamed due to exposure of the immune system to antigens from the traumatized eye, resulting in an autoimmune response to the normal eye. The consequences can be devastating for the normal eye. In addition, blind eyes after trauma often become painful and do not look normal, giving additional reasons to consider an enucleation.

The procedure is usually performed under general anesthesia, although it can also be performed with the patient sedated (Figure 1). A retrobulbar block is given prior to starting the surgery to help with postoperative pain and to help prevent bleeding during the surgery with the use of epinephrine in the injection. For eyes with tumors, some surgeons prefer to not give a block because of the risk of perforating the eye with the needle.

The surgery can be performed in under an hour and is usually an outpatient procedure. Each of the four rectus muscles are identified, disinserted from the globe, and tagged with a suture. The inferior oblique muscle and superior oblique tendon are identified and transected. The optic nerve is then transected, and the eye is removed.

For a patient with a tumor, in particular retinoblastoma, it is important to obtain as long of a piece of optic nerve as possible (Figure 2). An orbital implant is placed in the socket, and the rectus muscles are attached to the implant. The Tenon’s layer and conjunctiva are closed separately to finish the surgery. A conformer is placed to retain the fornices, and a pressure patch is placed for at least two days. The patient will follow up in one week for reevaluation.

FIGURE 2 Enucleation specimen in a patient with a history of retinoblastoma. Long optic nerve segment is obtained in these cases.
Eye removal

The placement of an orbital implant is performed for two reasons. First, the implant provides volume to the orbit. If an implant was not placed, a large, bulky prosthesis (artificial eye) would be needed, which is not ideal. The second reason to place an implant is it can improve movement of the prosthesis and maintain the anatomy of the orbit. Although there is controversy regarding how a prosthesis moves, many believe that the movement of the orbital implant improves movement of the prosthesis. By attaching the rectus muscles to the implant, better movement is obtained.

Implants can be made from porous or solid material. Porous material has the advantage of having the patient’s tissue grow into the pores; the implant then becomes “part” of the patient and will not migrate.

Implants come in different shapes. Most commonly, a spherical implant is used, but some implants have mounds on the front that may aid in the movement of the prosthesis.

The prosthesis is made by an ocularist four to six weeks after the surgery. In general, the patient should see the ocularist once a year for prosthesis polishing and checking the fit. The patient will have better success if he does not manipulate the prosthesis himself. The prosthesis rarely needs to be removed except for examination once a year by the oculoplastic surgeon and ocularist.

The most common complications after enucleation are implant related.

Implants can become exposed for several reasons: dehiscence of the surgical wound, poorly vascularized conjunctiva, infection of the implant, and prosthetic mechanical pressure.²

If an implant is exposed, it should...
be repaired. Techniques for repair depend on the size of the exposure. With time, the patient can lose volume in the orbit, likely due to fat atrophy. The prosthesis may need to be enlarge. A large prosthesis does not fit and move as well as a thinner prosthesis. Due to the potential problems with volume after the surgery, the largest implant possible is placed at the time of the surgery.

An enucleation in a child is a special situation. Volume is very important in children to help the orbital bones grow. Sometimes it is useful to implant a dermis-fat graft, which is tissue from the patient that will grow with the patient and help maintain volume and adequate bone growth.3

Evisceration

For an evisceration, the contents of the eye are removed and the sclera is retained (Figure 3). Eviscerations are often performed for blind, painful eyes. Eviscerations are not performed for eyes that have tumors; in fact, it is mandatory to image (ultrasound) the eye prior to an evisceration to make sure there is not an unknown or undetected tumor.4

Advantages of evisceration are faster surgery (<30 minutes) and less manipulation of the orbit with extraocular muscles left in their normal anatomical position. In addition, research has shown that the movement of the prosthesis is better after evisceration compared to an enucleation.5 Disadvantages include a theoretic concern for sympathetic ophthalmia (extremely rare) and a poor anatomic specimen for the pathologist.

This surgery can be performed with the patient awake or asleep. An incision is made 360° posterior to the limbus, and the cornea is removed. An evisceration spoon is used to remove the contents of the eye so only the sclera remains. An implant is placed within the scleral shell or behind it, and the sclera and conjunctiva are closed over the implant.

Postoperative care is similar to an enucleation. Complications are fewer with an evisceration compared to an enucleation. There is a lower incidence of implant exposure, and volume problems are less common.

Exenteration

In exenteration, the entire eye is removed as well as the soft tissue of the eye socket (Figure 4). This is a disfiguring surgery and usually performed when the patient’s life is at stake. Indications include malignant tumors and extensive infections of the orbit. Skin cancers (e.g., basal cell carcinoma, squamous cell carcinoma) that have invaded the orbit, primary malignant tumors of the orbit, and malignant sinus tumors which have invaded the orbit are indications for exenteration, although recent advances with molecularly targeted agents are resulting in fewer exenterations.6

An exenteration is performed with the patient asleep. An incision is made through the skin, and dissection is carried out to the underlying orbital rims. The covering of the bone (periosteum) is elevated from the bone completely around the orbit, and the orbital apex is transected with scissors to remove the orbital contents. The socket can be allowed to granulate, or a split thickness skin graft or free flap can be placed depending on certain factors, such as the need for postop radiation or the patient’s desire to wear a prosthesis. Sometimes enough skin can be retained from the eyelids to cover the bare bone.

The patient can be fitted with an oculofacial prosthesis after the surgery. This prosthesis differs from the prosthesis after an enucleation or evisceration because the eyelids do not blink and the eye does not move.

Postoperative care

After any of the above procedures, it is important to take more time postop with the patient, who is understandably anxious about how things will look and whether there will be pain. It is important for patients to wear glasses with polycarbonate lenses after any of these procedures. This will protect their only eye from an incidental trauma, and the glasses will camouflage any asymmetry.

I have found that results from enucleation, evisceration, and exenteration are excellent. I can promise that all of us have met a person with an artificial eye that we did not notice.

References

Use social media to market LASIK to millennials

Be sure to highlight the good you do for your patients and community

By Keisha Reedus

Recently at our laser vision center, we widened the scope of our social media outreach to include millennials who may be interested in finding out more about available refractive eye care options.

Keep in mind that millennial patients tend to access services where they are most convenient for them and when they have an immediate need, whether it’s Pearle Vision in the mall or 1-800 Contacts online.

Unless millennials have kept the same doctor since childhood, often they do not have a regular eyecare provider.

Let’s discuss best ways to reach this demographic group.

Using social media
We have effectively incorporated Instagram and Facebook into our social media marketing strategy. On Insta-

gram, for example, we post pictures of patients taken after their successful LASIK procedure. On Facebook, we often post testimonials, and we also use the site’s paid ads to target more potential patients.

An effort of which we are particularly proud is our practice’s volunteer partnership with a local food pantry. As part of this community service program, we donate supplies, money, and time to the food pantry, making monthly trips to the facility.

Through social media efforts, we make sure potential patients know about our involvement and how they too can support the program. In fact, for every paid surgery we perform,

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Keisha M. Reedus, is practice administrator at Clarity Refractive Services/TLC Laser Eye Centers in West Orange, NJ. She has no financial interest in the products or companies mentioned.

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we donate a portion of the proceeds to our food bank fund which in turn provides a week’s worth of food for a family.

Social sharing of our activities has received a tremendous response from millennials. We know this group is concerned with social justice and the belief that we are all connected and need to care for one another. We have learned there is much value in demonstrating to these potential patients that we take a lead role in helping our community. In addition, we provide a way for them to take part and make a difference in a tangible way. All of this community action translates into rich social media content.

**Social media messaging**

Our social media and marketing messaging involves talking about LASIK and driving the desire in patients to take the first step toward getting an examination to find out their choices. Millennials are curious to learn about LASIK and see what they might be missing out on in their lives, yet they do not necessarily want the pressure of making an immediate decision.

Once a patient has decided to learn more about LASIK, we provide educational materials on the technology we use, what to expect during the pre-operative workup, and they can see the technology in advance to ease any anxiety. Social media easily helps us accomplish this.

**Practice website**

Our practice website (www.clarity-refractive.com) provides comprehensive education for potential LASIK patients. We have incorporated videos and links to helpful forms on every page as well as a calendar so interested individuals can make an appointment online for a consultation.

The LASIK section of the site is divided into sections that include defining LASIK, its evolution, what makes a patient eligible, testimonials, frequently asked questions, and a LASIK kit that reviews what the patient can expect at the first visit.

The sections on defining LASIK and the procedure’s evolution ensure that patients have the opportunity to understand the benefits of today’s advanced procedure. On the site, we explain that LASIK is now even more accurate using wavefront technology that performs a high-technology analysis of the optical characteristics of a person’s eye. Patients learn that LASIK is a customized excimer laser treatment.

**Testimonials**

Patient testimonials can be very important to practices—they provide social media continued on page 8
Social media
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“real-world” information to potential patients. In fact, polls indicate that 80 to 90 percent of potential patients read reviews.12

We have found great value in encouraging patients to write unbiased reviews and testimonials. These reviews are featured on the practice website as well as on social media and online review sites like Yelp.

Financing
Offering patients a procedure with a significant price tag requires that you also make available a way for them to pay for it. We use CareCredit as a financing option, and we make sure patients know that financing is available. We include this information on our website and social media outlets as well.

Confidence and outcomes
We have been able to maintain and grow our LASIK practice due to confidence in our optometric network and commitment to integrated patient care between these ODs and our surgeons. About 70 percent of our patients come from our OD referral sources, and 30 percent come from word of mouth.

Another key to providing excellent outcomes and happy patients is technology. Using the newest version of iDesign System and the iLASIK Technology Suite (Johnson & Johnson Vision), we have a 99 percent patient satisfaction rate. We convert almost 85 percent of our patients to this procedure.

Results
Thanks in large part to our social media push over the past 12 to 18 months, we have seen a 30 percent increase in our overall patient consultation volume and a 10 percent increase in surgical volume.

The internal marketing department at the practice manages the social media accounts. As we seek to grow surgical volume further, we will consider all options in terms of how to optimize the potential of social media channels.

References
Building trust with patients builds the practice

It starts with first contact via telephone and continues through the patient handoff

By Tami L. Hagemeyer, ABOC, FNAO

Creating a positive first impression is more than a significant factor during our patients’ first contact with our practices, which is almost always via a telephone call.

During the initial conversation, our soon-to-be patients are faced with a fundamental decision—are they comfortable with what they perceive as our practices’ personality? Is it a good fit?

Tone of voice matters

Early in the conversation, one main element comes into play, our tone of voice. If the tone is pleasing or reassuring, it may create an effective positive first impression, encouraging confidence, and may have more influence than the words the patient hears.

The tone of our voices will matter to every patient and every call, enabling our initial conversation to use the first contact as a character barometer and in constructing a positive practice personality.

It is possible to change the sound of your voice. Yes, your voice changes with facial expressions. A smile during a conversation will alter the pitch of your voice; it will sound bright, sunny, and take a tone most will understand as happy. Changing your tone of voice with a smile almost sounds too easy, but it works. Try it.

It is important to recognize the significance of telephone etiquette and necessary to make training a priority. Consider this—When the telephone rings, we have an opportunity to positively impress our would-be patient by simply planning our conversations, or we can answer mechanically and risk a negative impression.

Practice together as a team. Encourage individual team members to listen as they rehearse telephone-answering dialogue. Listen to the tone of individual voices. Just as a smile can brighten our voices, likewise a frown or scowl will lower our tone and may sound more serious.

Practice and patient personality

Keep in mind that a practice’s personality may influence the decision for patients to become loyal to the practice and may affect team members’ ability to build patient trust. A practice is comprised of various personalities; when all are combined, we become a synergy or greater than the sum of an individual—this is the practice’s personality.

It is natural for people to gravitate toward individuals and organizations.

Tami L. Hagemeyer, ABOC, FNAO, is an optician, motivational speaker, and author. She discusses optometric medical care, frame styling, inventory management, purchasing, and more.

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that represent beliefs that are similar to their own. In other words, if a patient senses our collective personality resembles her own, she would like to be associated with us; she may perceive us as a continuation of herself, inspiring trust. It is through trust that commitment is built.

The objective for every practice should be a resilient, self-assured team and an abundance of loyal patients. Resiliency is an achievable, albeit, ambitious goal.

We have heard the old adage, “Respect is a two-way-street.” However, I think respect is more than a two-way street; there are multiple individuals with many personalities to consider.

Team interaction
As team members, we respect each other’s talents and skills; what follows is an appreciation of our specific abilities to provide additional levels of patient care.

A team consists of multiple individuals, and likewise, separate thoughts and ideas. Innovative new ideas expressed require respect, complete candor, and confidence without fear of ridicule or mockery. A team that values individual thoughts will continue to grow in certainty and conviction.

Treating inventive fresh ideas and viewpoints with acceptance will stimulate additional perspectives and encourage team appreciation.

Inspire the team to become adaptable—it is vital we learn to “change with change.” New concepts are almost never easy, but team adaptability may add benefits to our practice.

Simple changes, such as color-identifying folders or an identifying flag system, may streamline the patient experience without added disruption.

Aggressive modifications are not as easy to implement. For instance, if we change the check-in or checkout process, perhaps we will require additional patient information, which may add more time to both processes. It will take time to adjust to these changes, but remaining flexible with team input and possible modifications, will allow us to become more proficient with patient care.

Team interaction is palpable to patients and is demonstrated best when our patient is transferred from one testing area to another. The transfer from one team member to the next is known as the patient handoff. Every patient handoff is essential to demonstrate the confidence we have in each other.

Review with the team the routine dialogue used during the patient handoff, listen as though we are the patient, and allow yourself to hear the exchange as if for the first time.

Does the conversation invoke confidence? If it does not, find an interchange that will focus on building confidence, make sure the exchange feels comfortable with every team member.

With a successful patient handoff, our patients sense our positive interaction as an extension of their care.

Regaining trust
Trust is never automatic with each new patient—we must cultivate the relationship, and it must be earned. Presenting an air of confidence, but not arrogance, will invoke patient confidence and over time trust. It’s great to show off our skills; patients appreciate our abilities to service them and our products.

If trust is lost, it becomes almost impossible to regain it. Attempting to do so will require additional effort from every team member. We will need to focus our attention on rebuilding our relationship and changing the negative attitude patients may have about us. It takes many positives to counter a single negative.

Transparency is an important tool to counter most negative concerns. For instance, if a remake of a patient’s lenses is required, it is important to talk to the patient and avoid the blame game. If responsibility lies with the practice, we must take that ownership. If the liability falls with the patient, our job is to speak with him graciously and with tact.

There is always a compromise to be made if we are to sustain our patient’s trust and loyalty.

The road to trust
Positive first impressions are sustained with every patient interaction; consistent monitoring of patient relations through communication becomes our tool to maintain patient confidence.

Utilizing social media with announcements of activities, new instruments, or new team members are exciting for our team and is a great way to continue communication between patients’ visits.

With a reliance on the integrity we demonstrate when providing our patients with improved eye health and vision, our patients understand that our goal is to enrich their lives with better-quality vision resulting in improved eye health.

It is through trust that commitment will be built. It is important to remember that trust is ongoing and must never be lost. With trust comes the power to develop and maintain patient loyalty, almost always a guarantee for continued practice growth.
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