

OCULOPLASTICS

Advice for Better Ptosis Surgery From Three Experts

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INTERVIEWING JOHN B. HOLDS, MD, CHRISTINE C. NELSON, MD, FACS, AND JEFFREY A. NERAD, MD

P ptosis surgery is a bread-and-butter procedure for oculoplastic surgeons, but its prevalence belies the challenges it can present. *EyeNet* asked three experts to share their insights, tips, and personal approaches to performing this common but exacting surgery.

Surgeon, Know Thyself

According to Christine C. Nelson, MD, FACS, chief of eye plastic, orbital, and facial cosmetic surgery at the University of Michigan, Ann Arbor, no matter which surgical approach is chosen, anyone who is new at performing ptosis surgery should meticulously measure and record all relevant preoperative and surgical details. This not only helps ensure that the procedure will be successful but also provides valuable feedback to the physician about the effects of small adjustments in technique. Gathering, recording, and reviewing this information can shorten the learning curve for a surgeon who is adding ptosis repair to his or her practice.

Preop: measure. The planning process for ptosis repair begins in the office, when the surgeon is deciding whether an internal approach, such as Müller muscle–conjunctival resection (MMCR), will be sufficient to address the patient’s ptosis or if an external approach is required. (For a glossary of procedures, see page 41.) Measuring and remeasuring are critical to success, said Dr. Nelson, and several sets of



(1) Preoperative photo and (2) postoperative photo of a 60-year-old woman with ptosis who underwent external levator aponeurosis repair.

measurements may be required, even if that means another office visit for the patient.

Postop: record. “First you measure and decide how much you want to elevate the lid, and then you document the lid position at the end of surgery,” noted Dr. Nelson, who is also professor of ophthalmology and visual sciences and professor of surgery at the Kellogg Eye Center in Ann Arbor. “When the patient comes back in a week, for example, you can see that your margin–reflex distance was left at 2 millimeters at the end of surgery, but after the patient healed, it was only 1 millimeter. This tells you that you need to set the lid higher. Everyone performs surgery a little differently, and my 2.5 millimeters might be another surgeon’s 3 millimeters. You have to figure out how much you need to do, and this knowledge usually develops after your first 50 to 100 procedures.”

Dr. Nelson also stressed the importance of keeping in mind Hering’s law of motor correspondence, which means that a patient who appears to have unilateral ptosis may actually have a bilateral condition that is being

masked by the asymmetry of the two lids. When the clearly ptotic lid is corrected, the opposite lid may look worse because the procedure has unmasked the “hidden” ptosis of that lid.

Tips for Minimizing Complications

The most common complications of ptosis surgery involve placing the lid too high or too low or creating an unnatural-looking lid crease or contour.

Pay attention to contour. “You really want to be careful with the contour, or the shape, of the lid,” Dr. Nelson said. “You want the lid to have a nice shape and not look like an A-frame roof with a peak or with a droop at the outer corner.” If she is correcting only one eye, she takes a photo of the good eye to post in the OR “because everyone’s shape is a little different.” She added that “if you are concerned about the contour of the lid during surgery—if you think you might need to place an extra suture or adjust something—go ahead and do it because it’s not going to look any better next week.”

Mark the lid’s high point. Dr. Nelson recommends measuring where the highest point of the lid should be

and marking that spot preoperatively. “That way, when I am looking at the patient at the end of the case, when there is swelling, I know that this should still be the highest point.”

Dry eye? Undercorrect. Dry eye is an anticipated consequence of ptosis surgery. “If a patient’s eye is already dry, you may have to undercorrect a bit,” Dr. Nelson said. “I tell the patient that I will raise the lid, but I might not be able to leave it that high if the eyes are dry initially.” Sometimes Dr. Nelson treats dry eyes before surgery, with punctal plugs or thermal occlusion.

Watch for problems in surgery.

Dr. Nelson noted that if a suture is placed through the tarsus, the surgeon should make sure that the suture does not penetrate the lid, where it could scratch the cornea later. It’s also important to be vigilant about hemostasis because bleeding and oozing may create a hematoma that can obscure the surgical planes.

Dr. Nelson also stressed the importance of knowing the anatomy inside out. “If you do not perform the procedure frequently, you need to review the anatomy the night before to refresh your memory.”

Stick With What Works for You

John B. Holds, MD, a clinical professor of ophthalmology and otolaryngology—head and neck surgery at Saint Louis University in Missouri, said that ptosis surgery is something that you have to be diligent about, and you must perform a large number of procedures to acquire a good skill level. As for himself, he remains primarily a “levator aponeurotic surgeon” with patients who have good or slightly diminished levator function. “With ptosis, my procedural choice has evolved very little over the last 20 years. The only thing I do differently is that with appropriate patients, I will opt for the Putterman procedure—the MMCR. But the Putterman is not my primary go-to procedure because it is not as versatile as levator aponeurotic surgery.” For patients with bilateral poor levator function ptosis, he typically prefers a frontalis sling procedure.

Ptosis Surgery: A Snapshot of Current Practice

A recent survey of members of the American Society of Ophthalmic Plastic and Reconstructive Surgeons (ASOPRS) showed continued support for internal levator aponeurosis advancement surgeries, such as MMCR and Fasanella-Servat, but it found that external approaches are preferred when blepharoplasty is performed concurrently.¹

The ASOPRS survey also demonstrated that a wide range of materials are used for frontalis sling surgery. The most common is the silicone rod, followed by autogenous fascia lata, cadaveric fascia lata, and Supramid-type material.

In regard to testing for dry eye, nearly half the respondents perform Schirmer testing preoperatively—and nearly half of those physicians test every patient.

Approximately 50 percent of the survey respondents had performed more than 100 ptosis procedures in the previous year.

1 Aakalu VK, Setabutr P. *Ophthalm Plast Reconstr Surg*. 2011;27(4):270-276.

Levator aponeurotic surgery. Although aponeurotic surgery is Dr. Holds’ preferred surgery for most ptosis patients, he noted that it’s a very nuanced, precise operation. “Overcorrection and undercorrection are the most common complications in aponeurotic ptosis surgery,” Dr. Holds said. “But some of this depends on how picky the surgeon and patient are. Some patients can be exquisitely sensitive to lid height, and no matter how good you are at ptosis repair, it is always a potentially humbling experience.”

Classic levator resection. According to Dr. Holds, the classic levator resection technique has little role in treating the typical adult patient who has good levator function.

Fasanella-Servat. “The Fasanella-Servat procedure probably should not be performed by the novice or occasional surgeon,” Dr. Holds said. “Because it is technically very simple, this procedure has been performed by many people for many years, and it can create bad results and produce lots of complications. As someone who is called on to repair complications, especially those related to the Fasanella-Servat procedure, I would prefer to see this procedure go away. But some people who perform this operation are artists with it and do a perfect job. With the average surgeon, however, the results typically are not great even when the procedure does work; and if it doesn’t work, it causes real problems and creates very tough reoperations.”

MMCR (Putterman). “One advantage of this procedure is that you can use epinephrine as a provocative test to see what kind of result you are likely to achieve,” he said. “By doing this, you can get a very good prediction of your postop lid height, and then it becomes a formulaic procedure. You are basically flipping the lid over and taking a measured amount of tissue out of the back layer of the eyelid. If you execute this properly, there is a 90-plus percent chance that you will achieve an acceptable surgical result.”

Determine What the Patient Really Wants

Jeffrey A. Nerad, MD, an ophthalmic and reconstructive surgeon at Cincinnati Eye Institute and professor of ophthalmology at the University of Cincinnati, said “Both doctor and patient need to understand the individual contributions of a droopy eyebrow, droopy eyelid, and redundant eyelid skin to the overall process of correcting ptosis. Each of these problems requires a slightly different fix.”

Clarify medical vs. cosmetic. Dr. Nerad added that once the patient understands the contributions of each of these factors, the physician can begin to sort out what the patient truly wants or expects. “This gets to be a subtle thing: Is the patient looking for an improvement in vision or an improvement in appearance—or both? This is when we say to patients, ‘The insurance company will pay for you to

see better, but they don't care how you look. So if you are trying to look better, there are special things that we can do, but you may have some out-of-pocket expense."

"Sometimes the goal is to do everything you can to help the patient see better *and* look better," he said. "This is important because it becomes difficult to separate a visual result from a cosmetic result. For example, we may have lifted a patient's lid nicely above the pupil, but that tends to make the skin more redundant. The patient may then be unhappy because of the appearance of 'extra' skin."

Discuss contour and height. The surgeon must fully explain the issues and then help patients understand their goals in terms of both vision and appearance. "In general, patients are much more sensitive to the shape of the eyelid than to its exact height," said Dr. Nerad. "If a patient ends up with asymmetric contour in which the shape of one eyelid is different from that of the other lid, he or she will notice that right away. However, if both lids are a little low, but the contour is good, patients don't seem to mind. They have gotten an improvement, even if the eye is not wide open." He added that clarifying such issues in advance will help the surgeon to plan the procedure in a manner that should meet the patient's expectations.

In terms of surgical approaches, Dr. Nerad said that the MMCR has been an important development in recent years. "It makes it much easier to give the patient a symmetric contour and provides an easier recovery."

Dr. Holds is a consultant for Allergan, Merz Pharmaceuticals, and QLT Phototherapeutics. Dr. Nelson reports no related financial interests. Dr. Nerad is a consultant for Procter & Gamble.

Go to www.eyenet.org to view a step-by-step slide show of external levator aponeurosis repair. Images are taken from the chapter written by John B. Holds, MD, and Yasaman Mohadjer, MD, in *Basic Techniques of Ophthalmic Surgery*, which is available for purchase through www.aao.org/store.

Glossary

Müller muscle–conjunctival resection (MMCR)

Approach: Internal, transconjunctival
Basic surgery: Resection of conjunctiva and Müller muscle

Aliases: Putterman procedure, tarsal Müller muscle resection, conjunctivomüllerectomy

Levator aponeurosis repair

Approach: External, transcutaneous
Basic surgery: Resection of levator aponeurosis

Aliases: Levator aponeurotic, external levator aponeurosis advancement

Classic levator resection

Approach: External, transcutaneous,
Basic surgery: Detachment of the levator and aponeurosis from the lid, with replacement after shortening

Aliases: None

Fasanella-Servat procedure

Approach: Internal, transconjunctival
Basic surgery: Tarsal and conjunctival resection

Aliases: Internal tarsectomy, tarsomüllerectomy

Frontalis sling procedure

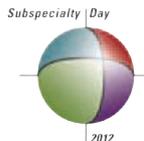
Approach: External, transcutaneous or internal, transconjunctival

Basic surgery: Connection of the eyelid to the brow using a sling material
Aliases: Typically reflect the type of sling material (e.g., silicone rod frontalis suspension surgery). Frontalis slings may be created from autogenous fascia lata, banked fascia lata, or alloplastic materials.

Learn More in Chicago

This year's Oculofacial Plastic Surgery meeting opens with "**Lessons From the Masters**"

(8:02-9:01 a.m.), which includes insights from Stuart R. Seiff, MD, into the more routine use of MMCR, and pearls from Allen M. Putterman, MD. **When:** Saturday, Nov. 10. **Where:** Room S406a.

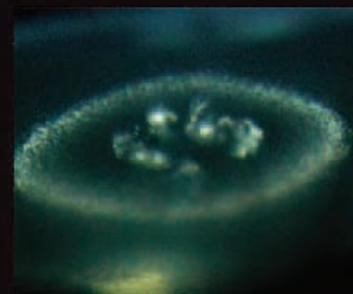


Oculoplastics

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