

RECHARGE YOUR PASSION FOR DRY EYE



PUT A PLUG IN DRY EYE



The newest option isn't always the best choice for the patient.

BY REBECCA MILLER, OD

For many of our patients, chronic discomfort, burning, and fluctuating vision are a fact of life, thanks to their ocular surface disease.

However, treating dry eye is not always as simple as using artificial tears. Often, we need more supportive and innovative solutions to solve the problem. Although industry does an amazing job of creating new pharmacologically based solutions, many of our patients struggle to afford these options, or are noncompliant with eye drop treatments.

This cost and compliance barrier got me searching for a tried-and-true treatment that would reduce a patient's need for eye drops and that insurance companies would cover.

THE "NEW" OLD TREATMENT

Most medical insurance plans cover punctal plugs. These devices are

great, minimally invasive treatments that generally provide 50% to 75% symptom improvement within a few days of placement.

Of course, as with all treatments, there is variability in the success of punctal occlusion, and not everyone is a good candidate. Avoid this treatment option in patients with active ocular surface disease, such as blepharitis or meibomian gland dysfunction; treat these conditions prior to placing plugs. Additionally, patients with unique eyelid anatomy, such as ectropion, entropion, or patients who have had previous eyelid surgery around the punctum, may not be good candidates for plugs. Knowing when to recommend a punctal plug is just as valuable as knowing how to administer the treatment itself. The Tear Film and Ocular Surface Society

Dry Eye Workshop II (TFOS DEWS II) Report is an invaluable resource for managing and treating dry eye.¹ The TFOS DEWS II report places punctal plugs at stage 2 of treatment. Below is the treatment process that I use with my patients. If you feel that a punctal plug is a safe and reasonable treatment option for your patient, then feel free to use the same process with your patients.

Initial Visit

I typically evaluate the ocular surface with a simple fluorescein stain. This is an efficient way to assess inflammation with corneal and conjunctival staining, tear break-up time, and tear meniscus. Matrix metalloproteinase-9 and tear osmolarity testing can help benchmark treatment and assist with patient communication. I commonly initiate dry eye treatment with preservative-free artificial tears four to six times daily, warm compresses once a day for 5 minutes, and lubricating ointment nightly.

At the initial visit, I briefly discuss additional options, such as punctal plugs, serum tears, or prescription eye drops that can be considered at the next appointment if the patient requires further improvement. We schedule the return office visit for 2 to 3 weeks after initiating treatment.

Progress Check

If the patient's ocular surface inflammation has improved but they need additional symptom relief, we

review additional treatment options. The majority of patients choose punctal plugs (dissolvable or semi-permanent). They like the idea of a quick, painless, in-office procedure. I typically perform the treatment at that visit. I recommend getting insurance approval and letting the patient know what their co-pay will be prior to placing the punctal plug.

Patients appreciate that silicone plugs can last for years as a semipermanent solution to keep their natural tears on the surface of their eyes for longer. It's valuable to remind them that although punctal plugs help many of our patients, we don't have a cure for dry eye.

In my experience, plugs reduce the need for artificial tears by about 50% in the average patient. I prefer non-preloaded silicone plugs (eg, BVI Parasol Punctal Occluder Bulk) over preloaded plugs. I find them to be a better value, and they produce less plastic waste because we can re-use the insertion tool.

Before placing the plug, my scribe will instill a drop of proparacaine and have the patient sign a consent form (for a great example consent form from Ophthalmic Mutual Insurance Company, visit www.omic.com/punctal-plugs-consent-form-courtesy-of-bernard-h-chang-md-a-practicing-ophthalmologist-in-nashville-tn/). This allows me to efficiently address any questions before placing the plug. I like to have the patient look up and out, toward the outer canthus, as I gently pull the nasal lower lid down to get a clear view of the punctum while I place the plug.

The key to success with punctal plugs is getting the sizing right. If the plug is too small, it could fall into the punctum, potentially requiring an irrigation or a surgical intervention. Conversely, if the plug is too large, it could irritate the punctum, giving the patient a foreign body feeling, and potentially requiring removal and resizing. I prefer simple

plug sizing (eg, small, medium, and large) and rarely have to resize a plug because of poor fit. I personally have had the most successful fit, retention, price, and customer service with BVI punctal occluders.

Progress Check After Punctal Plug Insertion

I have the patient return to the office 3 to 4 weeks after punctal plug insertion, hoping to hear that they've noticed a significant improvement in their dry eye symptoms.

RISKS, BENEFITS, ALTERNATIVES

As with any treatment or procedure, discussing the risks, benefits, and alternatives to punctal plugs is an important part of the patient conversation.

Risks

The most common side effect is having a foreign body sensation in the inside corner of the eye. Many people find that this feeling goes away within 1 or 2 days.

Additionally, punctal plugs might work "too well," causing excessive tearing. (Plugs work by slowing how quickly your tears drain, so in some cases, this can cause your eyes to water and tears to fall down the corners of the eyes.) If that's the case, the plugs can be repositioned, replaced, or removed. Advise patients not to rub their eyes, as doing so can cause the plug to come out of the eye, which would require another plug to be placed. Conversely, if the plug falls into the tear drain, it could require removal. Ongoing inflammation from a malpositioned plug can scar or damage the tear ducts and, although rare, certain types of eye infections can occur, which may require treatment with antibiotics and/or punctal plug removal.

Lastly, biofilms can accumulate on the ocular surface as a result of punctal occlusion with silicone plugs. This is a significant consideration for

all patients, especially contact lens wearers, due to risk of infection.² Carefully consider the risks, benefits, and alternatives of any treatment option with your patient before proceeding.

Benefits

Benefits associated with punctal plug use include: long-term improvement in dry eye symptoms, reduced need for eye drops, and the fact that they are typically covered by medical insurance.

Alternatives

There are alternative treatment options that can be used before and/or after punctal plugs. I often add serum tears, prescription eye drops, nasal sprays, moisture chamber goggles, amniotic membranes, meibomian gland treatments and/or intense pulsed light for patients who need additional help.

BE TRUE TO YOUR PATIENTS AND THEY'LL BE TRUE TO YOU

We have many treatment options available to help our patients with dry eye, and they appreciate it when we consider therapies that may have some medical insurance coverage. Keep in mind that many patients need more than one treatment to feel their best and that dry eye can change throughout our lifetime.

I encourage patients to keep an open mind and be willing to try different options as we create a custom dry eye treatment that works best for them. ■

1. Nelson JD, Craig JP, Akpek E, et al. TFOS DEWS II: Introduction. *Ocul Surf*. 2017;15(3):269-275.

2. Hadjiargyrou M, Donnenfeld ED, Grillo LM, Perry HD. Differential bacterial colonization and biofilm formation on punctal occluders. *Materials (Basel)*. 2019;12(2):274.

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