

INJECTION TECHNIQUE UPDATE

Experienced users of OZURDEX[®] (dexamethasone intravitreal implant) 0.7 mg discuss clinical experiences and injection pearls



INDICATIONS AND USAGE Diabetic Macular Edema

OZURDEX® (dexamethasone intravitreal implant) is a corticosteroid indicated for the treatment of diabetic macular edema.

Retinal Vein Occlusion

OZURDEX[®] is a corticosteroid indicated for the treatment of macular edema following branch retinal vein occlusion (BRVO) or central retinal vein occlusion (CRVO).

Posterior Segment Uveitis

OZURDEX® is indicated for the treatment of noninfectious uveitis affecting the posterior segment of the eye.

IMPORTANT SAFETY INFORMATION

Contraindications

Ocular or Periocular Infections: OZURDEX[®] (dexamethasone intravitreal implant) is contraindicated in patients with active or suspected ocular or periocular infections including most viral diseases of the cornea and conjunctiva, including active epithelial herpes simplex keratitis (dendritic keratitis), vaccinia, varicella, mycobacterial infections, and fungal diseases.

FACULTY



Seenu M. Hariprasad, MD Moderator

Dr. Hariprasad is Shui-Chin Lee Professor in Ophthalmology & Visual Science, chief of the vitreoretinal service, and director of clinical research at the University of Chicago. He also acts as the director of the fellowship in the diseases and surgery of the retina, macula and vitreous.

David R.P. Almeida,

St. Paul, Minnesota.

Dr. Almeida is a vitreoretinal

Surgery, PA, in Minneapolis-

surgeon with VitreoRetinal

MD, MBA, PhD



Sunir Garg, MD Dr. Garg is a partner with MidAtlantic Retina, professor of ophthalmology at Sidney Kimmel Medical College at Thomas Jefferson University in Philadelphia, and codirector of the Retina **Research Unit at Wills** Eve Hospital.



Bruce Saran, MD

Dr. Saran practices and is managing partner at Chester County Eye Care in Chester County, Pennsylvania. He is also adjunct assistant professor of ophthalmology at the University of Pennsylvania Medical School and the Scheie Eye Institute.

Kimberly Drenser, MD, PhD

Dr. Drenser practices with **Associated Retinal Consultants** in Michigan and is director of ophthalmic research for William Beaumont Hospital and Beaumont Eye Institute.

IMPORTANT SAFETY INFORMATION (continued)

Contraindications (continued)

Glaucoma: OZURDEX® (dexamethasone intravitreal implant) is contraindicated in patients with glaucoma, who have cup to disc ratios of greater than 0.8.

Torn or Ruptured Posterior Lens Capsule: OZURDEX[®] is contraindicated in patients whose posterior lens capsule is torn or ruptured because of the risk of migration into the anterior chamber. Laser posterior capsulotomy in pseudophakic patients is not a contraindication for OZURDEX[®] use.

REVIEWING INJECTION TECHNIQUES & PEARLS

Experienced users of OZURDEX® (dexamethasone intravitreal implant) 0.7 mg share their insights and clinical experiences

Please see the Administration instructions from the accompanying U.S. Prescribing Information, Section 2.2.

Seenu Hariprasad, MD:

Each member of the panel participating in this discussion has had extensive experience using the dexamethasone intravitreal implant 0.7 mg (OZURDEX[®], Allergan) for each of its FDA-approved indications, which are treatment of noninfectious uveitis affecting the posterior segment of the eye, macular edema following branch retinal vein occlusion (BRVO) or central retinal vein occlusion (CRVO), and diabetic macular edema (DME). Many also participated in the clinical trials that led to the approvals for these indications.

Based on a new understanding that these conditions are multifactorial in that they involve upregulation of vascular endothelial growth factor as well as inflammatory cytokines,^{1,2} our use of OZURDEX[®] has increased, and the way we use it has evolved. Depending on the patient, we are incorporating the implant to address inflammatory cytokines. Our levels of experience with this treatment option and our injection style have changed, too. In addition, OZURDEX® applicators include a secondgeneration needle.

The Evolving Use of OZURDEX®

Bruce Saran, MD: In part because of the benefits of its sustainedrelease formulation, I was an early adopter of OZURDEX*.

If I don't see improvement in visual acuity or adequate response on OCT. I tend to introduce

OZURDEX[®]. Based on my clinical experience, this is the best approach for my patients.

If a retinal vein occlusion or DME patient exhibits prominent macular edema at baseline, I may, after reviewing patient characteristics and contraindications, initiate

IMPORTANT SAFETY INFORMATION (continued)

Hypersensitivity: OZURDEX[®] (dexamethasone intravitreal implant) is contraindicated in patients with known hypersensitivity to any components of this product.

Warnings and Precautions

Intravitreal Injection-related Effects: Intravitreal injections, including those with OZURDEX®, have been associated with endophthalmitis, eye inflammation, increased intraocular pressure, and retinal detachments. Patients should be monitored regularly following the injection.

OZURDEX[®] as a first-line therapy.

David R.P. Almeida, MD, MBA, PhD: I firmly believe noninfectious posterior segment uveitis, vein occlusion-related macular edema, and DME are multifactorial, and I've been treating them as such for quite a while. I find that addressing the inflammatory response early by initiating therapy that addresses multiple inflammatory components is a good approach.

Kimberly Drenser, MD, PhD: Inflammation is an important aspect of managing these diseases, especially diabetic disease.³ In particular, in DME patients, I've seen how using the implant early can make a difference.

Sunir Garg, MD: I, too, have a very low threshold for using the dexamethasone intravitreal implant in a patient's therapy. I often start with another therapy, and some patients do very well. I don't like to

Please see additional Important Safety Information on the following pages.

see only marginal improvement in the patient's vision or OCT over months. For these patients, I can use the dexamethasone intravitreal implant to get them seeing better without having monthly injections by using a sustained-release formulation.⁴

Fifteen years ago, no one talked much about cytokines because we didn't have any treatments to target them. Once we learned about the VEGF cytokine and how it plays an important role in retinal vascular

disease, we realized that many cytokines are upregulated in these eyes.^{5,6} The more we learn about diabetic eye disease, the more we realize that targeting one cytokine is great, although if we can target multiple cytokines simultaneously, we can focus on the multi-inflammatory component of the disease.7

Dr. Hariprasad: I think it's vitally important to practice evidence-based medicine, and your collective statements are based

TABLE 1. OZURDEX[®] Primary Efficacy Endpoint Results

	Indication	Study	Measurement	OZURDEX ® (n = 328)	Sham (n = 328)	Estimate Differenc (95% confider interval [Cl]
		MEAD ^{8,9}	Patients gaining \ge 15 letters (3 lines) in BCVA (n) at month 39	19.5% ^a (64/328)	10.7% (35/328)	8.8% (3.4%, 14.3%
	Diabetic macular edema		Patients losing \ge 15 letters in BCVA (n) at month 39	13.7% (45/328)	10.7% (35/328)	3.0% (-2.0%, 8.1%
			Mean change in BCVA (letters) (standard deviation) at month 39	2.2 (15.88)	0.8 (12.72)	1.3 (-0.9, 3.4)
	Indication	Study	Measurement	OZURDEX® (n = 427)	Sham (n = 426)	
ĺ	Macular edema following retinal vein occlusion	GENEVA ^{9,10}	Patients gaining \ge 15 letters (3 lines) in BCVA from baseline, day 30	21.3% ^b	7.5%	
			Patients gaining \ge 15 letters (3 lines) in BCVA from baseline, day 60	29.3% ^b	11.3%	
			Patients gaining \ge 15 letters (3 lines) in BCVA from baseline, day 90	21.8% ^b	13.1%	
			Patients gaining \ge 15 letters (3 lines) in BCVA from baseline, day 180	21.5% °	17.6%	
	Indication Study		Measurement	OZURDEX® (n = 77)	Sham (n = 76)	
	Noninfectious posterior segment uveitis	HURON ^{9,11}	Percentage of patients with vitreous haze score of zero at week 8	46.8% ⁵	11.8%	

 $^{\circ}P$ = .002 vs sham. ^bP<.001 vs sham.

°P = Not significant

IMPORTANT SAFETY INFORMATION (continued)

Warnings and Precautions (continued)

Steroid-related Effects: Use of corticosteroids including OZURDEX® (dexamethasone intravitreal implant) may produce posterior subcapsular cataracts, increased intraocular pressure, glaucoma, and may enhance the establishment of secondary ocular infections due to bacteria, fungi, or viruses.

Corticosteroids should be used cautiously in patients with a history of ocular herpes simplex because of the potential for reactivation of the viral infection.

on the data (Table 1). I agree that DME and retinal vein occlusion are multifactorial diseases.^{1,2} I believe my patients are well served when I incorporate the dexamethasone intravitreal implant. This targets different components of the disease,¹² which makes very good sense to me.

Discussions With Patients and Colleagues

Dr. Hariprasad: How do you discuss the dexamethasone intravitreal implant with patients? How do you explain to colleagues why the therapy is important for your patients?

Dr. Garg: I explain to patients that I have treatments that are likely to help. We discuss how we are going to select the appropriate treatment course for their disease and that the effect of the dexamethasone intravitreal implant usually lasts

longer. I let them know that experience with OZURDEX (dexamethasone intravitreal 0.7 mg injection.

We also talk about how t injections can potentially can pressure inside the eye to inc If this happens, we can usual the pressure by using an eye If, however, the pressure inc

TABLE 2. Medical and Surgical Management of IOP in OZURDEX® Clinical Trials

Indication	Study	Patients Receiving IOP Medication at the Final Study Visit		Patients Receiving One IOP Medication at the Final Study Visit		Incisional Surgery for Elevated IOP	
		OZURDEX ®	Sham	OZURDEX ®	Sham	OZURDEX ®	
Diabetic macular edema	MEAD ^a	21.1% (54/244) ⁹	3.6% (6/169) ⁹	9.8% (24/244) ³	2.4% (4/169) ⁹	0.3% (1/324) ^{8,12}	
Macular edema following retinal vein occlusion	GENEVA ^b	22.9% (96/421) ⁹	3.8% (16/423) ⁹	16.2% (68/421) ⁹	3.3% (14/423) ⁹	0.7% (3/421) ^{10,14}	
Noninfectious posterior segment uveitis	HURON°	16.9% (13/77) [。]	9.2% (7/76) ⁹	13.0% (10/77) ³	6.6% (5/76) ⁹	1.3% (1/77) ³	

^aPooled results from 2 multicenter, masked, randomized, sham-controlled, 3-year studies.^a ^bPooled results from 2 multicenter, randomized, masked, sham-controlled, 6-month studies.¹⁰ °Multicenter, masked, randomized, 26-week study.11

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions

Diabetic Macular Edema

Ocular adverse reactions reported by greater than or equal to 1% of patients in the two combined 3-year clinical trials following injection of OZURDEX[®] (dexamethasone intravitreal implant) for diabetic macular edema include: cataract (68%), conjunctival hemorrhage (23%), visual acuity reduced (9%), conjunctivitis (6%), vitreous floaters (5%), conjunctival edema (5%), dry eye (5%), vitreous detachment (4%), vitreous opacities (3%), retinal aneurysm (3%), foreign body sensation (2%), corneal erosion (2%), keratitis (2%), anterior chamber inflammation (2%), retinal tear (2%), eyelid ptosis (2%). Non-ocular adverse reactions reported by greater than or equal to 5% of patients include: hypertension (13%) and bronchitis (5%).

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too much, a surgical procedure may be necessary. In the 3-year MEAD clinical study, 0.3% (1/324) of OZURDEX[®] patients required incisional surgery for steroidinduced IOP increase.¹² I also explain to patients that after the procedure, we can continue the injections with good success. And I discuss the possibility of cataract progression,

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particularly with younger patients. I explain that with the dexamethasone intravitreal implant, cataract surgery may be necessary; but once that's out of the way, vision should improve, and we can continue with the treatment plan. It is an educational conversation, and I think patients respond well to it.

As far as colleagues in my area, some use the dexamethasone intravitreal implant frequently and some do not.

Dr. Saran: I have many patients who come from far away. I seek to reduce the monthly injections for all of my patients, and the OZURDEX[®] (dexamethasone intravitreal implant) 0.7 mg implant is a significant medication in our treatment arsenal to achieve this goal because it has a sustainedrelease formulation;¹² in addition, IOP is typically manageable (Tables 2 and 3).¹³ Doctors who don't have experience with the implant may

fear the potential side effects, but any of the IOP issues that arise are manageable and patients typically do well. I've been able to rely on the safety profile of OZURDEX[®].¹²

Dr. Almeida: Because I'm a big advocate of therapy that addresses multiple inflammatory components, I usually explain all of the treatment options to the patient right from the beginning.

Rather than cataract progression, I find the biggest obstacle some

TABLE 3. OZURDEX® IOP Across Indications

Indication	Study	Percentage of Eyes With ≥ 10 mm Hg IOP Increase From Baseline		Percentage of Eyes With IOP ≥ 35 mm Hg		Peak Mean IOP Timing	Generally Returns to Baseline
		OZURDEX ®	Sham	OZURDEX ®	Sham	OZUR	DEX®
Diabetic macular edema	MEAD ^a	28.1% (91/324) ^{9,6}	4.0% (13/328) ^{9,6}	6.2% (20/324) ^{9,6}	0.9% (3/328) ^{9,b}	45 or 90 days after injection⁵	180 days after injection ¹⁵
Macular edema following retinal vein occlusion	GENEVA	26.6% (112/421) ^{9,b}	1.4% (6/423) ^{9,b}	5.9% (25/421) ^{9,6}	0% (0/423) ^{9,b}	60 days after injection ⁹	180 days after injection ⁹
Noninfectious posterior segment uveitis	HURONd	9.6% (7/73) at week 8°	0% (0/71) at week 8°	7.9% (6/76) ^{9,e}	1.3% (1/75) ^{9,e}	56 days after injection ⁹	182 days after injection ⁹

Pooled results from 2 multicenter, masked, randomized, sham-controlled, 3-year studies. ^bAt any visit.

°Pooled results from 2 multicenter, randomized, masked, sham-controlled, 6-month studies.10 ^dMulticenter, masked, randomized, 26-week study.¹¹

[®]Overall

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued)

Diabetic Macular Edema (continued)

Increased Intraocular Pressure: IOP elevation greater than or equal to 10 mm Hg from baseline at any visit was seen in 28% of OZURDEX® (dexamethasone intravitreal implant) patients versus 4% of sham patients. 42% of the patients who received OZURDEX® were subsequently treated with IOP-lowering medications during the study versus 10% of sham patients.

doctors see to using OZURDEX* (dexamethasone intravitreal implant) is the potential for an increase in IOP. The results of the MEAD trial answer that concern. Slightly more than 25% of patients (91/324) showed a \geq 10 mm Hg IOP increase,^{8,12} and fewer than half of them required drops (136/324).^{9,12} My colleagues and I recently published a retrospective case series exploring ocular hypertension in patients with preexisting glaucoma or glaucoma suspects receiving the implant.

Dr. Drenser: When discussing the dexamethasone intravitreal implant with colleagues, I focus on the fact that the multifactorial nature of the disease makes it necessary in order to address both inflammation and other factors.^{1,2}

Also, I think many have concerns about IOP increase, so I can tell them from experience it's manageable. I also mention the second-generation applicator needle, which features a coating designed to facilitate glide of the needle through the sclera and into the posterior.^{16,17}

We're able to see patients less frequently for the purpose of giving them an injection.4

OZURDEX® Injection: **Patient Experience**

Dr. Hariprasad: Do you discuss with patients the clicking sound that occurs as you administer the dexamethasone intravitreal implant?

"I find that addressing the inflammatory response early by initiating therapy that addresses multiple inflammatory components is a good approach." - DAVID R.P. ALMEIDA, MD, MBA, PHD

Dr. Garg: As long as I tell patients ahead of time that they're going to hear a click, they are totally fine with it. I say, "In a second, you're going to hear a click, and that's normal."¹²

Dr. Drenser: As long as we talk them through it, patients handle the implant injection well.

Preparing the Patient and Delivering the Injection

Please see the Administration instructions from Section 2.2 in the accompanying U.S. Prescribing Information.

Dr. Hariprasad: How do you prepare the patient for the OZURDEX® injection, and how do

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued)

Diabetic Macular Edema (continued)

Increased Intraocular Pressure (continued): The increase in mean IOP was seen with each treatment cycle, and the mean IOP generally returned to baseline between treatment cycles (at the end of the 6-month period).

you handle the components of the injection procedure?

Dr. Garg: Except for very select circumstances, our technicians handle all of the preparation. We have a well-established protocol

for all of our injections. I don't use a lid speculum; the assistant uses both thumbs to retract the eyelids. I refrain from talking during the injection.

For anesthesia, I use approximately 0.25 mL of subconjunctival lidocaine injection, 0.2 mL or 0.3 mL, which I let sit for about 5 minutes.^{12,18} It makes the procedure virtually pain free for the patient. In the past, I used a pledget, but my patients prefer the subconjunctival lidocaine. Research that our group¹⁹ and others have published suggests that routine use of topical antibiotics after intravitreal injection may increase bacterial

resistance, so we use copious povidone iodine.12,20

Once I uncap the needle, I want to perform the injection immediately. I remove the cap quickly, but I'm cognizant to pull it along the plane of the needle to make sure I'm not hitting the tip. I feel as if I have better control pulling off the cap quickly rather than trying to slowly separate it. I don't use calipers to measure 3 mm to 4 mm from the limbus. I do shift the conjunctiva peripherally with a cotton-tipped swab, which I think helps to stabilize the eye.

Because of the Bell's response, I inject inferotemporally. I put the needle into the eye, similar to the way I place a trocar for microincision vitrectomy. I enter at an approximately 20-degree angle, and when the needle is inserted about 1 mm, I rotate the injector and continue perpendicular to the eye. It's a smooth motion, not a deliberate reposition. Rather than hold the OZURDEX[®] (dexamethasone intravitreal implant) applicator like a pencil, which is how I hold other injection needles for intravitreal injections, I lay it across my fingers with my thumb perpendicular to the button. That gives me better control and I can simply rotate my wrist to get the implant into the eye. The

angle works well for me because the applicator is larger than a traditional syringe. After the injection, I don't look into the back of the eye to visualize the implant.

Dr. Drenser: My protocol is similar to Dr. Garg's. Most of the time, I prepare the patient myself, but we have some very experienced technicians who were surgical techs and are very good with aseptic

vitrectomy. I use a cotton-tipped swab to displace the conjunctiva, and I enter the eye in a beveled manner.

Older patients tend not to blink when their eye is numb. I do place a bit of antibiotic ointment, usually erythromycin, on the eye after an injection.

Dr. Saran: Technicians prepare our patients for injection of the dexamethasone intravitreal

"I use a cotton-tipped swab to displace the conjunctiva, and I enter the eye in a beveled manner."

- KIMBERLY DRENSER, MD, PHD

technique. If they're working with me on a given day, they handle the patient prep.

I use subconjunctival lidocaine to numb the eye for most patients. Some dislike it, so for them, I use topical tetracaine HCl 0.5% (TetraVisc Forte, Accutome), and patients do surprisingly well. I ask patients to look to the side for the injection because I find the eye moves less and I don't have to manipulate it as much. Because it's a slightly larger needle, I tend to look at the injection like a 23-gauge implant, but we require them to pass a preparation test first. We prep with povidone iodine but not antibiotics, and we've moved away from subconjunctival lidocaine. I have found that subconjunctival injections increase the chance of subconjunctival hemorrhage and this adds to postinjection discomfort and increased patient calls. For all but approximately 5% of our patients, we instill topical tetracaine — we no longer use TetraVisc. When the decision is made to treat, we place the first anesthetic drop in the eye.

After the informed consent process is complete, we instill another drop. In a period of about 5 minutes, patients receive 3 to 4 drops.²⁰ Once in a while, if a patient mentions he or she was uncomfortable during the procedure, we make a note in the chart and suggest subconjunctival lidocaine the next time. I like to use a speculum because it protects the lid margin from getting near the injection site. The patient is instructed not to talk. I find it beneficial to give the patient something to focus on during the injection by having technicians wiggle their fingers where I want the patient to look. I perform the injection at a 20-degree angle, typically in the inferior temporal quadrant. This allows the implant to enter away from the macula and float in the inferior quadrants outside central vision. Also, any subconjunctival hemorrhage is masked by the lower lid.

Dr. Almeida: According to our standardized practice pattern, a technician prepares the patient for the injection using povidone iodine. We ask patients not to talk. I don't use calipers and I don't shift the conjunctiva. I don't use a cotton-tipped swab either, because I think the fewer items in the eye, the better. I make sure I'm

not touching the needle at any point during the injection process. I inject superotemporally or inferotemporally. After the injection, I don't visualize the implant in the eye.

Dr. Hariprasad: Either I or one of our retina fellows prepares the patient and the applicator. To numb the eye, we dip two cotton-tipped swabs in 4% lidocaine, place them under the superior temporal and superior nasal fornices, and leave them there for a minute. We do this 3 times. We use povidone iodine

that it's a great option to have."

- SUNIR GARG, MD

swabs 3 times to prep the eye.^{12,20} For the injection, I use clean gloves and a lid speculum with a lash guard. I ask everyone in the room to keep the talking to a minimum. Although I know I am in the minority, I use a drop of a fourth-generation fluoroquinolone right after the injection procedure is completed. I'm very careful about how

I remove the cap from the

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued)

Diabetic Macular Edema (continued)

Cataracts and Cataract Surgery (continued): Among these patients, 61% of OZURDEX® subjects versus 8% of sham-controlled subjects underwent cataract surgery, generally between Month 18 and Month 39 (Median Month 21 for OZURDEX® group and 20 for Sham) of the studies.

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued) **Diabetic Macular Edema (continued)**

Cataracts and Cataract Surgery: The incidence of cataract development in patients who had a phakic study eye was higher in the OZURDEX® (dexamethasone intravitreal implant) group (68%) compared with Sham (21%). The median time of cataract being reported as an adverse event was approximately 15 months in the OZURDEX® group and 12 months in the Sham group.

OZURDEX[®] (dexamethasone intravitreal implant) 0.7 mg applicator. I do it without touching the needle, and I remove the safety pin immediately after, keeping the tip upward. I don't use calipers, but I do shift the conjunctiva with a cotton-tipped swab so the scleral and conjunctival postinjection holes aren't aligned. I use the same cottontipped swab to stabilize the eye and also to push the whole globe into the orbit to help pressurize the eye. I do this mainly out of habit, theorizing that a more pressurized eye

"I'm delighted to have this treatment to offer my patients. It expands how well I can treat them. The more we learn about it, the more we find

> makes the injection easier. I inject superotemporally or horizontally.

Applicator Design and Second-Generation Needle

Dr. Hariprasad: The secondgeneration applicator has a needle manufactured by TSK Laboratory.¹⁶ Allergan pursued this TSK needle based on feedback from Retina Specialists relative to the glide

factor and penetration of the original needle. The OZURDEX® (dexamethasone intravitreal implant) applicator with TSK needle is 22 gauge and features a coating designed to facilitate glide of the needle through the sclera and into the posterior chamber.^{16,17}

In my opinion, the OZURDEX® applicator is cleverly and elegantly designed. The actuator button squeezes an accordion-like piece below it. The accordion flattens and pushes the implant inside the eye via the needle. I've always found the design to be intelligent because a trained surgeon controls the pressure that is applied to the button.¹²

What has been your experience with the second-generation applicator needle versus the previous



Figure 1: OZURDEX® applicator

needle? Studies have evaluated the second-generation needle with favorable performance in glide and penetration.*16,17

Dr. Drenser: I was impressed right away by the ease with which it goes into the eye.

Dr. Saran: Using the secondgeneration needle is smooth. There's very little resistance entering the eye. Dr. Almeida: I agree that the

"The actuator button squeezes an accordionlike piece below it. The accordion flattens and pushes the implant inside the eye via the needle. I've always found the design to be intelligent because a trained surgeon controls the pressure that is applied to the button."

- SEENU HARIPRASAD, MD

...

second-generation needle penetrates the sclera easily.

Dr. Garg: The second-generation needle is great. It is smooth and goes in nicely.

Dr. Hariprasad: I've done many, many dexamethasone intravitreal implants, in clinical trials and post approval, and in patients with different sclera. I've had success in performing the procedure at the intended site of injection. It's a minimal concern at most. As long as the doctor performs the injection with confidence and is well trained, it is unlikely he or she would be unable to complete the procedure.

Injection Tips and Techniques

Dr. Almeida: One tip I've given to new OZURDEX[®] users — and received positive feedback on — is to use subconjunctival lidocaine for the first series of injections. That way, the patient isn't feeling pressure while the doctor is reaching his or her comfort level.

Dr. Garg: In my opinion, the most helpful advice for doctors new to OZURDEX[®] is to take advantage of the wet labs that Allergan offers. The company will bring a pig eye or model eye to you and you can perform as many sample injections

*Study was conducted in porcine eyes.

as you want so you can practice. For experienced vitreoretinal surgeons, the learning curve is really very short. To me, it's actually more simple to inject an OZURDEX* (dexamethasone intravitreal implant) implant than it is to insert a cannula with a trocar during surgery.

As Dr. Hariprasad mentioned, I advise doctors to "own the injection." When you execute with confidence, you have an ease and rapidity of motion that makes for a good experience for the patient and for yourself.

Dr. Drenser: It's helpful for residents or fellows to gain experience injecting OZURDEX® in the wet lab setting to increase comfort level when subsequently injecting OZURDEX® into an anesthetized eye.

Dr. Saran: The key is to think of the OZURDEX® injection technique as one fluid motion rather than several isolated steps. You have to commit, choose your site, do the entry, and then press the applicator button in one swift motion. That limits the amount of contact time with the eye and increases patient cooperation. I gently squeeze the trigger, which allows for a controlled injection. Patients can perceive your confidence, and the procedure

is smooth and seamless.

Dr. Almeida: I've seen beginners who aren't accustomed to using trocars get hung up on trying to bevel the incision.

Dr. Hariprasad: It is sensible for inexperienced injectors, or

"Using the second-generation needle is smooth. There's very little resistance entering the eye." - BRUCE SARAN, MD

even experienced surgeons who want to try delivering the implant before performing the procedure on a patient, to take advantage of the opportunity to practice with an Allergan OZURDEX® (dexamethasone intravitreal implant) 0.7 mg wet lab. Also, it's worth reiterating the importance of approaching the injection with confidence and using a fluid motion. With proper training and experience, it's a simple procedure, and it's not necessary to overcomplicate it.

Meeting an Important Need in Patient Care

Dr. Hariprasad: Let's close with thoughts on the dexamethasone intravitreal implant and its importance in the treatment algorithms for DME and macular

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued)

Retinal Vein Occlusion and Posterior Segment Uveitis

Adverse reactions reported by greater than 2% of patients in the first 6 months following injection of OZURDEX® (dexamethasone intravitreal implant) for retinal vein occlusion and posterior segment uveitis include: intraocular pressure increased (25%), conjunctival hemorrhage (22%), eye pain (8%), conjunctival hyperemia (7%), ocular hypertension (5%), cataract (5%), vitreous detachment (2%), and headache (4%).

IMPORTANT SAFETY INFORMATION (continued)

Adverse Reactions (continued)

Retinal Vein Occlusion and Posterior Segment Uveitis (continued)

Increased IOP with OZURDEX® (dexamethasone intravitreal implant) peaked at approximately week 8. During the initial treatment period, 1% (3/421) of the patients who received OZURDEX® required surgical procedures for management of elevated IOP.

edema following BRVO or CRVO. **Dr. Garg:** I'm delighted to have this treatment to offer my patients. It expands how well I can treat them. The more we learn about it, the more we find that it's a great option to have.

Dr. Drenser: I've found that OZURDEX® can be effective for many patients.12 I have a growing number of OZURDEX® patients who have their visual acuity managed effectively without the need for monthly injections.

I've steadily increased my use of OZURDEX®. Its use is straightforward. Also, it is helpful to have the second-generation needle and all of the support from Allergan regarding patient assistance.

Dr. Saran: My primary impression of the dexamethasone intravitreal implant is that it fills an important need. OZURDEX[®] helps treat the inflammatory component of DME without the need for monthly injections.

Dr. Almeida: OZURDEX* produces good visual improvements,

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and it can be efficiently incorporated into a busy practice flow.¹² *In vivo*, the matrix dissolves completely into its components, lactic acid and glycolic acid. In turn, these are converted to carbon dioxide and water.^{12,21}

OZURDEX® Progress

Dr. Hariprasad: In conclusion, I would like to give a special thanks to Drs. Drenser, Garg, Saran, and Almeida for taking time out of their busy schedules to share with us their extensive experience in utilizing steroids in the management of vitreoretinal diseases. It is clear from this discussion that the utilization of OZURDEX® (dexamethasone intravitreal implant) has progressed over the past few years. Their generosity in openly sharing their expertise on this topic will be valued by our clinician colleagues and their patients.

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Dosage and Administration

FOR OPHTHALMIC INTRAVITREAL INJECTION. The intravitreal injection procedure should be carried out under controlled aseptic conditions. Following the intravitreal injection, patients should be monitored for elevation in intraocular pressure and for endophthalmitis. Patients should be instructed to report any symptoms suggestive of endophthalmitis without delay.

Please see accompanying full Prescribing Information or visit https://www.rxabbvie.com/pdf/ozurdex_pi.pdf