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### What You Need to Know About Neuromodulators

Narrator:

Welcome to CME on ReachMD. This activity, entitled "What You Need to Know About Neuromodulators" is provided by Prova Education and is supported by an independent educational grant from Galderma.

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Dr. Bloom:

The cosmetic use of botulinum neurotoxin has grown significantly over the past two decades, now with four products approved for use in the United States. However, there are important differences amongst these products, and their use is not interchangeable, making it essential that we as clinicians understand their differences and their appropriate uses. This is CME on ReachMD. I'm Dr. Jason Bloom, and I'm here with my guests today, Dr. Melanie Palm from San Diego, California, and Dr. Susan Weinkle from Bradenton, Florida. Dr. Palm, Dr. Weinkle, welcome to you both.

Dr. Palm:

Thank you, Jason.

Dr. Weinkle:

Yes, it's really a pleasure to be here with you both.

Dr. Bloom:

So, Dr. Weinkle, let's begin with you. Let's look and really review some of the factors to help determine if a patient is an ideal candidate for cosmetic botulinum toxin administration. In your practice, what do you typically look for?

Dr. Weinkle:

Well, I look for someone who I think can get a real bang for their buck for this. Because I think personally, it is really the best thing we do. And if you can relax someone so they don't feel angry, if you can soften around their eyes, if you can make them not look sad – it's very impactful for their life and how they feel about themselves.

Dr. Bloom:

I typically say the same thing, that specifically around the eyes, that a little bit of botulinum toxin really is the best bang for your buck. It opens up the eyes, brightens the face.

Dr. Weinkle:

It's a wonderful introductory way to start a patient in sort of that journey of rejuvenation.

Dr. Palm:

Yeah, it's kind of like the gatekeeper, you know, and I think you build that trust bank with the patient, and then you can start considering, down the road, as you travel down with the patient, down their rejuvenation pathway, talk about other procedures that might benefit them too.

Dr. Weinkle:  
Especially the male patient.

Dr. Palm:  
Yes

Dr. Bloom:  
So we all know that the neuromodulator products are approved by the FDA for certain areas and different age ranges. But we all use them differently in our practice. Dr. Weinkle, how would you describe how you use some of these products in your practice.

Dr. Weinkle:  
Well, first of all, let's say, we know the package insert does direct 21-65. Now, I think the prejuvenation concept, I'm seeing more of that, so I'm treating sort of that 25-35-year-old group. However, don't neglect the 90-year-old. I actually, frequently use botulinum toxin because the grandmother doesn't want her grandchildren to think she looks angry. And they love it! They sign up for their next visit when they leave. So I really think that that age range is much broader than what the package insert and the clinical trials have shown us. Um, and then the other thing is, I think the areas that we treat. We know that on-label areas for Onabotulinum toxin are the glabella, the periorbital, and the forehead.

Dr. Bloom:  
Now, if we're considering using a neuromodulator product, Dr. Palm, how do we ensure that it's the right product for the right patient? Now, we have a couple different – four on the market currently. Tell me how you look at that.

Dr. Palm:  
Yeah, I think it's a really interesting sort of history we have. So, just in the past year, we've seen the fourth one introduced, Prabo, and, um, you know, I carry all four, but I predominantly use Ona and Abo, and I think for me, it's not so much about conversions, because we all know that they have their own specific behavior, but sometimes it's about patient preference. It's about education; it's about what the physician is experienced and really feels comfortable with. But what's really interesting, even though we know that they all derive from this Hall strain of botulinum toxin A1, they have different epitopes that have actually been discovered in recent research. So I think just like we look different and we have different phenotypic sort of behavior, um, I think sometimes one toxin is a little bit better fitted for another person, and sometimes you don't know that unless you taste test a little bit with the patient.

Dr. Bloom:  
Totally agree, and you know what, different patients respond differently to different toxins and, and also there are, um, different molecules around the neuromodulator that really can have, you know, some patients have headaches -

Dr. Palm: Sure.

Dr. Bloom:  
- in response to one and not to others. So, yeah, it does take a small little amount of taste testing to get the right mixture in there.

Dr. Weinkle:  
I think it's important to carry all four and keep them in your office. Because sometimes a patient says, "You know, it didn't work quite as well last time." I go, "Okay, let's try this one."

Dr. Bloom:  
Totally. We have that ability. There are also other important differences specific to how these products are reconstituted and stored. The phrase, "No two neuromodulators are alike" really applies in this instance. So, let's watch this brief video.

Narrator:  
Botulinum toxin is an injectable neuromodulator commonly used as part of an overall facial rejuvenation plan.

AbobotulinumtoxinA (Dysport®) comes in powder form in a 300 unit vial and should be reconstituted with either 1.5mL or 2.5mL of preservative-free, 0.9% sterile saline. Insert the needle at a 45-degree angle and allow the diluent to be pulled into the vial by partial vacuum. After adding the saline diluent, gently rotate (do not shake) the vial until the white substance in the vial is fully dissolved. When fully reconstituted, abobotulinumtoxinA should be a clear, colorless, and particulate-free solution.

AbobotulinumtoxinA, once reconstituted, should be stored in a refrigerator between 2 and 8 degrees Celsius or 36-46 degrees Fahrenheit. The product must be used within 24 hours after reconstitution and cannot be frozen.

Draw up 0.25mL (50 units) of the properly reconstituted botulinum toxin into a sterile 30-gauge syringe and expel any air bubbles in the syringe barrel. Confirm the patency of the needle.

Inject 10 units intramuscularly into each of the 5 standard points of injection: two into each corrugator muscle and one in the midline of the procerus muscle.

Dr. Bloom:

So, Dr. Palm, that gave us a pretty good look at the different ways that the neuromodulators are reconstituted and stored. But can you offer any additional insights that you do in your practice specific to this?

Dr. Palm:

Sure. I think it's a really personal choice how you decide to reconstitute it. We have things that are on-label, and then we know so much of what we do in plastics, oculoplastics and dermatology is off-label. Personally, for me, I do carry all four toxins – Ona, Abo, Inco, and Prabo – and I actually dilute it the same way - if I'm using it for facial applications, I reconstitute with 2.5 cc. I love using these little BD gauge, 31-gauge needles, and I think we can have a discussion about what we all use, but I find that it gives me excellent control. I don't lose the product. But if I am using it for certain applications, if I wanted a lot more precision, then I think that's when you concentrate and you maybe reconstitute with lower volumes, for an area such as axillary hyperhidrosis where I actually where more spread of the toxin, then I may use something that's greater in dilution. And then, finally, I think a point, you know, all of these are FDA-approved with, um, no preservative saline. And I think we all know, and there's been studies published, including Alamidol I think in like 2006, that showed benzyl alcohol, because that molecule acts like a natural anesthetic, makes it so much more comfortable for patients-

Dr. Weinkle:

Truly

Dr. Palm:

-So I actually enjoy that as well.

Dr. Bloom:

Um, I typically reconstitute with 2 cc, and I use those same 31-gauge needles. But what I do is, I divide it up into multiple needles, so that I'm really using it for a couple sticks each, and then I have a new fresh one, um, when I'm injecting a different area.

Dr. Bloom:

We should just talk one more thing about some of the storage. When we talk about all the neuromodulator products, they're pretty much all stored in the fridge except for incobotulinum toxin.

Dr. Weinkle and Dr. Palm:

Yes.

Dr. Bloom:

Which is nice because it can be stored on the shelf. So, Dr. Weinkle, let's say you've now consulted the patient, and they've decided to move forward with a neuromodulator. What are the goals of this type of therapy, and really, how do you typically talk to your patients and set both realistic and understandable expectations?

Dr. Weinkle:

I, I think that's such a key point. Because, if a patient thinks that a neuromodulator alone is going to fill the lines at rest, once they have etched lines at rest, it's not a filler.

Dr. Palm:

Yeah.

Dr. Weinkle:

I have to tell them this is a case of combination therapy. So your expectation – and I see this a lot in my practice. If they have an expectation that the neuromodulator alone is going to totally relax that, they come back and say, "It didn't work for me." Well, it didn't work for you because it's not a filler! And so, we have to add the filler. Or, they come back in and you have to make it clear that when you're injecting the orbicularis around the eye, you can't get the zygomatic cheek lines! And they think you're totally relaxing this entire complex – you can't. And I explain to them, if we get greedy, you know, we'll get in trouble. If we come down too far, and we inject inferior to the zygoma, we are going to relax the zygomaticus major and minor, and I actually explain this in terms I want them to understand that I know what's underneath their skin.

Dr. Bloom:

Sure.

Dr. Weinkle:

That they are going to look like they had a stroke.

Dr. Palm:

Hmm.

Dr. Weinkle:

So, it's not going to do that for you. I say that when I treat the forehead and the frontalis muscle, it's going to relax some of it, and other parts of it are going to become hyperkinetic, or have increased activity, and that's why you may see this little comma up here, because you still want to be able to raise your eyebrow.

Dr. Bloom:

Totally.

Dr. Weinkle:

And, the side effect is, you're going to have that little extra line, which we may need to put a filler in. But I think when you take time to explain these things to patients, they really feel much more comfortable.

Dr. Bloom:

Yeah, I use the phrase a lot, "Improve, not remove."

Dr. Weinkle:

Oh, that's an excellent phrase! I like that!

Dr. Bloom:

Because it does. It helps to, like, really set expectations with these patients, and you know, I explain to them, sometimes like as you were saying, the eye has to close.

Dr. Weinkle:

Right.

Dr. Bloom:

And so, when you weaken laterally, sometimes you get compensation from other muscles in the cheek, and sometimes you can see some, you know, fine lines and wrinkles under the eye. Or, because your orbicularis is also responsible for pumping out fluid in the lower eyelid—

Dr. Weinkle:

Right.

Dr. Bloom:

Some people can see some...

Dr. Weinkle:

Puffiness.

Dr. Bloom:

Puffiness, increased malar edema, just after neuromodulator injections. So I explain, we don't know exactly how you're going to respond, but I'm going to do everything I can to get you the best outcome. And in terms of safety, Dr. Palm, what can we do to help really minimize some of these adverse events during the administration of the products, and then do you have any tips or things that you tell patients, kind of like, take-home recommendations to lower those risks after treatment?

Dr. Palm:

You know, I think a lot of that comes with patient education. If you do that at the forefront...

Dr. Weinkle:

Yeah.

Dr. Palm:

They're probably not calling your office as much. And so, you know, part of that, I think, is your staff doing that. It's also me during — I'm actually administering the neuromodulator, talking to them about that. And I think it comes, you know, I'm big on patient comfort. So, um, we've talked about using small needle size. I think that helps with the pain factor. We, um, give patients a medication precaution list, because it's surprising how many medications, supplements, and even foods — flax seed and chia seed —

Dr. Weinkle:  
Right.

Dr. Palm:  
Things like fish oil, I think can—

Dr. Weinkle:  
Garlic.

Dr. Palm:  
- Increase the chance of bruising markedly. So, we do talk to patients about that. And then I think, comfort-wise, you know, I tend to, um, really guard the orbit when I'm injecting around the globular complex, I inject away from it when I'm doing the lateral canthal lines.

Dr. Weinkle:  
Good point.

Dr. Weinkle:  
Instead of waiting for the patient to call us. At about five or six days, one of my clinical assistants always calls the patient, just to say, you know, "Were you happy? Does everything look good? Do you have any concerns?" And if that patient needs to come back in, and might need a 2-unit tweek, we don't charge them.

Dr. Palm:  
Yeah. Same here.

Dr. Weinkle:  
It's — it's really making a reassurance that we are concerned about your outcome. And whatever it takes to make it just right for you.

Dr. Bloom:  
That's great. And especially even for a brand new neuromodulator patient who might not know some of the things to expect. It's good to have an office staff call them, check in on them, um, because they might not know some things that might be going on, and you know, it gives them a little bit of reassurance.

Dr. Weinkle:  
Right.

Dr. Bloom:  
Well, we've certainly covered a lot of ground today. But before we wrap up, I'd like to hear some of your key take-aways from this discussion. So, Dr. Weinkle, let's start with you.

Dr. Weinkle:  
I think setting patient expectations appropriately is very, very important. Making it comfortable. Making it as reassured as possible, some people that are needle-phobic, but also letting them know, this is going to be something that could be addictive, because you begin to like the way you look, and I'm going to be here for you.

Dr. Palm:  
I think for me and just to echo some of Susan's response, neuromodulators are the number one, noninvasive procedure that we do as cosmetic physicians, and so I think understanding that, making that first experience for a new patient comfortable,

Dr. Weinkle:  
Hmm.

Dr. Palm:  
... you know, making them confident about the procedure, because it really does and should have a high satisfaction rate. And then doing special things to sort of, make sure that they feel welcomed in follow-up.

Dr. Weinkle:  
I think that's a good point.

Dr. Palm:  
And making sure that they have a great aesthetic outcome. I think especially if you're a newer injector, that behooves you to actually bring patients back, take a look at photos, or check in with them to make sure you're getting good aesthetic results.

Dr. Bloom:

Yeah, I think we're all really on the same page. You know, neuromodulators for one, are really a gateway into this whole idea of aesthetic improvements, and when I get a new patient in my office, you know, we really said this earlier, is that, it's a great way to kind of like go slowly, start them out with some neuromodulator, for example, around the periorbital area, open up the eyes, and it really opens up their eyes to a lot more of the aesthetic things that we have in our office.

Dr. Palm, Dr. Weinkle, it was so great speaking to you both today.

Dr. Weinkle:

Such a pleasure. I think we all have, uh, very similar thoughts.

Dr. Palm:

Yes, thank you so much Dr. Bloom.

Narrator:

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