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ReachMD

www.reachmd.com

info@reachmd.com

(866) 423-7849

Rethinking Benzoyl Peroxide in Acne and Rosacea

[CHAPTER 1]

Announcer:

Welcome to CME on ReachMD. This activity, entitled "Rethinking Benzoyl Peroxide in Acne and Rosacea" is provided by Prova Education.

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Dr. Stein Gold:

Welcome to our educational series on the role of benzoyl peroxide, or BPO, in the management of acne and rosacea. In the first chapter, we'll focus on acne treatment.

This is CME on ReachMD, and I'm Dr. Linda Stein Gold. Here with me today are Dr. Julie Harper and Dr. Neal Bhatia. Welcome.

Dr. Harper:

Hi, Linda.

Dr. Bhatia:

Hi, ladies. Good to be with you.

Dr. Stein Gold:

Well, great to have you both with us today. So, let's go ahead and just get started. Julie, could you start by reviewing the role of benzoyl peroxide in the management of acne?

Dr. Harper:

Sure, and of course, that's just a huge topic, but I think we all are aware that benzoyl peroxide plays just a very central role in the treatment of acne, whether it's mild, moderate, or severe. In fact, if you look at the guidelines that were published in the Journal of the American Academy of Dermatology in 2016, you'll see benzoyl peroxide listed as first-line therapy, either alone or in combination, whether acne is mild, moderate, or severe. And that's because of the mechanism of action of benzoyl peroxide. We know that it primarily is antimicrobial, having a really solid impact on *C. acnes*, but it's also anti-inflammatory and also probably a little bit – definitely a little bit comedolytic, although I don't think that that's what it does best. It can certainly be used by itself; most of the time, that's going to be in mild acne. But I think we all know we're trying to hit other targets in acne when we're treating acne, and so oftentimes we're going to use it in combination with other products, whether it's a retinoid or an antibiotic, oral or topical.

But the way benzoyl peroxide kills *C. acnes* is by oxidizing it, and it's just kind of an equal opportunity oxidizer. Not only does it oxidize the thing we want it to, which is *C. acnes*, but it can oxidize other medications, and that would include our topical retinoids, for example. So, stability can be an issue when we're using benzoyl peroxide in combination with other drugs. One thing we really love about benzoyl peroxide is when it's oxidizing *C. acnes*, there's not a resistance mechanism that develops to that. So, we have a very effective product here that's also just an equal opportunity killer of *C. acnes*, which means we're not letting one resistant strain proliferate and then

potentially share its resistance with other bacteria. So, we like it. Anytime we're using antibiotics we like to use it, and it certainly has a role even by itself.

Dr. Stein Gold:

Thanks, Julie. That was a really great, comprehensive overview. I often discuss the fact that benzoyl peroxide's been around for a long time but is really not your grandfather's acne medicine. You know, it's just as important today as it was in the past, and new technology, including microencapsulation technology, which we'll talk about more later, allows us to do exactly what you were talking about – mix the unmixables. We have more options today to combine benzoyl peroxide with products like tretinoin that we haven't had in the past.

Neal, any other comments?

Dr. Bhatia:

Well, I thought Julie gave a nice synopsis. I mean, we have so many flavors of benzoyl peroxide, whether it be for spots, using washes, you know, having them mixed with other ingredients over the counter, but I think tolerability of benzoyl peroxide has always been a limiting step, so the development of new vehicles to put it into context and add it to our regimens is going to be pretty useful for all of us.

Dr. Stein Gold:

That's critically important, the tolerability piece, so thank you.

In Chapter 2, we'll shift our focus to the role of benzoyl peroxide in rosacea. Stay tuned.

[CHAPTER 2]

Dr. Harper:

Welcome back. In the first chapter, we covered the role of benzoyl peroxide in managing acne. In Chapter 2, Dr. Stein Gold will be discussing its role in rosacea treatment. So, let's get started!

Dr. Stein Gold, we've been hearing a lot about benzoyl peroxide being a potential treatment for rosacea. Can you tell us about what its use might mean for our patients?

Dr. Stein Gold:

Thanks, Julie. Our options for the treatment of rosacea have been somewhat limited. We have had topical metronidazole and azelaic acid and, more recently, topical ivermectin cream. Orally, we have submicrobial dose doxycycline. These treatments are effective, but we're still not getting the majority of our patients to clear or almost clear.

We now have a new option with microencapsulation of benzoyl peroxide that's been shown to be very effective in getting those moderate to severe rosacea patients to clear or almost clear in approximately 50% of the patients, and it's been very well tolerated. In clinical trials, this drug was used as monotherapy once daily, and it was really a win-win, with good efficacy and very good tolerability.

Dr. Harper:

Dr. Bhatia? You have anything you'd like to add to that?

Dr. Bhatia:

Yeah, I think the opportunity to use it in rosacea, which is, again, hypersensitive skin, you know, potentially irritated by either bad vehicles or some active ingredients. You know, now, with the opportunity to use benzoyl peroxide, we can really have an additive effect, both of the anti-inflammatory level as well as compatibility with some of the other treatments that patients may have been using before. So, it's a good time for rosacea patients to have something new in their bag.

Dr. Harper:

Yeah, I agree with what you said. You know, this is not just any benzoyl peroxide. This is a very specific formulation that can be useful in our rosacea patients. And really, when you do look at the evidence and the data from this study, it's quite impressive.

Thank you. In Chapter 3 we'll be discussing microencapsulation technology. Stay tuned.

[CHAPTER 3]

Dr. Stein Gold:

For those just tuning in, you're listening to CME on ReachMD. I'm Dr. Linda Stein Gold, and I'm here today with Drs. Neal Bhatia and Julie Harper. We're discussing the role of benzoyl peroxide in the treatment of acne and rosacea.

In Chapter 2 we looked at the role of benzoyl peroxide in rosacea treatment. Now, in Chapter 3, Dr. Neal Bhatia will be discussing microencapsulation technology.

So, Neal, this is really a big topic. Let's go ahead and dive in, and can you give us, really, an overview and explain the microencapsulation process?

Dr. Bhatia:

Yeah, it's interesting because what we traditionally thought of as over-the-counter benzoyl peroxide was – some were either poorly made, we used to think it was gritty, it would stain clothes, would have some real issues with, you know, compatibility with not only other medicines but just being put on the skin, whether it's for acne and now upcoming for rosacea.

But what microencapsulation does is it actually stabilizes the active ingredients, both in the vehicle itself as well as when it hits the skin, in terms of what is going to be tolerated. So, the instances that there's silica monomers that are basically put into encapsulation mode, where they work their way around the active ingredient, those monomers will then come together, and they'll migrate to an oil-water interface, which again is really going to be much more controlled as well as stabilizing in the cream vehicle. And then what happens from there is there's a silica shell that's made right around all of the active ingredients so that when it hits the skin, and everything that's changing as far as pH and temperature, there's a very even distribution of the active ingredient, which for benzoyl peroxide, as you know, is critical not only for, again, the tolerability of the active ingredient, but also in rosacea skin, which we know is potentially very irritable. And a lot of the rosacea patients are very sensitive to new ingredients as well as during a flare. So, you know, together with tretinoin and another compound for acne, we have 2 ingredients that were not allowed, basically, to be compatible in one vehicle. And now, separately, they're encapsulated so that once they hit the skin, they're able to be added together, and then their additive effect, which should help with compliance as well as, you know, again, an ease of use for spreadability. So, pretty interesting time, the way that microencapsulation is putting itself to use in both acne and rosacea for benzoyl peroxide.

Dr. Stein Gold:

Great. Let's go ahead and take a look at an animation that will help to give us an overview on really what you just talked about, Neal.

[MICROENCAPSULATION VIDEO PLAYS]

Dr. Stein Gold:

That was a great overview of microencapsulation. In the next chapter, we'll be discussing how this technology will potentially benefit our patients with acne and rosacea. Stay tuned.

[CHAPTER 4]

Dr. Stein Gold:

Welcome back. In Chapter 3, we covered the microencapsulation technique. And now, in this final chapter, we'll be discussing the benefits of microencapsulated benzoyl peroxide. So, let's go ahead and get started.

And, Neal, can you tell us what this newer formulation of encapsulated benzoyl peroxide will mean for our acne and rosacea patients overall?

Dr. Bhatia:

Yeah, I think what we've learned from the clinical research involved with the trials, both the benzoyl peroxide alone as well as the combination with tretinoin, is compatibility and tolerability. Whereas we now have options where benzoyl peroxide before was either intolerable in hypersensitive skin of rosacea or the compliance issues that went along with acne, you know, with not being able to tolerate them with retinoids or skin being too dry. So now we have a vehicle that allows for stability in the package as well as for the way that it is easy to apply to the skin in areas that could be hypersensitive or may need a little bit extra care in terms of tolerability. I think the research data shows not only good efficacy, but I think importance in the compliance of use compared to what we've had over the counter or in maybe other vehicles that weren't as easy to tolerate on the skin. So, a lot of good options that microencapsulation will bring to benzoyl peroxide as a whole.

Dr. Stein Gold:

So, Julie, can you comment specifically now on the benefit of microencapsulation of benzoyl peroxide? Specifically for acne, what do you see as a major benefit?

Dr. Harper:

Well, I think there's a lot that's really important for our acne patients, and something Neal just mentioned, but maybe I'll talk about it in a little different way, is compliance with our treatment plans. And so, as somebody who treats patients all day long, having a product where there are 2 active ingredients that can live together in a fixed-dose combination, I think many of us who are just out in the clinic would say it's easier for our patients to adhere to a more simplistic plan like that. And so, microencapsulation, you know, in rosacea may be about tolerability, and that's certainly important in acne, too. Tolerability is hugely important. But I think maybe the bigger benefit

here is that we're able to, as we've heard said, mix the unmixables, take these 2 really important products – tretinoin and benzoyl peroxide – put them together, and have them be stable in a product together and stable on application. And then enhanced treatment outcomes – because our patients have a simpler product and a simpler regimen that they can use. I think that's the real benefit for our acne patients.

Dr. Stein Gold:

I agree with you, and then when we turn and look at rosacea, I think the real benefit is this now allows us for a new option. We have significant efficacy and a really good tolerability profile, and it sets a new standard for our rosacea therapy that allows us to better serve our patients. We want to strive for clear skin, but we also want to remember that these patients have sensitive skin, and tolerability is key.

Unfortunately, that's all the time we have for today, so I want to thank our audience for listening in and thank you, Dr. Neal Bhatia and Dr. Julie Harper, for joining me and sharing your valuable insights. It was great speaking with you both today.

Dr. Bhatia:

Thanks, Linda and Julie. Thanks for having us.

Dr. Harper:

Thank you, guys. It's always a pleasure.

Announcer:

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