Nearly a century after benzoyl peroxide was successfully formulated as a mass-market acne treatment (by Jack Breitbart at Revlon), acne vulgaris continues to capture the attention of researchers and clinicians alike. The condition has taught us much—and still has a lot to tell us.

Perhaps most obviously, dermatologists have learned about bacterial resistance, a serious threat to patient health. We have realized that the ways we approach a common, non-life-threatening skin condition like acne can have dire consequences for patient health. We’ve learned after all those years we brushed off patient concerns about diet and acne that perhaps our patients were on to something. Or maybe not; We’ve still not reached a consensus about the effects of diet on acne.

We’ve reclassified acne across different age groups and grown to better appreciate the realities and challenges of pre-adolescent acne. We’ve dealt with the real and purported risks of isotretinoin. We’ve waffled on the benefits of light, and we’ve held firm on the importance of skincare.

Research is only now beginning to explore the genetic factors that underlie acne vulgaris. We know that acne affects multiple generations of the same family—not unexpected for a disease with such a wide prevalence. More importantly, the severity and quality of acne seems to repeat from one generation to the next. Why do some patients develop extensive severe acne, while others have only mild disease? And why are the children of those individuals similarly affected? Future research should focus on genetic aspects of acne with the goal of translating that research to more effective therapies.

Now we are rediscovering the role of inflammation in acne and weighing this knowledge against our established treatment paradigms. We’ve always known acne is an inflammatory disease and have always targeted that inflammatory component. However, we have not to this point appreciated the contributions of inflammation to the early pathogenesis of acne.

What we, our patients, and our non-dermatologist physician peers need to understand is that acne is, at its first inception, an inflammatory disease that has the potential to persist or to worsen and to lead to scarring or pigmentary alterations. We cannot predict which patient’s acne will remain mild and whose will progress. We cannot ascertain who will develop post-inflammatory hyperpigmentation based simply on the number or quality of acne lesions.

We can, however, use available therapies to effectively treat acne with minimal risks. We can prevent worsening of the disease and reduce the risks of long-term sequelae. We can—and we should—implement treatment rapidly and meaningfully to mediate inflammation. The science and our clinical experience show that there is no point in delaying treatment. We have tools to counter acne and its associated inflammation, and there are more on the horizon. It’s our duty to use them. Ahead specialists discuss developments in acne.

—Joseph Bikowski, MD
NEW THINKING IN PEDIATRIC ACNE
ANDREW KRAKOWSKI, MD

Could you discuss the new acne treatment guidelines, the impetus for them, and how they were developed?

Dr. Krakowski: The new pediatric guidelines (Pediatrics. 131 (S3); 2013) grew from the recognition that we now see teenagers and preadolescents, even down into childhood. People are coming into our offices with acne and there are a lot of questions on how we treat them. And over the last two years we gathered together the world’s greatest acne experts to get their recommendations for, a) How they approach acne; b) How they treat it; and then I think most importantly, c) How they approach the condition of acne with their patients and get them to buy into the treatment of their own condition.

Are there any significant changes or perhaps surprises in the new guidelines?

Dr. Krakowski: The surprises are that we are now addressing preadolescent, mid-childhood acne, infantile acne, and neonatal acne as distinct age groups with really specific recommendations for each of those groups. We’re no longer considering acne just a teenager problem. The statistics are that nine out of 10 teenagers have acne. I always joke with my patients that the other one is probably lying, but now we’re absolutely seeing that acne is coming out earlier in both boys and girls, and down to eight years of age is almost now the new norm.

There has been increased focus by industry on the issue of preadolescent acne. What do we know about the prevalence of acne in those who are preadolescent?

Dr. Krakowski: Preadolescent acne is absolutely sort of the new thing. It’s probably always been there, but we’re starting to see it more often now in the clinics. It’s interesting because there is a red flag that at least should go off in clinicians’ minds when they see a child with acne, because the age bracket of mid childhood acne, that’s about one to seven, maybe one to eight years of age, really should be an alarm for clinicians that true acne should not be there, and you have to suspect possibly an adrenal cause of acne or a tumor, some other reason why this child is producing acne lesions. But the age group of preadolescent acne, which is about eight years of age to 12 years of age, really is gaining new focus, both in industry, and like I said, also in the clinician’s offices, because we’re seeing children coming in with true comedonal acne.

Treatment for preadolescent acne is very similar to adult acne, but now made much simpler with the new guidelines in Pediatrics in May. There’s a big focus in using monotherapy, you can start with either benzoyl peroxide or a retinoid, but then we also address the use of a lot of the topical combinations that are available to try to hit acne from a multi-pronged approach, which I think is ultimately the most effective because you’re really limiting the complexity of the acne regimen for the patient and giving them the best chance to attack acne from different approaches.

Andrew Krakowski, MD, FAAD is Assistant Clinical Professor of Medicine at Grady Children’s Hospital, San Diego and University of California, San Diego.

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“I always start by simply gauging where my patients are by asking them, ‘Do you care about your acne? What are you doing for it?’ And from there I can sort of open the door to how to address what kind of acne they have and where we might be going with the management therapy.”
—Dr. Krakowski

SPECIAL CONSIDERATIONS FOR FEMALE PATIENTS
JULIE C. HARPER, MD

There’s new research looking at inflammation that gives clinicians a new perspective on the pathogenesis of acne. What does this mean for patient care going forward?

Dr. Harper: We all treat acne all of the time; we all think we have a really clear understanding of the pathogenesis of acne. But if I ask people to put in order what we think causes acne, we’re not really able to do that.

So for a long time we’ve talked about inflammation having an important role in acne, but also the hyper-proliferation in the follicle causing the comedonal lesion. We have historically referred to that lesion as a non-inflammatory lesion. We have...
thought that was the earliest lesion of acne, and so many of our treatments have targeted that. But we’re now learning that that early lesions shouldn’t be called non-inflammatory. There is still inflammation that plays an important role even early in the disease.

We still have a lot that we need to learn about that, but obviously as we learn more about the pathogenesis of the disease, we learn more about what those earliest steps are in the pathogenesis. I think absolutely it could stand to change the way all of us treat acne.

Could you summarize the latest data regarding adult acne and oral contraceptive therapy?

Dr. Harper: All of us want to know more about what’s causing adult female acne; we really don’t know. We do know that we see it in our clinics and many of us would say that we’re seeing it more. We know what it looks like, we know that it presents on the lower face and the neck in women, but we don’t really have a full understanding of what’s different about it.

As far as birth control pills go and oral contraceptives, there’s been a lot of information out lately about the risk of venous thromboembolism and clotting associated with some birth control pills. All birth control pills carry with them some increased risk. A woman’s baseline risk of having a clot if they’re not on a birth control pill is about three per 10,000 woman years. For a woman who takes a birth control pill, that risk may be six per 10,000 woman years.

The most interesting information we’ve seen come out lately is that those pills that many of us have relied on to treat adult female acne contain the progestin drospirenone, and now we know drospirenone may be associated even with a little bit higher risk than some of the other pills. But to put that into perspective, instead of three or six per 10,000 woman years, now we’re talking about nine or 10 per 10,000 woman years.

Does skincare matter in acne management?

Dr. Harper: Skincare is important in so many different arenas in dermatology; it’s probably the crux of eczema and rosacea but it’s also very important in acne for a couple of reasons. It’s a very important part of actually treating and managing acne, but it’s also essential to help patients to tolerate the topical medications that we’re prescribing. Some of those medications can be irritating, and if they’re not coupled with good skincare, they’re going to irritate our patients’ skin. Patients who are irritated from topical medications don’t use them and then they don’t get the results. It’s a very important part of treatment.

Julie C. Harper, MD, FAAD is Clinical Associate Professor at the University of Alabama in Birmingham and in private practice in Birmingham, AL.

INSIGHTS ON ACNE AND ROSACEA
DIANE S. BERSON, MD, FAAD

What is the latest in management of the redness of rosacea?

Dr. Berson: Patients who present with erythematotelangiectatic rosacea have always been a bit of a challenge for us. It’s hard to decrease their redness. All of the treatments that are FDA approved for the treatment of rosacea really deal with papulopustular form of rosacea and any improvement in erythema that we see is usually a decrease in perilesional erythema. So what we’re left with is patients who have redness and dilated vessels and who really want to get rid of the red.

Certainly we can recommend camouflage makeup and some peels and laser procedures, but they also want us to give them something that they can use to help with the redness. Up until now we’ve had topical anti-inflammatory agents available as a cosmeceutical or antioxidants, or even moisturizers that help repair the barrier, but what’s exciting is that we are going to have a couple of new compounds coming along the pipeline
which are vasoconstrictors. And by constricting the smooth muscle of the blood vessels, patients will have improved redness as their vessels constrict.

These are called alpha agonists and research so far has shown that they work really quickly, rather acute; they take onset in about 30 minutes, and that the effect can last all day. What’s nice also is that we don’t see tachyphylaxis with these, so it will be really exciting to offer our patients something to help decrease their redness.

How do you think the latest research on the pathogenesis of acne will shape how dermatologists approach treatment?

Dr. Berson: We appreciate that a large part of the pathogenesis of acne is inflammation. Inflammation plays a role in both rosacea and acne. And so offering our patients appropriate topical anti-inflammatories can be very helpful in their treatment. We do have topical retinoids which are indeed anti-inflammatory, and we have a lot of newer retinoids and newer formulations that can be used by patients which will improve the acne and also can improve their rosacea. And then we have some new compounds such as topical dapsone, which can also be used for our female patients with acne. But basically we have a lot of great vehicles in the acne treatments that can be used for all patient skin types that can have anti-inflammatory properties as well as antibiotic properties and also have retinoid properties which will keep the pore unclogged.

With adult acne being a continual problem for some patients, do you have any therapeutic strategies for addressing it?

Dr. Berson: Adult female acne constitutes a large part of my practice, and I find that I love prescribing topical retinoids along with topical antimicrobials. The key thing with adult women is incorporating the appropriate skin care into their regimen. And very often I recommend that my patients use a barrier repairing moisturizer, sometimes actually under the retinoid, which will improve tolerability to the retinoid without negatively affecting the efficacy. So I’ll usually recommend that my patients use a retinoid on top of their moisturizer.

I also like to recommend gentle cleansing along with gentle moisturizing, and of course sun protection. Another key thing for women with acne is to use the appropriate cosmetics which will help camouflage their acne lesions and also not exacerbate their acne. I find the mineral make-ups to be very helpful; they’re non-comedogenic, they’re non-pore clogging, and they actually reflect light so they can diminish the appearance of pores along with fine lines and wrinkles and they don’t contain a lot of the irritating ingredients that we find in liquid foundations.

So I think advising our patients with adult acne about appropriate skincare, use of moisturizers and use of makeup, along with the appropriate topical antimicrobials and topical retinoids can be very helpful. And in addition there are some office procedures I might do on these patients such as salicylic acid peels, which are great for patients with acne and actually very helpful also for some patients with rosacea.

Do you think any interventions for acne or rosacea may be overlooked? Should clinicians think outside the box?

Dr. Berson: You can think out of the box when you’re treating patients with acne and rosacea by not just thinking about what prescriptions you are going to write. You can recommend appropriate skincare, whether it’s cleansing, whether it’s moisturizing, whether it’s advice about sun protection, and certainly advice about makeup. Then give the appropriate medication, whether it’s a topical antimicrobial or a topical retinoid, picking the appropriate vehicle for that patient’s skin type.

There are also procedures we can do in the office such as salicylic acid peels, sometimes even laser, laser or light treatments, which can help with the acne. But in terms of thinking out of the box, look at the patient’s skin, figure out their skin type, figure out the types of lesions that they have, and then go with it. Think of the most appropriate vehicle, the most appropriate medication, and whatever other advice you can give them regarding skincare and in office procedures.

With respect to rosacea, we can appreciate that there is a role of inflammation and an augmented innate immunity, which is an augmented immune reaction to certain triggers such as ultraviolet light, heat, even organisms such as Demodex, but there is also vasodilatation. So there’s a vascular thermal flushing that we see.

When we’re thinking about treating the patients with rosacea, we’re not only dealing with an anti-inflammatory component, but also a vascular component. Up until now most of the topical agent that we’ve given to our patients, whether over the counter anti-inflammatory, antioxidant cosmeceuticals or moisturizers, or even antimicrobial agents, most of these work by decreasing inflammation. We have never had a topical that actually dealt with the vascular component of rosacea. And what we have in the pipeline are a couple of agents that are actually alpha agonists, which will cause vasoconstriction and in so doing help decrease the redness for these patients. They seem to work really fast and their effect lasts all day, and so far phase II trials have shown no tachyphylaxis.

Watch Dr. Berson on DermTube.com. Search: AcneRosacea

Diane Berson, MD, FAAD is Associate Clinical Professor of Dermatology at Weill Medical College of Cornell University New York Presbyterian Hospital and in private practice in New York City.