

PSORIASIS MANAGEMENT

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AHEAD IN THIS SECTION: **UPDATE ON PHOTOTHERAPY FOR PSORIASIS | THE EVOLVING ROLE OF BIOLOGICS**

New Approaches in Topical Therapy for Mild to Moderate Psoriasis

By Madelaine Haddican, MD and Gary Goldenberg, MD

Although plaque psoriasis affects roughly two percent of the adult population in the US, most patients with psoriasis have less than five percent of their total body surface area affected. Thus, while the development of systemic and biologic therapies for those affected by moderate to severe psoriasis has been notable, a vast majority of our patients are treated with topical medications.¹⁻³ With a growing number of topical agents becoming available, researchers and clinicians have explored a variety of combination approaches that may yield more successful outcomes with a diminished likelihood for adverse events. Ahead we will review the latest data and treatment strategies for optimizing topical therapies for psoriasis, from the potential benefits of sequential therapy to new approaches in scalp psoriasis.

COMBINATION OPTIONS WITH CORTICOSTEROIDS AND VITAMIN D ANALOGUES

Over the last several decades, topical steroids have been mainstay agents for mild to moderate psoriasis.⁴ Yet, despite recognition for strong efficacy, the use of high-potency topical steroids over extended periods of time has been linked to adverse events such as skin atrophy, telangiectasias, striae, and rebound.^{5,6} As increased evidence calls for more cautious approaches to topical steroids, the use of topical vitamin D analogues as a monotherapy has increased,⁷ perhaps as a perceived safer alternative to high-potency steroids. Calcipotriene 50mg/g (Taro Pharmaceuticals) ointment has been available in the US since 1994, however, the approval of a naturally occurring active metabolite of vitamin D called calcitriol (Vectical, Galderma) 3mg/g ointment in 2009 is arguably responsible for the resurgence of vitamin D therapy in the treatment of mild to moderate psoriasis.

In recent years, several studies have offered new approaches for incorporating topical steroids and vitamin D analogues, whereby clinicians can increase the efficacy of the agents while reducing side effects. For example, one open label study exam-

ined how patients with chronic plaque psoriasis responded to clobetasol propionate 0.05% (Clobex, Galderma) spray twice daily for four weeks followed by calcitriol 3µg/g ointment twice daily for eight weeks. At the end of 12 weeks, total BSA decreased from 7.1 percent at baseline to 3.9 percent.

Another regimen that has been explored is weekend corticosteroid therapy coupled with weekday calcipotriene monotherapy. In a double-blind, parallel-group comparison, patients with mild to moderate psoriasis were treated with calcipotriene ointment in the morning followed by halobetasol ointment in the evening for two weeks. Then, patients with improvement of at least 50 percent were switched to a regimen consisting of halobetasol ointment on weekends and calcipotriene ointment on weekdays. Of these patients, 76 percent maintained remission for six months.⁸ Another study involving twice daily application of calcitriol ointment 3mg/g on weekdays and twice daily application of clobetasol propionate spray 0.05% on weekends for up to four weeks yielded similar findings, with 79 percent of patients being clear or almost clear by the fourth week.⁹

While alternating between corticosteroids and vitamin D analogues has been associated with strong efficacy, combination therapy followed by calcipotriol monotherapy has been found effective, as well. In one study, patients with chronic plaque psoriasis treated with 0.005% calcipotriol/0.1% betamethasone valerate ointment once daily for either four or eight weeks followed by calcipotriol ointment at varying frequencies saw a statistically significant improvement in PASI scores.¹⁰ Similar trials have demonstrated comparable results,^{11,12} while other findings have demonstrated benefit in combination therapy following calcipotriol monotherapy,¹³ as well as alternating combination therapy and calcipotriol monotherapy.¹⁴

The advantage of sequential therapy involving corticosteroids and vitamin D analogues is that it allows us to maximize the benefits of both drugs and decrease the likelihood of adverse events associated with extended corticosteroid treatment, all the while providing a similar degree of efficacy in comparison to using high potency steroids alone.

MANAGEMENT OPTIONS FOR SCALP PSORIASIS

While sequential therapy has been found to offer benefits in many cases of mild to moderate psoriasis, its utility is often tied to the location of psoriasis on the patient's body. One area that has consistently proven to be a treatment challenge is the scalp. In addition to the environment being different on the scalp, the density of the skin is also notably different, which often makes topical treatment difficult. Patients with scalp psoriasis are often unhappy with many of the existing therapeutic options, due in part to the cosmetic appearance of their hair after application.¹⁵ Topical agents such as oint-

ments that leave a greasy residue tend to be associated with non-adherence, with patients generally favoring newly developed vehicles such as gels, foams, and sprays.^{16,17}

Corticosteroids and Vitamin D Analogues. In the topical steroid arena, clobetasol propionate 0.05% is one of the most potent topical corticosteroid preparations commonly prescribed for patients with scalp psoriasis.¹⁸ In an open label study involving 12 patients with scalp psoriasis, all patients had at least a 50 percent reduction in their PASI score for the scalp after clobetasol propionate foam 0.05% (Olux-E, Prestium Pharma) was applied twice daily for four weeks.¹⁹ Additionally, the efficacy and safety results for clobetasol propionate 0.05% spray for the treatment of scalp psoriasis are consistent with results from other trials involving treatment of psoriasis at other body sites.²⁰⁻²³ The shampoo formulation of clobetasol propionate 0.05% (Clobex Shampoo, Galderma) is also one of the newer options for the effective treatment of scalp psoriasis.²⁴

Calcipotriol has also shown some utility in scalp psoriasis. In a 52-week study involving twice-daily application of either calcipotriol solution or calcipotriol cream, the mean total score for scalp psoriasis had improved by 58 percent after 28 weeks of treatment.²⁵ Another study found that twice daily application of calcipotriol solution for a four week period was rated significantly better than placebo by both investigator and patient.²⁶

One of the common side effects of vitamin D analogues is skin irritation. However, studies have shown that irritation associated with calcipotriol noticeably diminished when combined with corticosteroids.²⁷ In a double-blinded study, patients were randomized to receive once-daily treatment with calcipotriene 50µg/g plus betamethasone 0.5mg/g, betamethasone 0.5mg/g, calcipotriene 50µg/g, or vehicle alone for scalp psoriasis. After eight weeks of treatment, 71.2 percent of patients receiving the vitamin D analogue/corticosteroid formulation had zero disease or very little compared to betamethasone 0.5mg/g, calcipotriene 50µg/g, or vehicle alone.²⁸

Coal tar and other options. Coal tar has long been used in the treatment of scalp psoriasis, due to its affordability and ability to penetrate the environment. The underlying mechanism to its efficacy involves inhibition of epidermal growth and inflammation. However, patients reportedly dislike the cosmetic appearance, pungent odor, and staining properties associated with its use.²⁹ In an investigator-blinded study, 162 patients were randomized to receive either clobetasol propionate 0.05% shampoo or a tar blend 1% shampoo to apply once daily for their scalp psoriasis. After four weeks of treatment, patients using clobetasol propionate 0.05 shampoo had a 50 percent decrease in total severity, compared to a 14.5 percent decrease in the group treated with tar shampoo.³⁰

In an eight-week study, patients were randomized to receive either calcipotriene scalp solution with a tar-based shampoo or calcipotriol with a non-medicated shampoo. Both groups' scores for scalp psoriasis improved by greater than 50 percent; no significant difference in efficacy was found between the two treatment groups.³¹

Keratolytics such as salicylic acid may also be useful in treating scalp psoriasis.²⁷ In an open label study, 10 patients treated their scalp psoriasis with 6% salicylic acid in an ammonium lactate foam vehicle. The mean score for erythema, thickness, and scaling was reduced significantly from 5.4 to 1.7 after four weeks of treatment. By the end of the study, 60 percent of patients were characterized as clear or almost clear.³² Thus, this agent in an ammonium lactate foam vehicle may be powerful when used in combination with topical corticosteroids and/or vitamin D analogues.^{33,34} Finally, despite the lack of clinical studies evaluating its effectiveness in scalp psoriasis, tazarotene may be effective in combination with topical corticosteroids in order to reduce the occurrence of skin atrophy.^{35,36}

When selecting a treatment for patients with scalp psoriasis, it is important that clinicians recognize not only the clinical differences in treating scalp psoriasis versus psoriasis in other locations, but also to take account the psychosocial element for patients. Scalp psoriasis is not only physically irritating but also very difficult to cover up. Therefore it is critical to devise a treatment plan that is both sensible and aggressive that will bring patients relief.

THE IMPORTANCE OF COMMUNICATION AND EDUCATION

One of the most essential components of successful treatment of psoriasis is that the patient recognizes the chronic nature of the disease. Both clinicians and patients should be thinking long-term, no matter what kinds of agents are prescribed. Regarding topical agents specifically, no matter what variation of agents we settle on, we can never lose sight of the importance of our communication and interaction with patients. Expectation management can be critical when it comes to successful outcomes, and the better our relationships are with patients, the more likely they are to adhere to the regimen.

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Where Phototherapy Fits in Modern Psoriasis Treatment

As the treatment landscape expands, the function and utility of light therapy has only grown stronger.

By Jerry Bagel, MD

Few would argue the clinical benefits of phototherapy in the treatment of psoriasis. However, with the continued expansion of topical and systemic therapies over the last 10 to 15 years, the landscape of psoriasis treatment has undoubtedly changed. With physicians and patients now having more options to manage varying stages of psoriatic disease, the question regarding phototherapy is not simply whether it is effective but whether it is both effective *and* practical enough to still be considered a viable therapy. This requires a closer look at its uses and applications, as well as the latest data on phototherapy.

USES AND BENEFITS OF PHOTOTHERAPY

Narrowband UVB. In patients without psoriatic arthritis, phototherapy remains a treatment of choice due to its favorable risk/benefit ratio.¹ Particularly when used in concert with topical agents, tar, topical vitamin D, and moisturizing creams, Narrowband UVB can be a very effective option. For example, one study found that NB-UVB three times per week for 12 weeks in addition to topical tar and moisturizing cream BID can result in 60 to 65 percent clearance.² Moreover, about half of these individuals remain clear for six months. Of course, each patient is different in both skin type and severity of psoriasis; therefore results are not likely to be uniform. In fact, some patients may require extra doses of NB-UVB to the extremities, while some may require inframammary, axillary, or facial treatment.¹

Baseline dose of NB-UVB is based on skin type, as follows:

- Type 1: 250mJ
- Type 2: 300mJ
- Type 3: 350mJ
- Type 4: 400mJ
- Type 5: 450mJ
- Type 6: 500mJ

The next six doses should then be 15 percent more than the previous dose, and after the sixth dose, each one should increase by 10 percent of the previous dose.¹

For patients with hyperkeratotic plaques, acitretin is helpful in increasing efficacy and decreasing the number of treatments necessary to clear patients.³ Acitretin doses between 10mg (<70kg) and 25mg (70-100 kg) or 25mg bid (>100kg) should be initiated two weeks prior to initiating phototherapy.^{1,3} In addition, the doses of NB-UVB should be 75 percent of the dose

used without acitretin. Importantly, acitretin should not be used in women of child bearing potential.

Psoralen plus UVA. PUVA is even more effective than NB-UVB, but the tradeoff is that psoralen can result in itching, nausea, and increased risk of skin cancer.⁴ Nonetheless, acitretin plus PUVA (Re-PUVA) over a 12-week course could result in clearing 80 percent of psoriasis in patients with moderate to severe disease.

COMBINATION THERAPY WITH PHOTOTHERAPY

While acitretin has commonly been used in combination with both PUVA and NB-UVB, more recent data have shown that combination regimens involving phototherapy and other agents have yielded positive outcomes, as well. For example, combination treatments of topical vitamin D derivatives and UVB has been found effective.^{5,6} In another study, patients who received topical applications of calcipotriol ointment twice daily and NB-UVB phototherapy more than twice a week showed marked and rapid reduction in PASI scores.⁷ Phototherapy in combination with oral retinoids has also yielded positive results for patients with hyperkeratotic plaques.⁶

In cases where psoriasis is more limited in BSA, the 308nm excimer laser (XTRAC, PhotoMedex) has been shown to be effective, particularly when used in combination with clobetasol spray (Clobex, Galderma) and calcitriol ointment (Vectical, Galderma).⁸ In one study in which this regimen was used for 12 weeks, long-term near-clearance of psoriasis was sustained after six months and one year without further therapy.⁸

Another interesting development in recent years has been the potential of UVB in combination with biologic treatments. In some patients, combining NB-UVB with TNF inhibitors has an additive effect.^{9,10} In one 24-week study, patients with moderate to severe psoriasis received adalimumab (Humira, AbbVie) 40mg every other week and NB-UVB three times a week for 12 weeks and then were followed for 12 weeks without treatment.⁹ Half of the patients achieved PASI 75 response by week 4, while 95 percent achieved PASI 75 at the end of treatment at week 12. In addition, 75 percent patients achieved PASI 90 and 55 percent achieved PASI 100. Disease improvement was observed through the end of follow up period at week 24, with no serious adverse events reported.

Another study involving etanercept (Enbrel, Amgen/Pfizer) showed a higher clearance with combined therapy with NB-UVB than with monotherapy, with high clearance rates in a very short time without short-term adverse effects.¹⁰ The authors concluded that the combined treatment had a synergistic effect for clearing plaque-type psoriasis previously unresponsive to etanercept and NB-UVB phototherapy alone. The authors also noted concerns regarding potential co-carcinogenicity. Therefore the number of patients who require, and could benefit from, the combined treatment is likely to be small.

THE CASE FOR PHOTOTHERAPY

While the clinical utility of phototherapy is still being discovered with new uses emerging, logistical questions remain about the viability and availability of therapy. Patients who might benefit from phototherapy often must travel long distances for treatment, and some of the more severe cases require frequent treatments that make phototherapy a less feasible option, even if clinically it is warranted. For physicians, the costs and accommodations required to house phototherapy equipment can be demanding. But if the latest data are any indication, phototherapy is an effective and versatile treatment option for patients who either cannot afford or would prefer not to be treated with heavier-duty systemic and biologic agents. In addition, advancements in technology and delivery have made light therapy more accessible in more limited instances, including targeted deliveries of light therapy with the excimer laser.

Unfortunately, the recently released Medicare Physicians Fee Schedule contains a proposed reduction of 48 percent and 59 percent for NB-UVB (96910) and PUVA (96912) codes, respectively. This is based on the misunderstood assumption that facility codes (which some university hospitals charge) are uniformly charged by all phototherapy providers. Therefore the Centers for Medicare & Medicaid Services (CMS) believes the cost for phototherapy is about three times as much as it really is and feels the decreases in reimbursement are justified. However, while phototherapy may not make practical sense for some patients who have to travel far or require many treatments, it remains one of the most cost-effective forms of therapy for psoriasis. Therefore, if the proposed fee schedule passes, it is certain that phototherapy will no longer be viable economically, potentially rendering a very safe and effective therapy lost to many patients.

No matter what the future holds for reimbursement rates for phototherapy, the data are convincing that the modality fills a unique clinical need and deserves its place in psoriasis care, both in combination with other agents and as a monotherapy.

Formulating a Treatment Plan for Moderate to Severe Psoriasis

From systemic agents to biologic therapies, one expert shares tips on how to choose the best treatments for patients with more extensive psoriasis.

By Robert T. Brodell, MD

Psoriasis treatment has evolved rapidly over the last two decades. While traditional and topical therapies have offered continued benefits for patients, biologic therapies have not only shifted the treatment paradigm but also changed how we think about psoriasis as an immunological disease. Unfortunately, patient access to appropriate biologic therapy has not been ideal, due to the high cost of treatment, insurance hurdles, and other logistical issues of administering treatment. Nevertheless, many of these agents have been with us for more than a decade and have been shown to offer compelling efficacy and strong safety profiles. Moreover, as new biologic agents have become available in recent years, physicians now have more options for refining the best treatment regimens with the least amount of risk for each individual patient. Determining the best course of treatment for each patient with moderate to severe psoriasis requires application of science and the art of medicine.

FORMULATING A TREATMENT PLAN

For patients who have more severe psoriasis, treatment choices include traditional systemic agents, such as acitretin, methotrexate, and cyclosporine, and the new generation of targeted biologic therapies. With the traditional systemic therapies, most dermatologists rotated therapies in an effort to get the greatest efficacy while minimizing risk that accrues with long-term use of these agents. Patients on cyclosporine must have their blood pressure and kidney function monitored over time. With methotrexate, liver function tests (LFTs) are monitored, but liver damage can occur even without marked changes in LFTs, which is why liver biopsies are often recommended after several years or 3-4gms of methotrexate. Patients treated with acitretin, a vitamin A analog, may experience LFT abnormalities, bone changes, and elevated triglycerides can be seen in addition to the risk of fetal harm should a pregnancy occur.

The advantage of biologic therapy is that it targets a very narrow part of the immune system, which theoretically decreases the chance of a patient having an unexpected

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complication down the road, such as the development of lymphoma or other internal malignancy. With the exception of squamous cell carcinoma, perhaps related to combination therapy with UVB, available data do not signal the likelihood of long-term complications with these therapies in the future.

While biologic therapy is highly effective with relatively few side effects, the cost of these drugs is a significant issue. Patients need to be prepared to spend up to \$28,000 a year to be on one of the biologic drugs. Even if a patient has insurance, he or she may have to pay significant co-pays, or cap out on insurance coverage over the course of a few years. It's important that patients are aware of this while making treatment decisions.

CHOOSING THE RIGHT BIOLOGIC THERAPY

Deciding which biologic agent to use is not a simple decision. There are several anti-TNF therapies to choose from. In my practice, I've found most patients would rather not come in for an infusion, so I use infliximab (Remicade, Janssen) only as a rescue drug in the most severe cases.

Anti-TNF drugs etanercept (Enbrel, Amgen/Pfizer) and adalimumab (Humira, AbbVie) both work very well for patients with psoriasis, but they have some specific side effects that should be considered. For instance, a patient who has a tendency toward heart disease who starts on an anti-TNF drug can develop congestive heart failure. In fact, I had a 27-year-old male morbidly obese patient

with no history of congestive heart failure who developed congestive heart failure in the few weeks after starting treatment with an anti-TNF drug. It's an issue that must be kept in mind when determining the right treatment course for a patient.

I also had one patient on an anti-TNF drug who developed slurred speech, tingling in the hands and feet, and "trouble thinking" after her third injection. Radiologic studies confirmed that she had multiple sclerosis. Fortunately, and it was the case with my patient, anti-TNF drug-induced multiple sclerosis, at least sometimes, improves when the treatment is stopped. Patients with a personal or family history of multiple sclerosis would be best treated with other biologic drugs.

Another benefit to prescribing an anti-TNF therapy is that the drugs have been around for a long time, so there is a comfort level to using these drugs that many dermatologists have had a lot of experience with—a lot of patients have done well with treatment and there is a level of trust associated with the drugs.

The newest biologic agent is ustekinumab (Stelara, Janssen), given by injection. The patient has to come back for a follow-up injection at one month and then every three months. It almost seems like the drug is somehow inducing at least a temporary remission in many patients. For patients who wish to minimize the number of injections when compared to anti-TNF drugs taken weekly or every other week—then ustekinumab may be a good choice. Also, if a patient has had trouble with an anti-TNF

DIAGNOSTIC TIPS

Psoriasis can be a very straightforward diagnosis: A patient presenting with a scaly rash with white micaceous scaling on the elbows, knees, sacrum, and scalp, with pitting of the fingernails is the prototypical case of psoriasis. However, it's often more complicated to diagnose. For instance, if a patient has scaling in his or her scalp, it can be difficult to determine if the patient has seborrheic dermatitis, a form of seborrheic dermatitis that has been rubbed and scratched leading to lichen simplex chronicus, or if the patient has psoriasis. A full-body exam to see if the patient has classic psoriasis on another area of his or her body is the best way to make the accurate diagnosis.

It can take a year to two years to make a definitive diagnosis—a patient with scalp psoriasis may go on to develop psoriasis on his or her elbow or knees a year or two after the scalp psoriasis originally presents. Similarly, with patients who have palm and sole psoriasis, it is not always clear if

the patient has psoriasis or chronic eczema. With psoriasis, the plaques tend to be more marginated, but, on the other hand, a scaly rash that may or may not itch on the palms, also can be psoriasis. Or, the identical rash only found on the palms of a patient can be a chronic form of eczema.

Even a biopsy doesn't distinguish very well between psoriasis and eczema on the palms—the presence or absence of itching is often the best clue because eczema almost always itches, while psoriasis itches only half the time. If a patient has no itching, it's more likely psoriasis.

Another distinguishing factor is that psoriasis Koebnerizes. The Koebner phenomenon, or the isomorphic phenomenon, reveals psoriasis on areas of the skin that are scratched or have had trauma. There are only a few other diseases that react this way and those conditions do not look like psoriasis.

—Robert T. Brodell, MD

FINANCIAL SUPPORT PROGRAMS FROM BIOLOGIC MANUFACTURERS

Remicade

Based on eligibility, RemiStart (www.Remistart.com) may provide patients with a rebate for Remicade (infliximab) out-of-pocket costs, including deductible, co-pay, and co-insurance, for up to 12 months, eight infusions, or a \$6,000 annual maximum benefit. According to the company, RemiStart rebates are determined by medication cost only and not by costs associated with administration of the IV infusion.

Patients may be eligible if they are just starting or are currently receiving treatment with Remicade for an approved condition, has commercial insurance that covers medication costs for Remicade, and has a medication out-of-pocket expense greater than \$50 per infusion.

For eligible patients who have maxed out on the RemiStart Program, RemiStart Extended Access Program (www.remistart.com/for_patients/remistart_extended_access_program.html) may be another option for extended support.

Advise patients to visit www.remicade.com/plaque-psoriasis/co-pay-support for more information.

Enbrel

The Enbrel Support Program (www.enbrel.com/ENBREL-support-program.jsp) offers different types of support depending on a patient's needs and eligibility.

For patients with commercial insurance, the Enbrel Support Card Program (www.enbrel.com/ENBREL-support-card-program.jsp) may offer benefits, including the first six months at no out-of-pocket cost, \$10 or less out-of-pocket per month after six months, and support for a patient's Enbrel co-pay or co-insurance and prescription deductible. The program provides up to \$4,000 of assistance per patient for each six-month period.

If a patient is unemployed—and covered by any private insurance, including COBRA—eligible patients can call to receive up to an additional six months of Enbrel at no co-pay cost.

For patients who are uninsured, Amgen and Pfizer support the ENCourage Foundation (www.ENCourageFoundation.com), a nonprofit patient assistance program that provides Enbrel at no cost to patients who qualify and who have no or limited drug coverage.

If a patient has government insurance (such as Medicare Part D) or needs more financial assistance, the company can refer them to independent foundations that may be able to help.

Humira

The Humira Protection Plan (www.humira.com/myhumira/financial-assistance.aspx) offers patients financial support for purchasing Humira.

For eligible patients with commercial insurance, the Humira Protection Plan Savings Card allows for purchase of Humira for \$5 or less.

Unemployed or uninsured patients may be able to get Humira at no additional cost through an independent foundation, such as the AbbVie Patient Assistance Foundation (www.abbviepaf.org). The AbbVie Patient Assistance Foundation provides AbbVie medicines at no cost to qualified patients who are experiencing financial difficulties and who generally do not have coverage available for these products through private insurance or government funded programs.

Patients with Medicare Part D may be eligible for help from an independent co-pay foundation. Patients can call 1.800.4HUMIRA for assistance.

Stelara

StelaraSupport (www.stelarainfo.com/support-tools/cost-insurance) offers financial support to patients who are prescribed Stelara.

Patients with private insurance can take advantage of Stelara's Instant Savings Program to help lower out-of-pocket costs including co-pay, deductible, and co-insurance medication costs. The program pays 100% of out-of-pocket medication costs for three doses of treatment and helps lower out-of-pocket costs after that.

Patients are eligible for Instant Savings if they have been given Stelara by their doctor, are being treated for the FDA-approved use for Stelara, and currently have commercial insurance that covers medication costs for Stelara.

If a patient has no insurance, Janssen Prescription Assistance (www.JanssenPrescriptionAssistance.com/stelara-cost-assistance) may be of help. Janssen Prescription Assistance contains information about prescription assistance programs sponsored by relevant Janssen Pharmaceutical Companies as well as up-to-date information about independent foundations that may have available funding to help minimize drug costs for Stelara for those patients in need.

If a patient has Medicaid, Medicare, or other insurance and still cannot afford Stelara, Janssen can direct them to independent foundations that may be able to help. Patients should call 1-877-STELARA.

drug, ustekinumab gives another option as a different class of drug that works by a different mechanism. And vice versa, if a patient experiences adverse events or isn't seeing improvement with ustekinumab, switching the patient to an anti-TNF drug is an option.

For example, I had a patient who was originally treated with an anti-TNF drug. When it seemed to lose effectiveness, I switched the patient to ustekinumab. The patient did very well for a year or so, then the drug seemed to lose its effectiveness. I switched the patient back to the original anti-TNF drug and he responded well again, and he is still on that drug presently. There is a lot that is still not fully understood about the biologics and why they work or why they don't work. It's not as simple as just developing neutralizing antibodies—if that were the case, if a drug stopped working, it would still be ineffective when the patient restarted therapy with the original drug, which has not been the case.

RECOMMENDED SCREENING TESTS

There are a number of studies that should be routinely performed when prescribing biologic drugs. A purified protein derivative (PPD) test or quantiferon assay is recommended to screen for tuberculosis. Depending on where the patient lives, you may want to take a chest X-ray to look for signs of histoplasmosis. Both tuberculosis and histoplasmosis have been shown to activate when a patient is treated with an anti-TNF drug. Baseline CBC, hepatitis screen, and liver function tests are also recommended at the beginning of treatment, as well as periodically throughout the treatment to monitor patients for potential problems. Rare patients develop leukopenia, pancytopenia, or thrombocytopenia, so monitor for these. Viral hepatitis could worsen with biologic treatment.

Some dermatologists recommend an ANA test to detect antinuclear antibodies—at the very least, if a patient develops any signs or symptoms suggesting lupus, order an ANA right away.

IS MODERATE TO SEVERE PSORIASIS UNDERTREATED?

A lot of data available suggest that patients with psoriasis tend to get discouraged with treatment. Some are discouraged after using just over-the-counter therapy, others may have gone to a doctor 10 years ago, tried several treatments that didn't work very well, and then decided to just live with the condition. This is frustrating for dermatologists because there are now stronger topical agents available, and a greater understanding of how to treat psoriasis with intralesional topical steroids

that work very well for some patients. In addition to traditional systemic agents, the newer biologic agents make it rare that a treatment plan can't be tailored to an individual patient's needs and his or her tolerance for risks and benefits.

Tailoring a treatment plan for a patient can sometimes involve going to great lengths. This may involve asking pharmaceutical companies to cover the costs of these drugs on their foundation plans, or writing letters to insurance companies to make them understand that a particular therapy should be covered because other therapies have been tried and failed. Clinical trials may also offer a way for some patients to access a biologic drug.

PSORIASIS AND THE METABOLIC SYNDROME

The case for aggressive treatment may be more important than solving the "heartbreak of psoriasis." The metabolic syndrome is clearly tied into psoriasis. The metabolic syndrome, among other things, includes diabetes, high blood pressure, sudden death from heart attacks and strokes, and more. Successfully treating a patient with psoriasis and suppressing associated inflammation will not only make the patient look and feel better and improve his or her quality of life, it potentially could lengthen his or her life by decreasing the possibility the patient will have an early heart attack or stroke.

When a patient's psoriasis is improved through treatment, there may be many reasons why the metabolic syndrome improves. Perhaps once the patient looks and feels better, s/he is willing to go to the beach or pool, or to a gym to exercise more, which could lead to weight loss, which in turn leads to better blood pressure and lower risk for diabetes and heart disease. Or, it may be that inflammation, perhaps anywhere in the body, induces atherosclerotic plaque formation that can cause heart disease, strokes, and peripheral vascular disease. There may be many mechanisms, but there is ammunition now to educate insurance companies as to why treatments that control psoriasis should be covered by insurance.

CONCLUSION

With excellent topical medications, narrow band UVB, traditional systemic medications, assorted biologics, and new oral and injectable medications on the horizon, the future for psoriasis patients has never been brighter. While a single approach will not fit every patient, it is the rare patient whose psoriasis cannot be controlled to a level that greatly improves the quality of their life. ■