Two months ago in Hong Kong, a 23-year-old woman was reportedly so tormented by chronic eczema that she killed her parents, then herself in an act that brought attention to the stress of living with a life-long skin condition.

This is not the first case in which the psychological distress of living with a skin disorder has led to suicide, but it is not the norm.

Anxiety and depression are far more common, shows a study of psoriasis patients published online in July in the British Journal of Dermatology.

Of 59,961 patients with psoriasis, researchers from the University of Manchester in the United Kingdom found a lower suicide risk in people with psoriasis as compared to a control group of 876,919 patients without psoriasis. However, the psoriasis group had a higher prevalence for having a history of alcohol misuse, bipolar disorder, depression, anxiety disorders, self-harm, and having psychotropic drug prescriptions.

The risk of suicide was found to be lower in psoriasis patients who were older than 40 years old. For patients younger than 40 years, the risk of suicide was not any better or worse than the control group, but there was a slight increase in self harm.

For some patients, a skin condition can become so unbearable, they request euthanasia as in the case of a patient treated by Michael J. Cork, M.B., Ph.D., of the University of Sheffield in the United Kingdom.

Dr. Cork treats some of the most severe cases of atopic dermatitis in the U.K. In 2016, he treated a young woman with atopic dermatitis who was so severely depressed, she requested euthanasia. Prior to seeing Dr. Cork she was treated with

PSYCHOLOGICAL DISTRESS

Emotional burden of skin conditions may be rooted in physiology

LISSETTE HILTON | Staff Correspondent

WHITNEY J. PALMER | Staff Correspondent

For Elizabeth Kiracofe, M.D., the patient-centered care focus started with retinoid cream.

“When I opened my practice and started seeing patients, many of them said they had stopped using topical retinoids because they were allergic,” she said. “I discovered they really meant they were developing retinoid dermatitis from the medicine, and they needed more guidance on how to use the creams.”

That’s when the board-certified dermatologist with Illinois Dermatology Institute in Chicago began designing her practice around giving patients not only the best dermatology care possible, specifically with acne, but also providing education about their conditions and the medications used for management.

Ensuring your patients know what you’re doing and why is critical to protocol adherence regardless of what condition you’re treating, she said.

“If you don’t give them an understanding of why the program you’ve created together makes sense specifically for them, they’re not going to do it,” Dr. Kiracofe said. “The main trouble happens when patients receive plans that don’t match their lifestyle. They just can’t do it.”

But, while this patient-centered focus works well for the individuals you treat, what does it mean for your practice?
A BRIGHT IDEA

The Only FDA Approved
Clobetasol Propionate 0.025%

IMPOYZ™ (clobetasol propionate) Cream 0.025% is indicated for the treatment of moderate to severe plaque psoriasis in patients 18 years of age and older.¹

IMPORTANT SAFETY INFORMATION

Warnings and Precautions
Topical corticosteroids, including IMPOYZ Cream can cause reversible hypothalamic-pituitary-adrenal (HPA) axis suppression with the potential for glucocorticoid insufficiency. This may occur during treatment or after withdrawal of treatment. This may require that patients be evaluated periodically for evidence of HPA axis suppression. Factors that predispose to HPA axis suppression include, use of high-potency steroids, large treatment surface areas, prolonged use, use of occlusive dressings, altered skin barrier, liver failure, and young age. If HPA axis suppression occurs, gradually withdraw the drug, reduce frequency of application, or substitute with a less potent corticosteroid. If signs and symptoms of withdrawal occur, systemic corticosteroids may be required. Recovery of HPA axis function is generally prompt and complete upon discontinuation of topical corticosteroids. Although rare, systemic effects of topical corticosteroids may manifest as Cushing’s syndrome, hyperglycemia, and glucosuria. Pediatric patients may be more susceptible to systemic toxicity because of their larger skin surface to body mass ratios. Local Adverse Reactions with Topical Corticosteroids - Local adverse reactions from topical corticosteroids may be more likely to occur with occlusion, prolonged use, or use of higher potency corticosteroids. Some local adverse reactions may be irreversible. Concomitant Skin Infections - Use an appropriate antimicrobial agent if a skin infection is present or develops. If appropriate, discontinue use of IMPOYZ Cream. Allergic Contact Dermatitis - Allergic contact dermatitis with corticosteroids is usually diagnosed by observing failure to heal rather than noting a clinical exacerbation. Adverse Events - The adverse reaction that occurred in at least 1% of subjects treated with IMPOYZ Cream and at a higher incidence than in subjects treated with vehicle cream was application site discoloration (2% versus 1%). Less common local adverse events occurring in <1% of subjects treated with IMPOYZ Cream were application site atrophy, telangiectasia and rash.

Please see Brief Summary of Prescribing Information on the following page.
Local Adverse Reactions from topical corticosteroids may include atrophy, striae, telangiectasias, burning, itching, irritation, dryness, folliculitis, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, secondary infection, and miliaria. These may be more likely to occur with occlusive use, prolonged use, or use of high potency corticosteroids, including IMPOYZ Cream. These local adverse reactions may be irreversible.

Concomitant Skin Infections: Use an appropriate antimicrobial agent if a skin infection is present or develops. If a favorable response does not occur promptly, discontinue use of IMPOYZ Cream until the infection has been adequately treated.

Allergic Contact Dermatitis: Allergic contact dermatitis with corticosteroids is usually diagnosed by observing failure to heal rather than noting a clinical exacerbation. Such an observation should be corroborated by confirmatory patch testing. If irritation develops, discontinue the topical corticosteroid and institute appropriate therapy.

ADVERSE REACTIONS

Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug, and may not reflect the rates observed in practice. IMPOYZ Cream was evaluated in two randomized, multicenter, prospective, vehicle-controlled clinical trials in subjects with moderate to severe plaque psoriasis. Subjects applied IMPOYZ Cream or vehicle cream twice daily for 14 days. A total of 354 subjects applied IMPOYZ Cream and 178 subjects applied vehicle. The adverse reaction that occurred in at least 1% of subjects treated with IMPOYZ Cream and at a higher incidence than in subjects treated with vehicle cream was application site discoloration (2% vs 1%). Less common local adverse events occurring in <1% of subjects treated with IMPOYZ Cream were application site atrophy, telangiectasia, and rash.

Postmarketing Experience

The following adverse reactions have been identified during post-approval use of clobetasol propionate: striae, irritation, dryness, acneiform eruptions, hypopigmentation, perioral dermatitis, allergic contact dermatitis, secondary infection, hypertrichosis, and miliaria. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

USE IN SPECIFIC POPULATIONS

Pregnancy

There are no available data on IMPOYZ Cream in pregnant women to inform a drug-associated risk for adverse developmental outcomes. Published data report a significantly increased risk of low birthweight with the use of greater than 300 grams of potent or very potent topical corticosteroids during a pregnancy. Advise pregnant women of the potential risk to a fetus and to use IMPOYZ Cream on the smallest area of skin and for the shortest duration possible (see Data). In animal reproduction studies, increased malformations, such as cleft palate and skeletal abnormalities, were observed after subcutaneous administration of clobetasol propionate to pregnant mice and rabbits. No comparisons of animal exposure with human exposure are provided due to minimal systemic exposure noted after topical administration of IMPOYZ Cream [see Clinical Pharmacology (12.3)]. The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

Data

Human Data

Multiple observational studies have suggested associations between maternal use of potent and/or potent topical corticosteroids, perinatal delivery, or fetal mortality. However, when the dispersed amount of potent or very potent topical corticosteroid exceeded 300 g during the entire pregnancy, use was associated with an increase in low birth weight infants [adjusted RR, 7.74 (95% CI, 1.49–40.11)]. In addition, a small cohort study, in which 28 sub-Saharan women used potent topical corticosteroids (2728 mg clobetasol propionate 0.05%) for skin lightening during pregnancy, noted a higher incidence of low birth weight infants in the exposed group. The majority of exposed subjects treated large areas of the body (a mean quantity of 60 g/month (range, 12–170 g) over long periods of time.

Animal Data

In an embryo-fetal development study in mice, subcutaneous administration of clobetasol propionate resulted in fetotoxicity at the highest dose tested (1 mg/kg) and malformations at the lowest dose tested (0.03 mg/kg). Malformations included cleft palate and skeletal abnormalities. In an embryofetal development study in rabbits, subcutaneous administration of clobetasol propionate resulted in malformations at doses of 0.003 and 0.006 mg/kg. Malformations included cleft palate, craniofacial, and other skeletal abnormalities.

Lactation: Risk Summary

There is no information regarding the presence of clobetasol propionate in breast milk or its effects on the breastfed infant or on milk production. Systemically administered corticosteroids appear in human milk and could suppress growth, interfere with endogenous corticosteroid production, or cause other untoward effects. It is not known whether topical administration of clobetasol propionate could result in sufficient systemic absorption to produce detectable quantities in human milk. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for IMPOYZ Cream and any potential adverse effects on the breastfed infant from IMPOYZ Cream or from the underlying maternal condition. Clinical Considerations: To minimize potential exposure to the breastfed infant via breast milk, use IMPOYZ Cream on the smallest area of skin and for the shortest duration possible while breastfeeding. Advise breastfeeding women not to apply IMPOYZ Cream directly to the nipple and areola to avoid direct infant exposure.

Pediatric Use: The safety and effectiveness of IMPOYZ Cream in patients younger than 18 years of age have not been established; therefore, use in children younger than 18 years is not recommended. Because of a higher ratio of skin surface area to body mass, pediatric patients are at a greater risk than adults of systemic toxicity, including clobetasol propionate suppression, when treated with topical drugs [see Warnings and Precautions (5.1)]. Rare systemic toxicities such as Cushing’s syndrome, linear growth retardation, delayed weight gain, and intracranial hypertension have been reported in pediatric patients, especially those with prolonged exposure to large doses of high potency topical corticosteroids. Local adverse reactions involving striae and skin atrophy have also been reported with use of topical corticosteroids in pediatric patients. Avoid use of IMPOYZ Cream in the treatment of diaper dermatitis.

Geriatric Use: Clinical studies of IMPOYZ Cream did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience with topical corticosteroids has not identified differences in responses between the elderly and younger subjects.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term animal studies have not been performed to evaluate the carcinogenic potential of clobetasol propionate cream. In a 13-week repeat dose toxicity study in rats, topically administered clobetasol propionate 0.001, 0.005, and 0.025% at corresponding doses of 0.004 and 0.02 mg/kg/day resulted in corticosteroid class-related systemic effects such as reductions in body weight gain, reductions in total leukocytes and individual white cells, decrease in weight of adrenals, thymus, spleen, liver, and lung. Histologically, there were decreased hematopoiesis in the bone marrow, thymic atrophy and cell infiltration of the mesenteric lymph nodes. All these effects were indicative of severe immune suppression consistent with long-term exposure to corticosteroids. A no observable adverse effect level (NOAEL) was determined to be clobetasol propionate cream, 0.001 (0.004 mg/kg/day) in male rats while a NOAEL could not be determined in females. The clinical relevance of the findings in animals to humans is not clear, but sustained glucocorticoid-related immune suppression may increase the risk of infection and possibly the risk of carcinogenesis. Clobetasol propionate was not mutagenic in three different test systems: the Ames test, the Saccharomyces cerevisiae gene conversion assay, and the E. coli B WP2/F lac -test. Fertility studies conducted in the rat following subcutaneous administration of clobetasol propionate at dosage levels up to 0.05 mg/kg/day revealed that females exhibited an increase in the number of resorbed embryos and a decrease in the number of living fetuses at the highest dose.

Manufactured by DPT Laboratories Ltd. San Antonio, TX 78213 For Encore Dermatology, Inc. Scottsdale, AZ 85254 © 2018 Encore Dermatology, Inc., Malvern, PA 19355 IMPOYZ is a trademark of Encore Dermatology, Inc.

www.encorederm.com
A few weeks ago I was invited by my 8-year-old grandson to speak to his class on “Professions Day” about being a dermatologist. I naturally accepted and after giving what I thought was a particularly interesting talk — complete with color slides of various skin diseases and even lasers that I use to treat patients — one of my grandson’s classmates asked the all-important question: “Are you a real doctor?”

When I told him that I was indeed a “real” doctor, he asked why I didn’t sound like his doctor — a pediatrician.

I’m relatively sure that his comment wasn’t a true reflection of the quality of my presentation, since it wasn’t the first time I’d been asked this question, albeit often by adults and not an 8-year-old child. I’ve been told this same kind of story over the years by many colleagues.

When I was President of the American Academy of Dermatology (AAD), I learned firsthand of the tremendous public relations and advocacy campaigns they performed to educate the public about the skills, abilities and training that dermatologists receive, the type of care we provide our patients, the innovations we develop, and the research we perform in all aspects of dermatologic care — infections, eczema, photobiology, pathology, wound healing, oncology, immunology, cosmetics, alopecia, aging, lasers and light applications and many more.

In spite of these significant public relations efforts, why is there still patient confusion concerning our “identity?”

One of the biggest reasons, I believe, is perhaps the relatively small size of our specialty. The most recent government statistics show that of the nearly 700,000 practicing physicians in the United States, only approximately 8,500 or 1.2% were dermatologists. This small size decreases the visibility of our specialty and may also impact our availability which may be part of the reason that some HMO’s use generalists to provide skincare to their patients and refer only those patients with the most complex or difficult skin problems to dermatologists.

Physician Competition with other specialties is intense and may also contribute to an inaccurate understanding about our specialty. It’s certainly hard to argue with the ability and training of some specialties like plastic surgery, otorhinolaryngology and oculoplastic surgery to provide some limited skin care, but they are not dermatologists.

Non-Physician Competition with other providers may confuse patients about who is qualified to perform certain procedures. When I recently read through the weekly supplement to our local newspaper I found a number of large colorful ads for various aesthetic procedures like Botox, Kybella, injectable fillers, microneedling, permanent cosmetics (tattooing), laser hair removal and chemical peels. All of these procedures were being offered by registered nurses, nurse practitioners and physician assistants, often independent of physician supervision and sometimes even in nationally recognized spas. There is no mention in any of these ads of the professional training or physician supervision of these individuals, only endorsements by some physician or a designation as a “Master Level Injector” by some unidentified group or company.

In view of these facts, is there any wonder why patients may be confused about who is qualified by training, certification and licensure to provide dermatologic care?

How can we help to educate people about the specialty of dermatology and correct this misinformation about our “identity” to ensure the safe and effective skincare for our patients? The Academy has done a superb job of informing the public about the specialty of dermatologic care — infections, eczema, photobiology, patho
"I believe that this plan has the potential to be successful in increasing the awareness of what kinds of services dermatologists provide to help solve our identity crisis, but also improve the quality of skincare people receive."


**Increasing awareness of dermatology services from Page 7**

ogy and dermatologists, but it isn’t enough. Education, as is typically the case, is very important and there is no better place to begin that process than locally.

To implement change, we must try to further educate our patient population. This can be done in a number of ways. I’ve personally found that volunteering to speak to any one of a number of local service groups, like Rotary or Kiwanis, at one of their weekly luncheons on a dermatology topic is very effective. Trust me, they are always looking for speakers and would always welcome an offer of a speaker.

It’s also relatively easy to start a small educational program at an elementary school near your practice by volunteering to speak on sun safety and importance of sun protection.

The teachers will love your involvement helping to keep young children stimulated to learn. You can obtain teaching materials from the Academy to provide interested teachers with exciting electronic or printed learning materials that can be easily upgraded as children learn. As the children advance, these programs can be easily changed to remain pertinent, exciting and interesting.

Several of our local physicians have begun a unique way to interact with people by organizing free “Walks with the Doc.” These are short walks usually along a river bank or in a park where the walkers can simply ask questions of the physician about any relevant topic. The walkers get some exercise, learn about the specific attributes of the physician and get some important and accurate information about some health care issue.

I’ve also heard of “Yoga Night” where a physician rents the use of a yoga facility for a minimal fee with an instructor teaching simple yoga moves. During the “cool down” period the dermatologist can either give a short lecture on a topic of relevance or simply answer questions. Both of these types of activities can serve to help familiarize people about the specialty of dermatology and skin care.

Obviously, any complications that may result from treatments by any of these non-physician, unsupervised practitioners that are subsequently seen in the dermatologist’s office should be reported to the state medical board.

Further, if there is interest in pursuing legislative changes to improve patient safety, it would also be appropriate to contact your state representatives and describe the types of complications you may have seen that resulted from treatments provided by these types of individuals.

I believe that this plan has the potential to be successful in increasing the awareness of what kinds of services dermatologists provide to help solve our identity crisis, but also improve the quality of skincare people receive.

However, this will work only if it receives the attention and support it deserves from dermatologists who are desiring to make a change.
Qbrexza™
(glycopyrronium) cloth

NOW FDA APPROVED
AVAILABLE OCTOBER 2018

Introducing the first and only topical anticholinergic cloth towelette

For patients aged 9 years and older with primary axillary hyperhidrosis¹

Learn more at Qbrexza.com/hcp

Package shown for illustrative purposes only. Actual pouch may differ.

INDICATION
Qbrexza is indicated for topical treatment of primary axillary hyperhidrosis in adults and pediatric patients 9 years of age and older.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS
Qbrexza is contraindicated in patients with medical conditions that can be exacerbated by the anticholinergic effect of Qbrexza.

WARNINGS AND PRECAUTIONS
Worsening of Urinary Retention: Use with caution in patients with a history or presence of documented urinary retention.

Control of Body Temperature: In the presence of high ambient temperature, heat illness (hyperpyrexia and heat stroke due to decreased sweating) can occur with the use of anticholinergic drugs such as Qbrexza.

Operating Machinery or an Automobile: Transient blurred vision may occur with use of Qbrexza. If blurred vision occurs, the patient should discontinue use until symptoms resolve. Patients should be warned not to engage in activities that require clear vision such as operating a motor vehicle or other machinery, or performing hazardous work until the symptoms have resolved.

ADVERSE REACTIONS
The most common adverse reactions seen in ≥2% of subjects treated with Qbrexza were dry mouth (24.2%), mydriasis (6.8%), oropharyngeal pain (5.7%), headache (5.0%), urinary hesitation (3.5%), vision blurred (3.5%), nasal dryness (2.6%), dry throat (2.6%), dry eye (2.4%), dry skin (2.2%) and constipation (2.0%). Local skin reactions of erythema (17.0%), burning/stinging (14.1%) and pruritus (8.1%) were also common.

Please see Brief Summary of Full Prescribing Information on adjacent page.

Reference: 1. Qbrexza™ (glycopyrronium) cloth Prescribing Information, Dermira.
©2018 Dermira, Inc. All rights reserved. PM-US-QBR-0033 07/18
**Qbrexza® (glycopyrronium) cloth, 2.4%**, for topical use

The following is a Brief Summary. Refer to Full Prescribing Information for complete product information.

1 INDICATIONS AND USAGE

Qbrexza is indicated for topical treatment of primary axillary hyperhidrosis in adult and pediatric patients 9 years of age and older.

2 DOSAGE AND ADMINISTRATION

For topical use only.

Qbrexza is for topical use in the underarm area only and not for use in other body areas.

Qbrexza is administered by a single-use pre-moistened cloth packaged in individual pouches. Qbrexza should be applied to dry skin on the underarm areas only. Qbrexza should not be used more frequently than once every 24 hours.

Tear open the pouch and pull out the cloth, unfold the cloth, and wipe it across one underarm once. Using the same cloth should be used to apply Qbrexza to both underarms.

Wash hands immediately with soap and water after applying and discarding the Qbrexza cloth. Qbrexza may cause temporary application site reactions (pain [6.4%], dermatitis [3.8%], pruritus [3.8%], rash [3.8%], erythema [2.4%]).

3 CONTRAINDICATIONS

Qbrexza is contraindicated in patients with medical conditions that can be exacerbated by the anticholinergic effect of Qbrexza (e.g., glaucoma, paralytic ileus, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis, Sjogren's syndrome).

4 WARNINGS AND PRECAUTIONS

5.1 Worsening of Urinary Retention

Qbrexza should be used with caution in patients with a history or presence of documented urinary retention. Prescribers and patients should be alert for signs and symptoms of urinary retention (e.g., difficulty passing urine, disinterested bladder), especially in patients with prostatic hyperplasia or bladder-neck obstruction. Instruct patients to discontinue use immediately and consult a physician should any of these signs or symptoms develop.

Patients with a history of urinary retention were not included in the clinical studies.

5.2 Control of Body Temperature

In the presence of high ambient temperature, heat illness (hyperpyrexia and heat stroke due to decreased sweating) can occur with the use of anticholinergic drugs such as Qbrexza. Advise patients using Qbrexza to watch for generalized lack of sweating when in hot or very warm environmental temperatures and to avoid use if not sweating under these conditions.

5.3 Operating Machinery or an Automobile

Transient blurred vision may occur with use of Qbrexza. If blurred vision occurs, the patient should discontinue use until symptoms resolve. Patients should be warned not to engage in activities that require clear vision such as operating a motor vehicle or other machinery, or performing hazardous work until the symptoms have resolved.

6 ADVERSE REACTIONS

The following adverse reactions are described in greater detail in other sections:

- Worsening of Urinary Retention [see Warnings and Precautions (5.1)]

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In two double-blind, vehicle-controlled clinical trials (Trial 1 [NCT02553798] and Trial 2 [NCT02553204]) of 459 subjects treated with Qbrexza once daily and 232 treated with vehicle, subjects were 9 to 76 years of age, 47% male, and the percentages of White, Black (including African Americans), and Asian subjects were 82%, 12%, and 1%, respectively.

Clinical trials of Qbrexza did not include sufficient numbers of subjects age 65 years and older to determine whether they respond differently from younger subjects.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

There are no available data on Qbrexza use in pregnant women to inform a drug-associated risk for adverse developmental outcomes. In pregnant rats, daily oral administration of glycopyrronium (glycopyrronium bromide) during organogenesis was associated with an increased incidence of gross external or visceral defects. When glycopyrronium was administered intravenously to pregnant rabbits during organogenesis, no adverse effects on embryo-fetal development were seen.

The available data do not support relevant comparisons of systemic glycopyrronium exposures achieved in the animal studies to exposures observed in humans after topical use of Qbrexza.

The estimated background risks of major birth defects and miscarriage for the indicated population are unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

8.2 Lactation

There are no data on the presence of glycopyrronium or its metabolites in human milk, the effects on the breastfed infant, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for Qbrexza and any potential adverse effects on the breastfed infant from Qbrexza or from the underlying maternal condition.

8.4 Pediatric Use

Clinical trials of Qbrexza did not include sufficient numbers of subjects age 65 years and older to determine whether they respond differently from younger subjects.

8.6 Renal Impairment

The elimination of glycopyrronium is severely impaired in patients with renal failure.

10 OVERDOSAGE

Because glycopyrronium is a quaternary amine which does not easily cross the blood-brain barrier, symptoms of glycopyrronium overdosage are generally more peripheral in nature rather than central compared to other anticholinergic agents. Associated signs and symptoms related to excessive anticholinergic activity may include flushing, hyperthermia, tachycardia, ileus, urinary retention, loss of ocular accommodation and light sensitivity due to mydriasis.

In the case of overdose when symptoms are severe or life threatening, therapy may include:

- Managing per standard of care any acute conditions such as hyperthermia, coma, and/or seizures, as applicable, and managing any myoclonic or choreoathetoid movements which may lead to haberdashery in some cases of anticholinergic overdosage
- Managing severe urinary retention with catheterization if not spontaneously reversed within several hours
- Providing cardiovascular support and/or controlling arrhythmias
- Maintaining an open airway, providing ventilation as necessary
- Administering a quaternary ammonium anticholinesterase such as neostigmine to help alleviate severe or life threatening peripheral anticholinergic effects.

Topical overdosing of Qbrexza could result in an increased incidence or severity of local skin reactions. Administration of Qbrexza under occlusive conditions may result in an increase in anticholinergic effects, including dry mouth and urinary retention.

16.2 Storage and Handling

Store at room temperature 20°C - 25°C (68°F - 77°F), excursions permitted to 15°C - 30°C (59°F - 86°F) [See USP Controlled Room Temperature].

Qbrexza is flammable; keep away from heat or flame.

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information). Worsening of Urinary Retention

Instruct patients to be alert for signs and symptoms of urinary retention (e.g., difficulty passing urine, disinterested bladder). Instruct patients to discontinue use and consult a physician immediately should any of these signs or symptoms develop.

Control of Body Temperature (Risk of Overheating or Heat Illness)

In the presence of high ambient temperature, heat illness due to decreased sweating can occur with the use of anticholinergic drugs such as Qbrexza. Advise patients using Qbrexza to watch for generalized lack of sweating when in hot or very warm environmental temperatures and to avoid use if not sweating under these conditions.

Operating Machinery or an Automobile

Transient blurred vision may occur with use of Qbrexza. If blurred vision occurs, the patient should discontinue use until symptoms resolve.

Instruct patients to watch for generalized lack of sweating when in hot or very warm environmental temperatures and to avoid use if not sweating under these conditions.

Instructions for Administering Qbrexza

It is important for patients to understand how to correctly apply Qbrexza (see Patient Information).

- Instruct patients to use one cloth to apply Qbrexza to both axillae by wiping the cloth across one underarm, ONE TIME.
- Using the same cloth, apply the medication to the other underarm, ONE TIME.
- Instruct patients to watch for any temporary changes in the skin under the cloth until symptoms resolve.
- Instruct patients to wash their hands with soap and water immediately after discarding the used cloth.
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Manufactured for:

Dermira, Inc.
Menlo Park, CA 94025

Version 1, June 2018

PM-US-QBR-0030
Dr. Burn was a dermatologist working in a very busy predominantly medical dermatology office. He sees an average of 60 patients a day, is booked for weeks, and does not have a moment to breathe with his busy schedule. Although he loves the practice of dermatology, he finds himself increasingly exhausted and does not even have enough time to take a patient’s medical history.

One day, a patient presented to the office with a burn to his finger. The patient was a 30-year-old male who worked in a nearby chemical plant. The patient told the medical assistant the story of a chemical burn caused by hydrofluoric acid. The medical assistant simply relayed to Dr. Burn that the patient had a “burn” on his finger and nothing more.

Dr. Burn grabbed the patient’s file on the way into the exam room and did a quick scan of the nurse’s notes. He did not ask any questions, diagnosed the patient as having a second-degree burn, and prescribed the use of topical antibiotics. At no time did he ask the patient about the source of the burn—he was too busy. Dr. Burn did discuss with the patient about the importance of work safety as he made a note in the patient’s file about the burn. He assured his patient all would be fine.

Over the next few days, the burn-induced damage worsened. Although the patient’s condition deteriorated each day, he was assured by Dr. Burn’s lack of concern. By the end of the week, his finger had nearly self-amputated. At that point, the patient saw another dermatologist, and told the second dermatologist that the burn had been caused by hydrofluoric acid. The second dermatologist, seeing the extent of the damage, sent the burn patient to a burn center.

Unfortunately, treatment was unsuccessful, and ultimately the patient’s finger was amputated mid-knuckle, making it difficult for him to work. The remaining part of the finger became very sensitive to heat and cold. The patient became increasingly angry and bitter toward Dr. Burn.

On the advice of a friend he sought the counsel of a plaintiff’s attorney.

“If I had been treated properly by the first dermatologist, I would never have lost my finger,” he told the attorney. The attorney took the case, and filed a lawsuit against Dr. Burn.

Dr. Burn was shocked when he received notification that he was being sued. He met with the defense attorney provided by his insurance carrier and explained the situation.

“Neither my assistant, nor the patient ever told me he was burned with acid,” said Dr. Burn. “Is it my fault that the patient did not give me full details as to what was wrong?”

The jury returned after a brief time in deliberation with a verdict against Dr. Burn. At trial, the plaintiff’s attorney argued that Dr. Burn was negligent in his treatment of the patient. Just as a doctor wouldn’t rely on a patient’s self-diagnosis when determining a treatment, a doctor should also not rely on his staff’s lack of a description as to the source of the burn. It is the doctor’s responsibility to ask such questions.

The patient testified that although he hadn’t given the physician the information as to the cause of the burn, he was never asked by the physician; and he had given the information to Dr. Burn’s medical assistant.

The jury returned after a brief time in deliberation with a verdict against Dr. Burn. In reality, Dr. Burn did not provide the correct treatment for his patient. He relied on his staff for information and never asked the patient the correct questions.

In a case such as this, the onus was on Dr. Burn to ask about the cause. It is not the plaintiff’s responsibility to repeat his conversation twice. Similarly, Dr. Burn cannot push the onus onto his staff member for not telling him all the details. Lastly, Dr. Burn cannot say he was so busy that he did not have time to ask the right questions. He was liable and the jury agreed.
Ingredients for skin health

by ZOE DIANA DRAELOS, M.D.
Dr. Draelos is a clinical and research dermatologist with Dermatology Consulting Services, High Point, N.C. and a consulting professor of dermatology, Duke University School of Medicine, Durham, N.C.

Q: What is the skin NMF?
For years, cosmetic chemists have searched for the perfect moisturizer formulation that will maintain the optimal skin water content. Since normal skin does not require external moisturizer application to maintain water balance, there must be some substance in the skin that confers this quality. Before our increased understanding of stratum corneum physiology, this substance was named the natural moisturizing factor and abbreviated NMF. NMF is a mixture of amino acids, derivatives of amino acids, and salts. Cosmeceutical formulations that contain synthetic NMF are based on amino acids, pyrrolidone carboxylic acid, lactate, urea, ammonia, uric acid, glucosamine, creatinine, citrate, sodium, potassium, calcium, magnesium, phosphate, chlorine, sugar, organic acids and peptides. 10% of the dry weight of the stratum corneum cells is composed of NMF, which is derived from fillagrin.

Some higher end cosmeceutical moisturizers are based on NMF formulations. The question is whether these individual ingredients can function like naturally derived NMF. The analogy I use to explain the difference between individual ingredients and final formulation is cake baking. In order to make a cake, the flour, sugar, oil, baking powder, eggs, and flavorings must be put in a bowl, mixed and placed in the oven. When the concoction comes out of the oven, it looks like a cake, but the eggs, flour, sugar, etc., can no longer be distinguished. The baked cake is its own unique formulation. This same concept applies to skin NMF. The individual ingredients can be put on the skin, but their organization must be exact to insure functionality.

Q: Why are fatty acids essential in skin health?
Another essential part of skin health is the presence of essential fatty acids (EFAs), sometimes referred to as ‘vitamin F.’ These fatty acids are termed essential since they cannot be synthesized by the body, requiring oral ingestion. EFAs are important in barrier function maintenance. Linoleic acid is found in high concentration in ceramides, which are a major component of the intercellular lipids filling the spaces between the corneocytes. It is a burst a ceramide production that initiates the sequence leading to barrier repair.

It might seem that topical linoleic acid would be desirable, since external application might promote ceramide synthesis. This is not the case. Linoleic acid is a strong cutaneous irritant and highly unstable when exposed to oxygen. Cosmeceutical formulations that advertise EFA on their labels usually contain vitamin E linoleate. Nevertheless, oral administration is preferable.

Q: What can be done for estrogen deficient skin?
Estrogen deficiency is one of the key factors in postmenopausal skin thinning. Many postmenopausal women no longer wish to take oral estrogens due to their association with increased heart disease, breast cancer, uterine cancer, and ovarian cancer. This has led to increased interest in plant-derived phytoestrogens. One excellent source of plant estrogens is flaxseed. Flaxseed can be consumed as the roasted seeds on cereal or yogurt, but the ends of the seeds are sharp and the ground seeds are gritty. An easy way to consume flaxseed phytoestrogens is to take organic flaxseed oil in gel capsules daily, which is inexpensive and easy to swallow. While there are no well controlled studies on the cutaneous benefits of flaxseed oil, this is a healthy dietary suggestion the dermatologists can offer. Flaxseed is also rich in essential fatty acids, previously discussed.
Dear Doctor,

Hi. I’m Dr. Coultur, founding doctor at my clinic in Southern CA. We’re a small one Doctor clinic specializing in family practice. Like you, I’ve always looking for ways to provide better care for my patients. However, I must admit, with increasing government regulation and overly-restrictive insurance companies squeezing margins and crushing many doctors as well as sucking the life out of health care, I was looking for ways to both help my patients and provide a profitable income stream for my practice. Naturally, patient care comes first. But the reality is, if we can’t make money, our practice is simply not sustainable. And if you’ve been a doctor for a while, you know it’s not as easy as it once was.

That’s why I became interested in weight loss. Although I liked the concept behind these treatments, I felt these side effects were too risky and certainly not things I wanted my patients to experience. On top of that, the cost of the equipment at $150,000 plus paying every time you turn the machine on further encouraged me to look at other alternatives.

Why I Chose the Vevazz Slimline System

The Vevazz Slimline System offered all of the benefits of CoolSculpting (and more), without any of the risky side effects, and at one third the price. Now, I’m a pretty analytical kind of a guy. So, I really did my homework before deciding to try Vevazz in my clinic. I spoke with the owner of the company (several times) and compared Vevazz to other options including CoolSculpting. Here’s what I found...

As you can see, the decision to try Vevazz became obvious. So, I purchased the equipment with easy finance payments (knowing it came with a comprehensive income guarantee – so if I didn’t work, I could send it back without risk). That was years ago. Last month my small clinic performed 289 Vevazz treatments totaling $39,425 in sales. Apart from a few hours of my time, modest staff costs, and a handful of expensive ancillaries (like cloth pads etc.), most of the money we collect is pure profit. And that’s just last month. Here are records of one doctor’s Vevazz treatment sales over the past 6 months.

<table>
<thead>
<tr>
<th>No. Vevazz Clients</th>
<th>$ Income</th>
</tr>
</thead>
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<tr>
<td>December</td>
<td>16</td>
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<tr>
<td>January</td>
<td>24</td>
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<tr>
<td>February</td>
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<tr>
<td>May</td>
<td>19</td>
</tr>
<tr>
<td>Total for 6 months</td>
<td>134</td>
</tr>
</tbody>
</table>

The Vevazz Slimline System Is...

• The quickest, safest, most natural way to lose fat quickly
• The easiest, most rewarding way to add money to your bank account

Naturally, results differ from person to person. And sales differ from clinic to clinic. That’s why I urge you to check out Vevazz for yourself.

Why I Decided Against CoolSculpting

I’d seen lots of advertising for CoolSculpting and fat freezing, so that’s where my research began. While these treatments seemed to offer some legitimate, fat loss benefits, I was concerned about a number of potential side effects including... 

• Burns and scars, redness, itching, tenderness and swelling
• Tingling that can last for weeks
• Strange out-of-proportion lumps and bumps that can appear around the hips, thighs, elbows, knees, and shoulders
• Step-off deformity and transition lines along the perimeter of treatment areas

Although I liked the concept behind these treatments, I felt these side effects were too risky and certainly not things I wanted my patients to experience. On top of that, the cost of the equipment at $150,000 plus paying every time you turn the machine on further encouraged me to look at other alternatives.

P.S. By the way, Dr. Coultur is not affiliated with Vevazz nor is he receiving anything from Vevazz for writing this letter. He just knew how hard the restrictive insurance companies, shrinking margins, and growing bureaucracy was getting for him and his practice, and the results of introducing Vevazz to his practice have been so good (for him and his patients). So, he wanted to help spread the word. Once again, he encourages you to check out Vevazz for yourself. Watch their webinar, download their white paper at Vevazz.com or call them on 773-620-9500.

Sincerely,

Jamie Fettig, DC - Founder of Vevazz
FDA APPROVES TREATMENT FOR HYPERHIDROSIS

IN JUNE, Dermira Inc. announced the FDA approval of Qbrexza (glycopyrronium) for primary axillary hyperhidrosis — excessive sweating that can occur on the palms, soles, face, underarms or scalp.

It is the first FDA-approved topical for this condition and may be available as a prescription treatment for pediatric and adult patients later this year.

Primary axillary hyperhidrosis affects nearly 10 million people in the U.S., affecting men and women equally. Qbrexza is an anticholinergic that comes as a cloth designed to be applied once-daily to the affected area. It works by inhibiting the activation of sweat glands.

It’s approval is based on results from two phase three clinical trials, ATOMOS-1 and ATOMOS-2. Both trials assessed the absolute change from baseline in sweat production (the weight or amount of sweat a patient produces) following treatment with Qbrexza and the proportion of patients who achieved at least a four-point improvement from baseline in their sweating severity, as measured by the Axillary Sweating Daily Diary (ASDD). Dermira’s proprietary patient-reported outcome (PRO) instrument.

The most common adverse reactions seen in ≥2% of subjects treated with Qbrexza were dry mouth (24.2%), mydriasis (6.6%), dry nose (5.7%), headache (9.0%), urinary hesitancy (3.5%), vision blurred (3.5%), nasal dryness (2.6%), dry throat (2.6%), dry eye (2.4%), dry skin (2.2%) and constipation (2.0%). Local skin reactions, including erythema (17.0%), burning/stinging (14.1%) and pruritus (8.1%) also occurred.

CONTRAINDICATIONS
Qbrexza is contraindicated for patients with medical conditions that can be exacerbated by the anticholinergic effect of Qbrexza, such as glaucoma, paralytic ileus, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis and Sjogren’s syndrome.

ANALYSIS SHOWS NURSES ARE OVERWORKED

HAWAII HAS THE most over-worked RN workforce, according to a report by Medicare Health Plans issued in June.


The report is based on an analysis of data from the U.S. Census Bureau compared to FBI crime data and data from the Kaiser Family Foundation that included the total number of healthcare professionals for each state.

This data was used to determine the number of physicians and nurses per every 1,000 people. States with higher person to nurse ratios were considered states in which nurses were overworked.
NEW TREATMENT FOR UNRESECTABLE/METASTATIC MELANOMA

THE FDA HAS approved the combination treatment of encorafenib (Braftovi/Avelia, Array BioPharma) with binimetinib (Mektovi/Avelia, Array BioPharma) for patients with unresectable or metastatic melanoma with BRAF V600E or V600K mutations.

“Despite recent treatment advances, many patients with BRAF-mutant melanoma still face significant challenges managing their disease, and there remains a substantial need for well-tolerated treatments that delay disease progression and improve overall survival,” Array BioPharma stated in a news release.

The announcement was made in June and is based on the outcomes of a randomized, active-controlled, open-label, multicenter trial (COLUMBUS) in 577 patients who met the criteria for the study. Having resectable or metastatic melanoma with BRAF V600E or V600K mutations. The patients were randomized (1:1:1) to receive binimetinib 45 mg twice daily plus encorafenib 450 mg once daily, encorafenib 300 mg once daily, or vemurafenib 960 mg twice daily.

The median progression free survival (PFS) was 14.9 months for patients receiving binimetinib plus encorafenib, and 7.3 months for the vemurafenib monotherapy arm (hazard ratio 0.54, 95% CI: 0.41, 0.71, p<0.0001). An average of 63% of patients in the first group and 40% of patients in the second group, responded to treatment within 16.6 months vs. 12.3 months, respectively.

The most common adverse reactions affecting 25% or more of patients included fatigue, nausea, diarrhea, vomiting, abdominal pain and arthralgia. Five percent of patients discontinued therapy due to hemorrhage and headache.

The recommended doses are binimetinib 45 mg orally twice daily and encorafenib 450 mg orally once daily.

The FDA approval comes with the approval of the THxID BRAF Kit (bioMérieux) as a diagnostic kit to be used with the combination treatment.

LANGUAGE USED IN MEDICAL RECORDS CAN STIGMATIZE PATIENTS FOR YEARS

A JOHNS HOPKINS study found that physicians who use stigmatizing language in their patients’ medical records may affect the care those patients get for years to come.

When doctors read notes and descriptions from previous medical visits, says the study, published in the May issue of The Journal of General Internal Medicine, the language in those notes may play a role in how that patient is treated, as well as how aggressively the patient’s pain is managed.

Mary Catherine Beach, M.D., M.P.H., designed the study to determine whether the language and descriptions used in patient records can perpetuate bias among physicians. More than 400 physicians-in-training -- medical students and residents -- were presented with one of two vignettes about a hypothetical patient, a 28-year-old man with sickle cell disease and chronic hip pain.

While the vignettes contained medically identical information, one used neutral language to describe the patient and his condition, while the other vignette contained nonessential language that implied various value judgments.

Dr. Beach and her research colleagues found that physicians-in-training who read the stigmatizing patient chart notes were significantly more likely to have a negative attitude toward the patient than those who read the chart containing more neutral language.

And not only did their attitudes change, so did their treatment plans. Those physicians-in-training who had read the stigmatizing chart note decided to treat the patient’s pain less aggressively.

Every clinician encounter with a patient is documented in a chart note. Symptoms, patient history, vital signs, test results, clinicians’ assessments and treatment plans are all part of the medical record.

“This record may be the only source of information a new clinician has about some patients,” says Dr. Beach. “We have to question the assumption that the medical record always represents an objective space.”

In one patient-doctor encounter cited in the study, study participants were presented with a wheelchair bound patient. The patient was described differently in every encounter from “pain is not alleviated by his home pain medication regimen” to “He is narcotic dependent and in our ED frequently.”

“There is growing evidence that the language used to communicate in health care reflects and influences clinician attitudes toward their patients,” says Anna Goddu, a Johns Hopkins University School of Medicine student who co-authored the study. “Medical records are an important and overlooked pathway by which bias may be propagated from one clinician to another, further entrenching health care disparities.”

EC MOVES FORWARD WITH NEW PSA TREATMENT

IN JUNE, the European Commission approved tofacitinib citrate (Xeljanz/Pfizer) 5 mg twice daily in combination with methotrexate for the treatment of active psoriatic arthritis (PsA) in adult patients who have had an inadequate response or who have been intolerant to a prior disease-modifying antirheumatic drug (DMARD) therapy.

Tofacitinib citrate is the first and only oral Janus kinase (JAK) inhibitor to be approved in the European Union for adults with active PsA.

The approval was based on the results of a phase three trial called the “Oral Psoriatic Arthritis Trials (OPAL)” which included two trials: OPAL Forward and OPAL Beyond. Results from the long-term extension trial OPAL Balance were also considered.
Pediatric AD treatment gaps

LISETTE HILTON | Staff Correspondent

Treating children with severe atopic dermatitis remains a challenge because there are so few effective and approved therapies. But there is hope that pipeline therapies, including Janus kinases (JAK) inhibitors and a monoclonal antibody against IL-31 receptor for treatment of itch may address some needs among severely impacted children, researchers write in the online May issue of Current Allergy and Asthma Reports.

The researchers reviewed what is known about severe atopic dermatitis in children and identified gaps in treatment and knowledge. They report:

- The estimated $364 million annual cost to care for atopic dermatitis in children in the United States doesn’t take into account consequences of especially severe disease, such as pain, suffering, poor sleep, low self-esteem and poor performance at school. Moderate-to-severe atopic dermatitis patients are also at higher risk than children without the disease for skin infections with S. aureus, potentially leading to invasive infections, from bacteremia to osteomyelitis, as well as serious complications, including meningitis.

- Atopic dermatitis has been associated with filaggrin null mutations, and interleukin (IL)-31 has been shown to be an important cytokine in the pathogenesis of atopic dermatitis-related itch.

- There are important gaps in aspects of the diagnosis, treatment and management of atopic dermatitis. For example, while atopic dermatitis remains largely a clinical diagnosis, clinicians lack a biomarker they can routinely use outside the research setting to diagnose atopic dermatitis severity.

- Treatments beyond first-line anti-inflammatory topical corticosteroids and second-line topical calcineurin inhibitors also are lacking for children with severe disease. Dermatologists and others might resort to alternative therapies that have yet to be approved for pediatric atopic dermatitis in the United States, including cyclosporine, azathioprine, mycophenolate mofetil and methotrexate.

- The FDA approved crisaborole for atopic dermatitis in patients two years and older, but it is not indicated for severe disease. The monoclonal antibody dupilumab, which blocks IL-4 and IL-13, has shown promise in early studies in children with moderate to severe atopic dermatitis, but it is not yet approved for pediatric atopic dermatitis and longer safety studies are needed.

- Other pipeline therapies for pediatric atopic dermatitis include JAK inhibitors, antagonists against chemokine receptor-homologous molecule expressed on Th2 cells, as well as monoclonal antibodies against IL-13, IL-22, IL-33, Thymic stromal lymphopoietin (TSLP), transcription factor GATA binding protein 3 (GATA-3) and more.

- The problem for many atopic dermatitis remains itch. Early research suggests JAK inhibitors might decrease chronic Th2 cytokine-induced itch. And researchers have reported a dose-response effect in relieving itch with a monoclonal antibody against IL-31 receptor in a phase 2 study on adults with moderate to severe atopic dermatitis.

- Researchers also seem to be making progress on an approach to prevent, even cure, atopic dermatitis, which involves transplanting skin microbiota, including bacteria, to compete with S. aureus.

- These experimental treatments could fill some of the treatment gaps for children with severe atopic dermatitis, the authors write.

References

Evie Huang, Peck Y. Ong. “Severe Atopic Dermatitis in Children.” Current Allergy and Asthma Reports. First online: May 10, 2018
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A French study adds to the evidence that oral propranolol is a relatively safe treatment for infantile hemangioma. However, it may be associated with an increased risk for respiratory events and cardiovascular events in children, French researchers wrote in the June issue of *Pediatrics*.

Researchers, who led by Catherine Droitcourt, M.D., of Pontchaillou Hospital in Rennes, France, found that oral propranolol for infantile hemangioma was “good.” This is a treatment that has long been used for infantile hemangioma, but in 2008, French researchers documented the occurrence of some complications. After more testing, the treatment was eventually approved in 2014 by the European Medicines Agency for use in infantile hemangioma.

The new analysis is based on a large nationwide claims database of 1,484 children (three years or younger) with infantile hemangioma, but without underlying disease. And, 269 children with infantile hemangioma, but with underlying disease, such as cardiovascular, respiratory and metabolic conditions.

The patients received at least two deliveries of oral propranolol between July 2014 and June 2016 and the outcomes were generally favorable. In infantile hemangioma patients who did not have other health conditions, there were two cardiovascular, 51 respiratory events and 38 hospitalizations with bronchiolitis and three metabolic events. But among children with underlying conditions who received the same oral propranolol treatment, there were 11 cardiovascular events — primarily, in children with pre-existing congenital heart disease. In 49 children with underlying respiratory disease, there were 11 respiratory events. No children with underlying metabolic disease experienced a metabolic event during treatment.

“The absence of risk for cardiovascular outcomes in the healthy population is reassuring. However, [in patients with underlying health conditions] much concern has been raised about cardiovascular effects and, more precisely, conduction disturbances, bradycardia, and hypotension,” the authors wrote.

While acute respiratory disease is a well-identified risk in children treated with propranolol, the high number of cases in the infantile hemangioma-only group was concerning, the others wrote, but the high rate of occurrence may be due to better monitoring and not necessarily more severe disease.

In terms of hospitalizations for metabolic events, this affected four patients in the infantile hemangioma-only group in which the patients developed hypoglycemia. Treatment was discontinued for three patients.

The authors do not suggest the need for monitoring oral propranolol outcomes for infantile hemangioma, but they do recommend some precautions. “Avoidance is advised in cases of lower respiratory infection or low food intake. During the titration phase, a cardiovascular monitoring based on clinical parameters is recommended.”

**Reference**

The inflammatory response in papules of patients with acne prone to scarring can last more than three weeks and is characterized by a marked infiltration of B cells, a study published in the British Journal of Dermatology has found,1 whereas the immune response in papules of patients with acne not prone to scarring resolves much more rapidly.

The researchers suggested that the intensity and duration of this inflammatory reaction causes dermal damage and alteration of the sebaceous gland structure leading to atrophic scar formation.

While the pathogenesis of atrophic acne scarring is not completely understood, severity and duration of inflammation is considered likely to play a role. One previous study analyzed the immune response in acne scarring by comparing acne lesions in scar-prone and non-scar-prone patients,2 and found that in the first seven days the inflammatory reaction around the pilosebaceous follicle was stronger and lasted longer in patients with acne prone to scarring and nine were not. Biopsies of non-lesional skin and of inflammatory lesions less than 48 hours old were taken from their backs, and further lesions less than 48 hours old were identified for follow up 21 days later. Biopsies of these “evolved lesions” were taken at 21 days. Biopsies were also from ten healthy volunteers to provide a comparison of healthy skin, and skin samples were obtained from five healthy people undergoing plastic surgery for gene expression profiling of human sebaceous glands and epidermis.

Gene expression and immunohistochemistry analyses showed a very similar immune response in 48 hours-old papules in scar prone and non-scar prone acne patients with acne, characterized by elevated numbers of T cells, neutrophils and macrophages. However, when the three-week old papules were examined, it was clear that the immune response persisted only in scar prone patients, and an infiltrate of B cells was evident. Down-modulation of sebaceous gland markers related to lipid metabolism was observed in 48 hours-old papules in scar prone patients, but this had normalized after three weeks. In contrast, there was a drastic reduction of these markers in scar prone patients which persisted at three weeks, suggesting "an irreversible destruction of sebaceous gland structures after inflammatory remodelling in scar-prone acne patients", the researchers said.

Quick Takes

- Acne scarring is associated with severity and duration.
- There is a point at which the destruction of sebaceous gland structures is irreversible.

Researchers suggest that the intensity and duration of inflammatory reaction causes dermal damage and alteration of the sebaceous gland structure leading to atrophic scar formation.

SCARRING CONTINUES ON PAGE 30
Managing severity is a challenge in kids. Secondary disease consequences include a range of comorbidities. Faster drug approvals with many promising agents on the way.

**Quick Takes**

Managing severity is a challenge in kids. Secondary disease consequences include a range of comorbidities. Faster drug approvals with many promising agents on the way.

**Children with atopic dermatitis present with remarkable variation in disease severity. One of the challenges for dermatologists managing this disease in kids is adequately treating severity, says Lawrence F. Eichenfield, M.D., in a talk given on June 23 at the 14th annual Women's and Pediatric Dermatology Seminar in Newport Beach, Calif.**

“With more significant disease, there’s a tremendous amount of burden in terms of symptoms, rash, secondary medical consequences and increasing data of comorbidities,” said Dr. Eichenfield, who is chief of pediatric and adolescent dermatology, University of California San Diego and Rady Children’s Hospital, San Diego.

Among the secondary medical consequences of pediatric atopic dermatitis: Cutaneous and, sometimes, systemic infections, sleep disturbance, and neuropsychologic effects, including anxiety, depression and attention deficit hyperactivity disorder (ADHD). Children with atopic dermatitis are more likely than those without the disease to suffer from a range of comorbidities, including traditional atopic comorbidities, such as asthma, allergic rhinitis, food allergy and contact allergy.

“There’s increasing cardiovascular evidence in adults, but we haven’t seen that yet in kids with atopic dermatitis,” he said.

Dermatologists are seeing what Dr. Eichenfield called the revolutionary phase for pediatric atopic dermatitis management. After a 15-year lull, the Food and Drug Administration approved the topical phosphodiesterase 4 (PDE-4) inhibitor crisaborole (Eucrisa, Pfizer) in December 2016. Regeneron Pharmaceuticals and Sanofi recently released phase 3 data on the use of the monoclonal antibody dupilumab (Dupixent) for patients 12 to 17 years with moderate-to-severe atopic dermatitis. The FDA approved dupilumab for adults with the disease in March 2017.

“There’s a good chance dupilumab will be approved within the next six to nine months in adolescents. There are another 20-plus drugs in development for atopic dermatitis.”

Lawrence F. Eichenfield, M.D., Rady Children’s Hospital, San Diego

**FDA recommends early, pre-approval systemic drug trials in pediatrics**

**There’s a good chance dupilumab will be approved within the next six to nine months in adolescents. There are another 20-plus drugs in development for atopic dermatitis.”**

Lawrence F. Eichenfield, M.D., Rady Children’s Hospital, San Diego

**Reference**

Eichenfield LF. Atopic Dermatitis: Pediatric Challenges. 14th Annual Women’s & Pediatric Dermatology Seminar. Newport Beach, Calif., June 22 and 23, 2018
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MSL 183 Rev A
IL-23 guselkumab improves PsA symptoms

JOHN JESITUS | Staff Correspondent

A new phase two study shows that guselkumab significantly improves signs and symptoms of psoriatic arthritis (PsA), supporting the importance of interleukin (IL)-23 as a therapeutic target in PsA.

Published in the June 2018 issue of The Lancet, the study shows that guselkumab significantly outperformed placebo in terms of American College of Rheumatology (ACR) 20 response at week 24, as well as several secondary outcomes related to bones, joints and quality of life out to nearly a year.

“This is the first published study of an IL-23-blocking drug, which offers a novel mechanism of action, in psoriatic arthritis,” said lead investigator Atul Deodhar, M.D., of the Oregon Health & Science University in Portland, Ore. Guselkumab seems to improve all manifestations of psoriatic disease, including skin, joint and enthesial involvement, along with dactylitis, he added. “The other exciting part is the significant improvement in patients’ functioning, which is not surprising because patients’ pain, swelling and skin improved.”

Investigators randomized 100 patients to subcutaneous guselkumab 100 mg and 49 to placebo at weeks zero, four, and every eight weeks thereafter for 24 weeks. Investigators switched patients who experienced less than 5 percent improvement in swollen and tender joint counts at week 16 to ustekinumab. This group included 10 percent of guselkumab-treated patients and 35 percent of placebo-treated patients. At week 24, the remaining placebo-treated patients (59 percent) crossed over to guselkumab 100 mg at weeks 24, 28, 36 and 44. Patients who started with guselkumab received one placebo injection at week 24, followed by guselkumab at the remaining time points.

The superiority of guselkumab emerged as early as week four, when 21 percent of treated patients had achieved ACR 20, versus no placebo-treated patients. At week 24, 58 percent of guselkumab-treated patients achieved ACR 20, as did 18 percent of placebo-treated patients (p<0.0001). ACR 20, 50 and 70 responses of guselkumab-treated patients held steady or improved slightly between weeks 24 (58 percent, 34 percent, 14 percent) and 56 (61 percent, 43 percent and 27 percent). Guselkumab also achieved significantly better Psoriasis Area and Severity Index (PASI) 50, 75, 90 and 100 results at all time points.

The proportions of guselkumab-treated and placebo-treated patients achieving at least 0.35 improvement from baseline in Health Assessment Questionnaire Disability Index (HAQ-DI) scores at week 24 were 51 percent and 29 percent, respectively. Mental component summary scores on the 36-Item Short-Form Health Survey (SF-36) at week 24 improved by 9.06 percent and 6.74 percent, respectively. Week 24 enthesitis and dactylitis scores both fell 100 percent in the guselkumab cohort, versus 33.3 percent for placebo.

Deodhar et al. write that the efficacy of guselkumab in psoriasis and PsA may stem from its neutralization of IL-23 or IL-39; both cytokines share the p19 subunit. However, they hypothesize, the previously reported efficacy of drugs blocking IL 12/23 and IL-17 in these diseases suggests that IL-23 is more likely than IL-39 to drive guselkumab’s efficacy.

“IL-39 is a recently discovered cytokine, and we do not know whether it plays any role in the pathology of psoriasis and psoriatic arthritis,” said Dr. Deodhar. Conversely, he said, IL-23 has long been known to be important in the development of psoriasis and PsA. “In mice and in humans, the IL-23 pathway causes inflammation. In enthesis, IL-23 leads to release of IL-17 and IL-22, which cause more inflammation in the joints, the enthesial area and the skin.”

Compared to ustekinumab, which inhibits IL-12 and IL-23, in PsA, he said, “Guselkumab may be more effective – we wonder whether blocking IL-12 might hamper the good effects of blocking IL-23.”

Safety outcomes mirrored those in phase three guselkumab psoriasis trials, except for a slightly higher incidence of neutropenia – 3 percent of guselkumab-treated patients had grade two neutropenia, and 1 percent had grade three neutropenia. All but one case resolved without stopping treatment, he added. A total of 10 patients discontinued treatment before the final visit due to adverse events were infections in 16% of patients. It was well tolerated during 44 weeks of treatment.
The results of this study confirm the importance of interleukin 23 in this disease, and indicate that this cytokine is a promising treatment target in psoriatic arthritis."

Atul Deodhar, M.D., et al. The Lancet

Disclosures: Dr. Deodhar has received research grants and has served on advisory boards for Janssen, maker of guselkumab.

Reference


What’s your diagnosis

A 52-YEAR-OLD MAN who had returned from an end-of-summer camping trip in Vermont two weeks earlier went to the doctor complaining of a severe headache in the front of his head and a widespread rash of blanching macules. The illness had started a few days earlier with just a mild fever, myalgias, and some loss of appetite. Despite feeling terrible, he joked that his trip was fun, but he’s pretty sure the mosquito is the unofficial bird of Vermont.

A. West Nile virus
B. Dengue fever
C. Rubeola
D. Viral exanthem

Learn more about this diagnosis at VisualDx: http://bit.ly/2eUpXZb

Photo: VisualDx
oral steroids. She attempted to enroll in a dupilumab trial, but wasn’t eligible.

So I met the CEO of Regeneron and showed him her pictures and how desperately ill she was. He gave her immediate approval for compassionate use. It was four weeks before Christmas when she started dupilumab and by Christmas Eve, she was completely transformed,” Dr. Cork said.

**PSYCHOLOGICAL BURDEN**

The psychologic burden of skin disorders has been documented in many studies. A review published in June in the journal *Skin Pharmacology and Physiology*, shows that approximately 30% of patients with skin disorders suffer from a psychological condition, such as anxiety and depression.

In one study cited in the review, of 3,207 patients with hidradenitis suppurativa (HS), 42% suffer from depression. Another study of 154 patients with HS reported 35% having depression or 21% having depressive symptoms.

Several studies cited in the review reported high rates of suicidality among patients with atopic dermatitis and HS. But among psoriasis patients, a 2017 systemic review published in the *American Journal of Clinical Dermatology* found no increased risk of suicide, but that study was deemed to be of low quality.

Adults with atopic dermatitis are 2.24 times more likely to suffer moderate depression and 5.64 times more likely to be severely depressed compared to adults without the disease, shows a clinical research letter published in 2015 in the *Journal of Investigative Dermatology*.

A 2015 article published in *Medicine* showed that in children, there is a dose-dependent relationship between atopic dermatitis severity and psychological distress. Adolescents with atopic dermatitis were more likely to suffer suicidal ideation than healthy teens.

**HOW UNTREATED SKIN DISEASE CAN AFFECT THE BRAIN**

Dr. Cork and colleagues are conducting research that examines the “atopic dermatitis psychiatric march,” which explains how untreated atopic dermatitis can affect the brain, leading to mental health disorders and suicide in severe cases.

“From a biological perspective, we suspect mental health disorders, like depression and anxiety, are related to atopic dermatitis because the inflammation in the skin alters the neurotransmitters in the brain,” Dr. Cork said. “There’s very good data in rheumatoid arthritis that the inflammation affects the brain. We’re basically proposing the same occurs in atopic dermatitis.”

Other researchers have explored this theory in dermatology. Writing in the June 28 online issue of *Skin Pharmacology and Physiology*, Farzana F. et al. wrote, “The potential relationships between cutaneous inflammation and central nervous system contributions form a chronic feedback loop.”

There are a number of underlying shared mechanisms between severe atopic dermatitis and psychiatric disorders, including genetic associations, stress, inflammation, sleep disturbance and environmental factors, according to Shatha Shibib, M.B., Ch.B., a child and adolescent psychiatrist at Sheffield Children’s Hospital NHS Foundation Trust in the United Kingdom. Dr. Shibib has a special interest in psycho-dermatology and is an author on the atopic dermatitis psychiatric march study with Dr. Cork.

The brain and skin share a common embryological origin, the ectoderm, she said.

“In our practice we have observed an association between the itch-scratch cycle and a cycle of stress-inflammation and the development of depressive symptoms and negative cognitions. Negative cognitions render an individual more prone to the development of emotional disorders such as anxiety and/or depression and suicide in those severely affected,” Dr. Shibib said.

“Hopelessness and statements such as ‘I wish I wasn’t born’ are common. Oftentimes, cognitive distortions can be reinforced by the relapsing and remitting nature of atopic dermatitis. They can also be reinforced by perceived hopelessness from treating clinicians and family members, particularly when a number of treatments have been tried and treatment effects are not as expected,” she said.

Effective treatment and targeting inflammation early can quickly “switch off” depression and, potentially, the psychiatric march, altering the trajectory of those affected, Dr. Cork said.

The International Eczema Council discourages the routine use of systemic corticosteroids, suggesting physicians reserve them for special circumstances, but oral steroid use is a common practice. In one study cited in the review, of 3,207 patients with hidradenitis suppurativa, 42% suffered from depression. Another study of 154 patients with HS reported 35% having depression or 21% having depressive symptoms.

Dr. Cork who rarely treats severe atopic dermatitis with oral corticosteroids because the adverse effects may outweigh its benefits. She said, “My motto is never prescribe a treatment that carries a risk of side effects that outweighs the risks of the disease. Knowing that depression and suicidality are potential risks of severe atopic dermatitis helps put more aggressive treatment into context,” she said.

The tolls severe atopic dermatitis can take on sleep and...
mental health are among the disease’s most significant comorbidities. They can be life-altering, even life-threatening, she said.

While dupilumab is approved for adults with moderate-to-severe atopic dermatitis in the U.S., the FDA has not yet approved it for pediatric atopic dermatitis. Clinical trials in adolescents are underway, but the early data shows an improvement in atopic dermatitis and emotional wellbeing, Dr. Cork said.

Ironically, suicidal patients may not be candidates for drug trials because their mental health status may be considered an exclusion criteria. “This needs to be corrected. We need to make sure we get these drugs to patients with severe atopic dermatitis,” he said.

ENDPOINT: LONG-TERM DISEASE CONTROL

The stories and statistics reflect what many dermatologists already know about severe skin disease, said Lawrence E. Eichenfield, M.D., of Rady Children’s Hospital in San Diego.

“Severe disease has been underappreciated amongst the much higher numbers of patients with milder disease, which is the predominant epidemiology — especially younger children. More severe disease has not been well managed because of limited use of systemic medications,” he said.

With the approval of dupilumab (Dupixent, Regeneron and Sanofi) for adults with atopic dermatitis, and other therapeutic agents in the pipeline that may change, he said.

“Dermatologists and others have to acknowledge bad atopic dermatitis and treat it — with long-term disease control being the endpoint. That’s the message: Long-term disease control with whatever you need therapeutically proportionate to disease severity,” Dr. Eichenfield said.

It’s vital that dermatologists become aware of the mental health impact of atopic dermatitis and adequately address its psychological toll in the clinic setting, Dr. Eichenfield said.

“We need to move from the quick follow-up visits where we’re refilling drugs and really figure out what we need to do to get the disease under control so that it doesn’t impact the life of the child,” he said.

References


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Skin lupus linked with autoimmune conditions

WAYNE KUZNAR | Staff Correspondent

Autoimmune diseases are possible in patients with cutaneous lupus erythematosus (CLE) who do not have systemic lupus erythematosus (SLE).

In a cross-sectional study performed by Texas researchers, almost one in five patients with CLE without SLE were found to have coexisting autoimmune conditions.

As reported in JAMA Dermatology, 23 of 129 patients (17.8%) from outpatient dermatology clinics with diagnoses of CLE confirmed by a dermatologist without SLE had at least one coexisting autoimmune condition. Thirteen distinct autoimmune diagnoses were reported. The most common autoimmune diseases were autoimmune thyroid disease (n=6 [4.7%]), Sjögren syndrome (n=4 [3.1%]), rheumatoid arthritis (RA) (n=3 [2.3%]), and alopecia areata (n=3 [2.3%]).

On multivariable analyses, white race was more common in CLE-only patients with at least 1 coexisting autoimmune condition(s) (odds ratio [OR], 2.88; 95% CI, 1.00-8.29; P = 0.0498). Also, CLE-only patients who never smoked (OR, 3.28; 95% CI, 1.14-9.39; P = 0.03), had positive family history for autoimmunity (OR, 3.54; 95% CI, 1.21-10.39; P = 0.02), and had positive antinuclear antibody test results (OR, 4.87; 95% CI, 1.69-14.03; P = 0.003) were more likely to have 1 or more coexisting autoimmune condition(s).

The researchers noted that genetic polymorphisms found in multiple autoimmune diseases include genes for protein tyrosine phosphatase non-receptor type 22, tumor necrosis factor-induced protein 3, signal transducer and activator of transcription four, and cytoxic T-lymphocyte–associated protein 4, indicating that patients with autoimmune conditions are susceptible to developing others.

In the current analysis, autoimmune thyroid disease (including Grave disease and Hashimoto thyroiditis) was the most commonly reported autoimmune condition. “This rate could be higher because we excluded nine cases of hypothyroidism due to inadequate documentation,” the authors wrote. “We recommend checking for symptoms, physical examination findings, and laboratory test abnormalities associated with thyroid disease in patients with CLE, especially those with systemic complaints such as fatigue that may mimic SLE.”

They add that referral to rheumatologists is helpful to “pinpoint arthritis diagnoses” in CLE patients because Sjögren syndrome and RA were 2 other common diagnoses in the sample.

Reference


Scarring is affected by intensity, duration of inflammation FROM PAGE 23

“We demonstrated that the inflammatory response is still present in 21-days lesions in acne patients prone to scarring compared to those who do not develop scars, suggesting a difference in the acne lesion life-cycle between the two populations,” Dr Johannes Josef Voegel said.

“Inflammatory lesions persist after three weeks only in patient with scars, with an exacerbation of number and modulation of genes involved in the immune response. This was in line with higher influx of T cells and macrophages observed by immunohistochemistry.”

A lack of neutrophils in the three-week papules of scar prone patients showed the persistence of an adaptive immune response, he added, suggesting “either a non-elimination of the trigger factor and/or an absence of inflammation resolution signals or inappropriate immune response.” However, the infiltrate of mature B cells and strong expression of several immunoglobulin genes was unexpected, he said.

B CELLS

B cells have diverse functions in the adaptive immune system and have been observed in chronic inflammatory skin conditions such as atopic dermatitis. They may contribute to the skin-specific immune response by producing local antibodies and exhibiting either pro-inflammatory or anti-inflammatory activities, Dr Voegel said. “The influx of mature B cells occurs late in acne lesion cycle and only in long-lasting lesions of patients with scarring. It is currently unclear whether the influx of B cells in older acne lesions contributes to sustaining the immune response or to dampening the inflammation via anti-inflammatory mechanisms.”

There is growing evidence suggesting that B cells might be as important as T cells in the pathogenesis of several inflammatory skin diseases, including autoimmune blistering disorders, psoriasis and atopic dermatitis.

“In late-stage acne lesions, B cells might fulfill both antibody-dependent and independent roles in the maintenance of skin immunity and inflammation. Additionally, B cells by producing cytokines regulate collagen synthesis by fibroblasts and thus could contribute to the scarring process,” he suggested.

GENE EXPRESSION PROFILE

The difference in the gene expression profile of 48 hour and 21-day lesions in scar prone patients indicated profound remodelling of the skin, the researchers suggested. In particular, the dramatic down-modulation of a lipid-associated gene set, which is preferentially expressed in human sebaceous glands, supports the disappearance of sebaceous glands in atrophic acne scars.

They speculated that dermal thinning is caused by a loss of pilosebaceous units and insufficient replacement of dermal matrix. Disappearance of sebaceous glands has also been noted in viral infection of the epidermis by herpes zoster (varicella) which has a potential to scar.

“By extension, in the acne population prone to scarring, the destruction of sebaceous glands by an exacerbated inflammatory response can result in atrophic scar formation. The destruction of the entire pilo-sebaceous unit causes a loss of dermal continuity, which is later filled with granulation tissue. At the end of the healing process the granulation tissue shrinks, resulting in atrophic scar formation,” they proposed.

References


“If you don’t give them an understanding of why the program you’ve created together makes sense specifically for them, they’re not going to do it.”

Elizabeth Kiracofe, M.D., Illinois Dermatology Institute, Chicago

Patient-centered care in practice FROM PAGE 1

According to Dr. Kiracofe, it’s changed the way she structures appointments and how she asks her staff to operate.

PLANNING THE OFFICE VISIT
At the outset, Dr. Kiracofe said, she plans for longer first-time appointments. Most follow-up visits can last approximately 5-to-7 minutes, but initial consultations now run nearly 20 minutes. That time is devoted to learning as much about the patient’s condition as possible, as well as what he or she is doing to handle it.

For these appointments, she said she asks new patients to bring in all products they’re using — face washes, creams, and products from any skin care line. It’s an opportunity to assess their tactics and involve them in designing a new treatment plan.

“You’re patients are obviously trying to fix the problem, but they’re in your office because they haven’t been able to,” she said. “Salvage what you can from what they’ve been doing, and augment it.”

Additionally, if possible, Dr. Kiracofe recommended creating a checklist to set your patients up for success. For example, to avoid any confusion, she gives patients a handout filled with treatment details, specifically what medications are to be used in the morning and at night.

“Basically, I fill in what I want them to do when and highlight specific education information that is pertinent to each individual,” she said.

She also has pre-packaged samples of medication she prescribes frequently available so patients leave the office armed with medicine needed to immediately begin treating their condition.

TRAINING STAFF
Because a patient-centered focus takes more time, it’s unlikely you’ll be able to handle everything yourself. Instead, Dr. Kiracofe recommended training your staff to educate patients on how best to use their medications, especially if it’s a new prescription.

Once your portion of the patient visit is complete, have a medical assistant show the patient what amount of medicine is to use and how to apply it.

“Nine times out of ten, a patient will want to put on too much or too little medication,” she said. “Watch them. Show them what to do. That way, they understand when they get home how much medication they’ll really need to use.”

Giving a medical assistant this responsibility can help teach your patients how to effectively manage their conditions and free you up to stay on schedule with your patient rotation. With their help other patients won’t wait too long for their time with you.

Your staff can also improve the electronic health record by carefully entering your notes into the system. Highlighting any changes in medication or regimen specifics can help you keep track of how a patient’s condition changes over time and monitor whether he or she has followed the prescribed protocol properly.

“It creates 60 seconds of work for medical assistants to enter data, but it makes it so much easier when the patient returns,” she said. “There’s no question of what the patient and you decided. You can see what was altered at a glance.”

DIGITAL TOOLS
But, as important as the personal touch is in patient-centered care, creating a workflow and practice management system in today’s healthcare environment requires more arrows in the quiver.

Scottish company StormID is taking a more technological approach by launching digital tools that could make it easier for patients to contact their dermatologists, according to Paul McGinness, StormID Director. Long appointment wait times could become less common.

Through its Virtual Consultation and Primary Care Triage App, the company hopes to limit how frequently patients return for face-to-face visits, as well as help general practitioners determine the best options for patients with skin conditions.

As part of a virtual consultation, patients will likely be able to side-step a in-person appointment by sharing personal health data via a secure connection with their dermatologist. A Patient Mobile App feature will also allow for picture uploads of skin conditions. The goal is limiting wait time for patients to contact their provider, freeing up office visits for new or more complicated patients.

A second app — the Primary Care Triage App — is set to offer clinical decision support to primary care providers who require assistance in determining the next steps for treating patients with emergent skin conditions. By uploading images and submitting them to an artificial intelligence database, general practitioners could retrieve a likely diagnosis and guidance for how to best advise patients.

Whether you opt for the personal approach, digital approach, or combination of the two, Dr. Kiracofe said, the patient-centered care focus can be valuable.

“I get a lot more out of my patient visits. They’re more engaged in their care, and they’re more excited because they start doing better,” she said. “They’re more up front with me about what they’re doing, and I feel like I have real time with them.”

Quick TAKES

Patient-centered focus takes more time, so plan accordingly.
Give your staff more responsibilities.
Employ new digital tools to streamline care.

Neil Prose, M.D., a pediatric dermatologist with Duke University Medical Center, offers 11 tips for achieving patient-centered care.
See page 78.
Neuromodulators and combination therapies

JOHN JESITUS | Staff Correspondent

The U.S. landscape of neuromodulators continues to expand, physicians reported in June at this year’s Cosmetic Bootcamp meeting in Aspen.

Prabotulinum toxin A (Nabota, Daewoong/Evolus) and daxibotulinum toxin A (formerly RT002, Revance) are neuromodulators on the horizon to receive FDA approval, said Kenneth Beer, M.D., a meeting co-founder and dermatologist with the University of Miami Miller School of Medicine. Approved in South Korea in 2013, prabotulinum toxin A differs not only in molecular structure from onabotulinum toxin A, but in the design of its pivotal American (EV-001 and EV-002) and Canadian/European trials (EVB-003).

In pivotal trials EV-001 and EV-002, 67 percent and 71 percent of patients met the primary endpoint, an improvement of at least two points on the four-point GLS with prabotulinum toxin A. Adverse events were mild and rare.

In the BELMONT phase two trial, 30.8% of patients given a 40-unit dose of prabotulinum toxin A and maintained at least a one-point improvement.

Patients in SAKURA 1 and 2 phase three trials achieved ≥ two-point improvements 4 weeks post-treatment.

Neuromodulators mesh well with other modalities for a combined global effect in facial rejuvenation.

In EV-001 and EV-002, 67 percent and 71 percent of patients treated with prabotulinum toxin A met all primary endpoints in its recent phase three studies, with a high degree of safety. “We’ll see it in the United States at some point.”

Daxibotulinum toxin A uses a positively charged peptide to bind with the negatively charged portion of its toxin molecule, a unique type A neuromodulator. This combination provides potential for safer and longer-lasting treatments.

In the BELMONT phase two trial, 30.8% of patients given a 40-unit dose maintained at least a one-point improvement in investigator and patient-assessed glabellar line severity scores six months post-treatment.

The SAKURA 1 and 2 phase three trials included 609 patients total. “The demographics in these trials all look the same – probably the same as in our practices,” said Dr. Beer. Four weeks post-treatment, 73.6 percent and 74 percent of patients treated with daxibotulinum toxin A achieved ≥ two-point improvements in investigator- and subject-assessed scores (versus zero and one percent for placebo, respectively; p<0.0001). Also at week four, 88 percent and 91 percent of daxibotulinum toxin-treated patients were either satisfied or very satisfied with their results.

At the final (week 24) follow-up visit, 35.3 percent and 29.4 percent of treated patients maintained IGA scores of zero or one. The corresponding figures for patient-assigned scores were 23.9 percent and 21.6 percent.

The most common treatment-related adverse event among daxibotulinum-treated patients in SAKURA 1 and 2 was headache: 7.0 percent and 5.9 percent, respectively, versus 2.9 percent and 1.0 percent for placebo.

Altogether, he said, “Daxibotulinum has a very early response. Compared to the other toxins, even at six months, there’s still significant activity. It’s going to be very interesting to learn how the different stabilizing protein affects the product, and what this means to patients and clinicians.” Meanwhile, topical daxibotulinum toxin A is in preclinical development.

“We are seeing skin quality improvements with botulinum toxin injections. And we are refining micro-botulinum toxin
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• TETRACYCLINE DRUGS SHOULD NOT BE USED DURING TOOTH DEVELOPMENT (LAST HALF OF PREGNANCY AND UP TO 8 YEARS OF AGE) AS THEY MAY CAUSE PERMANENT DISCOLORATION OF TEETH.
• Pseudomembranous colitis has been reported with nearly all antibacterial agents and may range from mild to life-threatening. Therefore, it is important to consider this diagnosis in patients who present with diarrhea subsequent to the administration of antibacterial agents.
• Dose adjustments may be necessary in patients with renal impairment to avoid livertoxicity.
• Central nervous system side effects, including light-headedness, dizziness, and vertigo, have been reported with minocycline therapy.
• Pseudotumor cerebri (benign intracranial hypertension) and autoimmune syndromes have been associated with the use of tetracyclines.
• Cases of anaphylaxis, serious skin reactions, erythema multiforme, and drug rash with eosinophilia and systemic symptoms have been reported postmarketing with minocycline use. Discontinue SOLODYN immediately if symptoms occur. In rare cases, photosensitivity has been reported.
• The most commonly observed adverse reactions are headache, fatigue, dizziness, and pruritus.

To report SUSPECTED ADVERSE REACTIONS contact Ortho Dermatologies at 1-800-321-4376 or FDA at 1-800-FDA-1088 or visit www.fda.gov/medwatch.

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To report SUSPECTED ADVERSE REACTIONS, contact Ortho Dermatologics at 1-800-321-4575 or FDA at 1-800-FDA-1088 or visit www.fda.gov/medwatch.

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Preliminary studies suggest that use of tetracycline-class drugs, crosses the There are no adequate and well-controlled potential hazard to the fetus and stop (see Warnings and Precautions)

SOLODYN should not be used during pregnancy. If the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus and stop treatment immediately. There are no adequate and well-controlled studies on the use of minocycline in pregnant women. Minocycline, like other tetracycline-class drugs, crosses the placenta and may cause fetal harm when administered to a pregnant woman. Rare spontaneous reports of congenital anomalies including limb reduction have been reported with minocycline use in pregnancy in post-marketing experience. Only limited information is available regarding these reports; therefore, no conclusion on causal association can be established. Minocycline induced skeletal malformations (bent limb bones) in fetuses when administered to pregnant rats and rabbits in doses of 30 mg/kg/day and 100 mg/kg/day, respectively, (resulting in approximately 2.5 times and 2 times, respectively, the systemic exposure to minocycline observed in patients as a result of use of SOLODYN). Reduced mean fetal body weight was observed in studies in which minocycline was administered to pregnant rats at a dose of 10 mg/kg/day (which resulted in approximately the same level of systemic exposure to minocycline as that observed in patients who use SOLODYN). Minocycline was assessed for effects on peri- and post-natal development of offspring in studies showing that intravenous administration to pregnant rats from day 6 of gestation through the period of lactation (postpartum day 20), at dosages of 5, 10, or 50 mg/kg/day. In this study, body weight gain was significantly reduced in pregnant females that received 50 mg/kg/day (resulting in approximately 2.5 times the systemic exposure to minocycline observed in patients as a result of use of SOLODYN). No effects of treatment on evaluation of the gestation period or the number of live pups born per litter were observed. Gross external anomalies observed in F1 pups (offspring of animals that received minocycline) included reduced body size, improperly rotated forelimbs, and reduced size of extremities. No effects were observed on the physical development, behavior, learning ability, or reproduction of F1 pups, and there was no effect on gross appearance of F2 pups (offspring of F1 animals).

Nursing Mothers Tetracycline-class antibiotics are excreted in human milk. Because of the potential for serious adverse effects on bone and tooth development in nursing infants from the tetracycline-class antibiotics, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother (see Warnings and Precautions).

Pediatric Use SOLODYN is indicated to treat only inflammatory lesions of non-nodular moderate to severe acne vulgaris in patients 12 years and older. Safety and effectiveness in pediatric patients below the age of 12 has not been established. Use of tetracycline-class antibiotics below the age of 8 is not recommended due to the potential for tooth discoloration (see Warnings and Precautions).

Geriatric Use Drug/Laboratory Test Interactions Absorption of tetracyclines is impaired by antacids containing aluminum, calcium or magnesium and iron-containing preparations.

Low Dose Oral Contraceptives In a multi-center study to evaluate the effect of SOLODYN on the use of oral contraceptives, hormone levels over one month of SOLODYN 1 mg/kg once-daily were measured. Based on the results of this trial, minocycline-related changes in estradiol, progesterone, FSH and LH plasma levels, of breakthrough bleeding, or of contraceptive failure, cannot be ruled out. To avoid contraceptive failure, female patients are advised to use a second form of contraceptive during treatment with minocycline.

Drug/Laboratory Test Interactions False elevations of urinary catecholamine levels may occur due to interference with the fluorescence test.

USE IN SPECIFIC POPULATIONS Pregnancy Teratogenic Effects: Pregnancy category D (see Warnings and Precautions) SOLODYN should not be used during pregnancy. If the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus and stop treatment immediately. There are no adequate and well-controlled studies on the use of minocycline in pregnant women. Minocycline, like other tetracycline-class drugs, crosses the
Next-generation technologies

LISETTE HILTON | Staff Correspondent

Evolution in radiofrequency and standard microneedling, as well as picosecond fractional and pulsed dye laser technologies were hot topics at last month’s The Aesthetic Show. E. Victor Ross, M.D., presented on next-generation energy-based anti-aging skin treatments, noting that today’s focus on microneedling technology is on improving radiofrequency devices and clarifying differences in outcomes between microneedling with and without radiofrequency. Dr. Ross is a dermatologist with the Scripps Clinic, San Diego, Calif.

Increasing comfort is important for improving radiofrequency microneedling devices, he says.

“That’s tied into the needles’ penetrating more easily,” Dr. Ross says.

The principle is much like that of the man walking on a bed of nails, who doesn’t get hurt because he makes sure to distribute the pressure of the nails evenly on his feet. The challenge with radiofrequency microneedling is in trying to engage, or insert, 20, 30, 40 needles simultaneously into the skin, while distributing the pressure evenly and simultaneously to full depth. The problem is the needles tend to push away the skin.

“It’s one thing to take one needle and stick it into the patient for immunization or a blood draw, but to have 30, 40, 50, 60 needles go in at one time is a bigger challenge,” he says. “So, we’re working on smaller needles, as far as the diameter; sharper needles; smoother mechanisms to insert the needles; and different types of ways to force the needles in. Those are the types of things that are going to eventually improve radiofrequency microneedling.”

Another issue is the controversy about whether adding radiofrequency to microneedling translates to better outcomes. There are many reasons that’s an important question to answer, one of which is cost.

“The cost of a microneedling system could be $5,000 to $7,000, whereas, if you do radiofrequency microneedling, you’re talking about $30,000 to $50,000,” Dr. Ross says.

There are no definitive studies comparing the two, according to Dr. Ross. Early research, however, suggests that microneedling with radiofrequency creates more tightening than without radiofrequency, according to Dr. Ross.

“But microneedling alone does seem to have a role for some things. For example, acne scars and skin rejuvenation, particularly when applied with PRP. And that’s another controversy,” Dr. Ross says.

The question about whether adding PRP to microneedling also needs to be answered with definitive studies, according to Dr. Ross.

**PERSONALIZED SKINCARE PRODUCTS**

By LISETTE HILTON

**ADDING GROWTH FACTORS** to skincare products is a concept that has been hampered by roadblocks, including high cost. But an novel approach, using a patient’s own platelets as the key antiaging ingredient and delivering the product at the point of care, could change the skin-care landscape, according to Farhan Taghizadeh, MD, a Phoenix, Ariz., based facial plastic surgeon who present-ed at the next-generation of an aging skin-care yesterday at The Aesthetic Show in Las Vegas.

Skincare products with plant-derived growth factors do little, if anything, for human skin. Human-derived growth factors as an active ingredient in antiaging skincare products, and many companies and skincare lines, including Allergan’s SkinMedica, are featuring products with human growth factors, Dr. Taghizadeh says.

“The most popular way of getting these growth factors has been to culture the fibroblasts in a medium, then extract the medium with the growth factors and put that into products,” he says. “While these products are somewhat more expensive, there is a modicum of demand for using these growth factors because people are seeing better results.”

That’s not new. What is new, according to Dr. Taghizadeh, is the use of human growth factors, Dr. Taghizadeh founded the AmnioAesthetics company, which will be launching its ME serum product at The Aesthetics Show. ME, according to the facial plastic surgeon, represents the new wave of personalized skincare products, which uses patients’ own platelets and growth factors.

Using autologous growth factors will lower product costs and increase accessibility in the long run, he says.

“You cannot sustain on the skincare side with products that the majority of the population may not be able to access or afford. Using cultured media is one pathway, but using your own platelets presents something new for the future,” he says. “You can get a lot of platelets very inexpensively, and you can make products that have high concentrations of these platelets.”

The question, according to Dr. Taghizadeh, is will these platelets fill into various bases and preparations for the future?

Using a patient’s own platelets overcomes another barrier.

“There’s an obvious benefit from using one’s own platelets,” he says. “What we’re seeing is that people are willing to pay a little bit more for a product that’s personalized.”

Dr. Taghizadeh says he thinks the ME product is comparable in its effect to other human-derived growth factor skincare products on the market.

“Beyond that, you can see it going many different directions, where the base becomes more standardized. Maybe, in the future, at the cosmetic counter, there’s a phlebotomist…,” he says. “The push for personalization is a critical factor in what’s driving interest in this space. What I think makes this more exciting for practitioners is that you can actually use someone’s own platelets, which gives you huge leverage to say you should come to me as opposed to going somewhere else to get these high-end products.”

The other potential advantage from the consumers’ point of view is personalized skincare offers 100% concentration of the active ingredient, without all the fillers, preservatives and additives that many of today’s consumers are trying to avoid in the products they use on their skin, hair and nails, he says.

“For the Pond’s Cold Cream [Unilever] generation, going to the cosmetic counter might just be what they do, but the millennials and the next generation don’t want toxicity. Using one’s own platelets is pretty attractive because there’s nothing in it but your own growth factors,” according to Dr. Taghizadeh.
Cellular therapies may replace medication, surgery

BOB KRONEMYER | Staff Correspondent

The new landscape in cosmetic surgery is the ability to use cellular therapies to help organize cellular structures and improve aesthetic outcomes from the “inside out” rather than the “outside in,” according to Dr. Ryan Welter, M.D., PhD, a cosmetic surgeon in private practice in Boston.

“Cell therapy and regenerative medicine are replacing, in a lot of ways, what we traditionally accomplished with medication and surgeries,” said Ryan Welter, M.D., PhD, a cosmetic surgeon in private practice in Boston.

New tools range from platelet rich plasma (PRP) to stem cell therapy from adipose tissue to adipose tissue itself.

“These are cell interactions,” Dr. Welter said. “As we start to gain a better understanding of the cell architecture and cell-cell interactions, we can truly augment what we are seeing from a cosmetic standpoint. We can also perform less of a surgical procedure and more of a cell-based procedure.”

For example, on the face, PRP and microneedling are combined to help induce collagen. But more recently, dermatologists and plastic surgeons are using growth factors from stem cell serums, as well as stem cells themselves that are isolated from adipose tissue.

In fact, for the past few years, Dr. Welter has been doing complete cell-based facelifts that do not require any surgery. “Results are similar to a traditional facelift,” he said.

These facelifts require a series of fillers and injections that allow for cell-based interactions, increased collagen formulation and basically improving the youthfulness of the skin.

Another example is using fat grafts that survive longer for breast augmentation by adding cell-based therapy.

Dr. Welter recently pioneered a complete cell-based breast augmentation.

“Although in its infancy, it is showing good results,” he said. “For this procedure, we are avoiding fat grafting all together. Instead, we are using other cell-based materials from the body to help enhance breast tissue.”

Dr. Welter said although the results are not as promising as an implant, they are still amazing, “considering they are basically cell-based therapies that stimulate the breast tissue to proliferate in a better manner, so you have augmentation without surgery.”

All these cell-based therapies have been shown to be extremely safe, according to Dr. Welter. “And, certainly, a lot of them are much safer than traditional surgical procedures,” he said.

There are also other cell lines now available, including autologous and base and cell membranes from sources like porcine-derived extracellular matrix which can help provide scaffolding to the cells.

Disclosures: Dr. Welter reports on relevant financial disclosures

Neuromodulators combine well with other modalities FROM PAGE 40

Neuromodulators mesh well with other modalities such as intense pulsed light (IPL) and laser treatments and skincare, he said. “Because much of what we do requires multiple treatments, many patients want to see more immediate results, which botulinum toxins can deliver. There’s perfect synergy between the timing of botulinum toxin injections and energy-based devices for a combined global effect in facial rejuvenation.”

Energy-based devices and submendable injectable treatments cannot fix brow depression or dynamic rhytids, Dr. Narurkar said. “Sometimes after treating the submental fat with deoxycholate, you can get an exaggeration of the platysmal bands. And, botulinum toxin can address these dynamic rhytids to enhance the results of these energy-based devices.”

In the perioral area, “Many women hate smokers’ lines. But you can’t get rid of them with one approach.” The typical patient requires resurfacing, neuromodulators and fillers, he said.

“Sometimes you can have undesired diffusion, especially after devices that create edema, most commonly after ablative and nonablative laser resurfacing,” Dr. Narurkar does same-day neuromodulator injections only after procedures that create little edema, such as IPL photofacials and low-fluence, nonablative lasers.

“But do other things like nonablative resurfacing and microfocused ultrasound, I like to stage the botulinum toxin — it’s often advisable to wait until the edema resolves to inject neuromodulators.” With ablative fractional laser resurfacing, he suggested reserving neuromodulator injections until after reepithelialization.

Disclosures: Dr. Beer is an investigator and consultant for Evolus, Revance, Allergan and Galderma. Dr. Narurkar is an investigator and consultant for Allergan and Revance.

References


COULD THE SKIN LESION YOU’RE SEEING...

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YOU PLAY A CRITICAL ROLE IN EARLY AND ACCURATE DIAGNOSIS OF BPDCN

Blastic plasmacytoid dendritic cell neoplasm (BPDCN) is an aggressive and deadly hematologic cancer with skin lesions that may be mistaken for other skin disorders.\(^1,2\)

Plasmacytoid dendritic cells (pDCs) invade the dermis where they proliferate, resulting in skin lesions that take the form of\(^1,3,6\):
- Nodular lesions (73%)
- Bruise-like macules (12%)

WHO ARE PATIENTS WITH BPDCN?

- \(~85-90\%\) present with skin lesions\(^2,4\)
- \(~75\%\) are men\(^2,5\)
- Typically between 60-70 years of age, but all ages can be affected\(^2,5\)

Research has uncovered key markers, including \(\text{cd}123\), that allow for the proper diagnosis of BPDCN.\(^6\)*

For more information, visit BPDCNInfo.com.

WHEN BIOPSING SKIN LESIONS, ASK YOUR PATHOLOGIST TO TEST FOR \(\text{cd}123\). REFER PATIENTS EARLY.

*BPDCN diagnosis can include other markers, such as \(\text{cd}4\), \(\text{cd}35\), TCL1, and \(\text{cd}303\) (BDCA2).\(^7\)

References:

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Nanofat enhances facial procedures, expert says

BOB KRONEMYER | Staff Correspondent

The science and techniques of biologics like nanofat continue to emerge, according to an expert who presented yesterday at The Aesthetic Show.

“Fat grafting is becoming the wave of modern aesthetic surgery,” Jon Grazer, M.D., told attendees. “It allows us to use natural tissue, without the drawbacks of allergic reactions or viral transmission,” he said. He is an assistant clinical professor of plastic surgery at the University of California, Irvine.

Fat also has a higher concentration of stem cells than bone marrow, he added. However, stem cell injection is not approved by the FDA.

“Therefore, you need to be part of an institutional review board (IRB),” Dr. Grazer said. “But with nanofat, anyone can process the fat for use because the FDA considers it fat without being biologically modified.”

Nanofat is injected intracutaneously to help improve the tone and texture of skin. “Because the fat is highly processed, you can actually inject it through a 27- to 30-gauge needle for true intradermal injections,” Dr. Grazer said.

Dr. Grazer uses nanofat for most of his facial procedures to treat fine lines, wrinkles, dyschromia and areas of hyperpigmentation.

“I do my traditional fat grafting for correction of deeper lines and wrinkles,” he said. “But if I want to improve the neckline, decolletage, perioral rhytides, crow’s feet and intraorbital region, I will use nanofat because I can go directly intradermally and help improve those areas.”

HARVEST POINTS

Before nanofat, it was difficult to inject fat into the neck to achieve an acceptable result, according to Dr. Grazer. He typically harvests nanofat from the knees because it is the most comfortable for the patient, the fat is easy to harvest and contour, and, usually, there is minimal to no bruising.

Dr. Grazer’s second and third areas for harvesting are the flanks and periumbical.

Dr. Grazer first performs fat grafting, followed by a facelift and, if needed, laser resurfacing. Next, he injects platelet rich plasma (PRP) and finally nanofat. The nanofat portion takes between two to four months for maximum outcomes.

With one treatment section of combined therapy, “I believe the tone and texture of the skin really improves,” Dr. Grazer said. “But it takes three to four months to really start to see the true stem cell/biological effect.”

Between 20% and 30% of Dr. Grazer’s patients schedule a second combination treatment at up to one year.

Dr. Grazer said there are some off-the-shelf devices that make it easier to prepare nanofat for injection.

“And by injecting intradermally, there is minimal risk of embolization,” Dr Grazer said. “We are also using the science of our own bodies to renew from within.”

Early studies look promising, including one published November 2017 in Lasers in Surgery and Medicine, by Eric F. Bernstein, MD, MSE. He and colleagues report the 1,064 and 532 nm picosecond-domain laser incorporating a 10 x 10 holographic beam-splitting handpiece was safe, effective and well tolerated when used to treat facial acne scars.

“In general, you’re going to see more picosecond fractional laser discussions and studies coming out looking at how the technology improves tone, texture and pigment, and, maybe, melasma,” Dr. Ross says. “I think we’ll see more picosecond fractional and nonfractional laser systems in the next four to five years.”

Syneron-Candela is expected to release its new pulsed dye laser technology, called V-Beam Prima, later this summer, Dr. Ross says.

“That’s a pulsed dye laser similar to what they had before but it has more power, a longer dye life, the option for contact cooling as well as cryogen spray cooling, and bigger spot sizes,” he says. “It’s a hot new visible light technology.”

Dr. Ross and colleagues presented research on the new 595 nm pulsed dye laser in April 2018 at the American Society for Laser Medicine and Surgery annual conference in Dallas. The researchers examined the laser’s role in facial rejuvenation in 13 women and men, ages 51 to 74, with Fitzpatrick skin types I through III. They treated 16 facial lesions, including photodamage, diffuse redness and telangiectasia. Twelve patients had two treatment sessions, performed one month apart; one had three sessions.

They report that 100% of lesions had at least 50% clearance. More than three quarters of lesions cleared 50% to 75%, and 23% had 76% to 100% clearance. More than 90% of patients were satisfied and indicated they would recommend the procedure.

They found that while they had applied lidocaine cream before treatments, mean discomfort during treatment was 4.7, on a scale of zero to 10. Immediate responses post-treatment included mild to moderate erythema in all patients and mild edema in 89%. The researchers also noted mild cold sores and moderate crust forming post-treatment.

Disclosures: Dr. Ross reports receiving research support from Lutronic, Candela and Lumenis.
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New cSCC guidelines

Recommendations emphasize primary disease management

**Quick Takes**

Most commonly followed guidelines are from NCCN and may include more detail than required.

New AAD guidelines more approachable and address common therapies used by dermatologists.

**The guidelines...reflect the most common treatment modalities...**

Dr. Murad Alam
Chicago, Illinois

**Treatment modalities for cSCC**

1. **GRADING AND STAGING**
   Currently, there is no widely accepted optimal staging system for risk stratification of cSCC, although both AJCC and BWH staging systems are used. Staging imaging studies are not always indicated for cSCC because of the low overall risk for nodal and distant metastasis associated with the more numerous smaller tumors. However, they can be useful in assessing for deep structural involvement with extensive localized disease. Clinical examination of the regional lymph nodes is routinely performed.

2. **BIOPSY**
   Punch, shave, and excisional biopsy techniques can all be used, and the procedure of choice depends on several factors including the clinical characteristics of the suspected tumor, expected histological subtype and depth, natural history, and anatomic location. Other factors such as bleeding and wound healing, as well as patient preference and physician judgement must be considered.

   - **Clinical and pathologic information**
     Clinical morphology, anatomic location, and patient-reported history all contribute towards a presumptive diagnosis of cSCC, and biopsy will typically confirm the diagnosis. Important information provided to the pathologist when submitting biopsy tissue includes patient age and gender, clinical presentation and anatomic location, and any history of treatment at the same anatomic site. Additional helpful information may include clinical size of the lesion, or the existence of other risk factors such as immunosuppression, radiation treatment, or solid organ transplantation.

3. **SURGICAL TREATMENT**
   For the vast majority of cSCCs, surgical excision remains the first line of treatment. However, clinicians must always be vigilant for a subset of tumors with increased risk for local recurrence, perineural spread, and nodal or distant metastasis, particularly in immunocompromised patients.

   - **STANDARD EXCISION**
     A complete removal of the tumor can be achieved following a “bread loaf” excision that includes...
Can bevacizumab be recommended in high-risk melanoma?

DAVE LEVITAN | Contributing writer

Treatment of high-risk melanoma with adjuvant bevacizumab following surgical resection improves disease-free survival over standard observation, but not overall survival, according to analysis of the AVAST-M trial.

“VEGF is over-expressed in melanoma and high levels have been reported to be associated with poorer outcome,” wrote study authors led by Pippa G. Corrie, MD, of the Cambridge Cancer Centre in the United Kingdom. Bevacizumab targets VEGF, and previously has shown modest activity in advanced melanoma. The new trial evaluated whether bevacizumab can improve outcomes in patients with resected cutaneous melanoma at high risk of recurrence.

The study included a total of 1,343 patients recruited between 2007 and 2012; all had resected stage IIIB, IIC, or III melanoma, and were randomized to receive either adjuvant bevacizumab (671 patients) or standard observation (672 patients). Most patients were stage III (73%), and their median age was 56 years; the median follow-up period was 6.4 years. Results were published in Annals of Oncology.

A total of 515 patients (38%) died during the follow-up period, including 38% of those in the bevacizumab group and 39% of those in the observation group. The 5-year overall survival rate was 64% for both groups, and the hazard ratio (HR) for overall survival was 0.98 (95% CI, 0.82–1.16; P = .78). A multivariate analysis found that the treatment was not independently prognostic of overall survival.

The 5-year disease-free survival rate was higher with bevacizumab, at 51% compared with 45% in the observation group, for an HR of 0.85 (95% CI, 0.74–0.99; P = .03). This remained consistent after adjustment for stratification variables. The median disease-free interval was 63 months with bevacizumab, compared with 37 months with observation.

The distant metastasis–free interval was not significantly better with bevacizumab; at 5 years, the rate was 58% compared with 54% with observation, for an HR of 0.91 (95% CI, 0.78–1.07; P = .25).

Most patients in the study completed quality-of-life questionnaires (89%), and these showed no significant differences between the two groups.

Among patients with BRAF mutations, there was a trend toward improved overall survival with bevacizumab, with an HR of 0.80 (95% CI, 0.57–1.13; P = .21). This was not seen in those with BRAF wild-type melanoma.

Based on the study design, the authors concluded that “adjuvant bevacizumab cannot be recommended as a standard adjuvant therapy after resection of melanoma at high risk of recurrence.” However, the findings regarding BRAF mutations, along with other research on the mutations’ connection to response to immune checkpoint inhibition, “raise the hypothesis that combining bevacizumab with adjuvant immune checkpoint inhibitors may benefit high-risk BRAF-mutant melanoma patients.”

### TOPICAL THERAPIES

The use of topical modalities for the treatment of cSCC including 5-fluorouracil and imiquimod is not currently supported by the literature.

### RADIATION THERAPY

This modality is experiencing a kind of resurgence and can be effective in select cases resulting in good tumor control and cosmesis, with smaller and thinner tumors showing a higher response rate. Primary radiation therapy can be implemented when first line surgery procedures are not feasible, contraindicated, or preferred by the patient after appropriate consultation of the risks and benefits.

### CRYOSURGERY

Due to the lack of histologic margin control, it is recommended that cryosurgery only be implemented for low-risk lesions when possible.

### FOLLOW-UP AND REDUCING RISK FOR FUTURE SKIN CANCERS

Once a cSCC diagnosis is made, at least yearly screenings should be performed for all NMSC and melanoma as well, which could include clinical assessment of regional lymph node basins for higher risk lesions.

Patients should also be taught and regularly practice at-home skin surveillance, as well as use appropriate sun protective measures.

“Skin cancer is a central part of dermatology and we are trying to provide an easily accessible guidelines format so dermatologists who are strapped for time can quickly read this document and be apprised of the current standard of management of primary cSCC,” Dr. Alams said.

Reference

When it comes to successfully diagnosing melanonychia — a brown or black pigmentation of the nail unit — it is important to examine the nails, look for pigmented lesions, be suspicious of nail melanoma, and biopsy early rather than late.

At the Atlantic Dermatology Conference in May, Nathaniel Jellinek, M.D., of the University of Massachusetts Medical School in Worchester and Brown University in Providence, shared five teaching points that can make diagnosis of melanonychia easier and more accurate.

LOOK BEYOND THE NAIL
While patients may present with pigmented lesions in the nail, there might be clues elsewhere to indicate that pigmentation is part of a larger picture.

“This might be as straightforward as a medication side effect or as patterned as pigmentation of the oral labial mucosa, general mucosa, ocular mucosa or laugherhunziker syndrome (a patterned freckling syndrome),” Dr. Jellinek said.

In addition, ethnic pigmentation is quite common. “People with darker skin are more likely to have melanonychia as a normal phenomenon,” he said.

There are also a variety of other medical conditions that can be associated with the disease, such as pregnancy, Addison’s disease and even carpal tunnel syndrome.

“People who present with one nail are often concerned about melanoma, but it is important to look at the bigger picture — both medically speaking and on the patients’ body by examining complete skin and mucus and mucosa, because those can often provide clues to the diagnosis,” Dr. Jellinek said.

USE YOUR DERMATOSCOPE
There are two types of dermatoscopy for the nail: noninvasive dermatoscopy of the nail plate and invasive dermatoscopy of the nail matrix. The latter entails a surgical exposure of the matrix and bed.

The invasive modality is more accurate in predicting diagnosis. “However, it is of minimal use as a screening tool because you need to anesthetize and reflect all the nail tissues,” he said.

Noninvasive plate dermatoscopy, on the other hand, can be helpful as a screening tool. “As a general rule, the melanomas that we observe in the nails are pigmented, which represents about 70% of nail melanomas overall,” Dr. Jellinek said.

Melanomas associated with melanonychia have a brown background of the pigmented bands and irregular brown lines, either in spacing, width, diameter or parallelism.

“With noninvasive dermatoscopy, it is very simple and quick to look at the nail plate and observe the background, whether it is gray or brown. You can also look at the features of the lines — how many colors, the width, diameter, parallelism and even pigment dropout,” he said.

A special clue for melanonychia that can be seen with the noninvasive technique is the micro-Hutchinson sign, which refers to pigment that is implicated in the periungual tissues, usually the cuticle/proximal nail fold. “This may involve the lateral nail fold or the hyponechium, which is pigment not easily visualized with the naked eye. If detected, though, this pigment tends to be a more worrisome sign for melanoma,” he said.

Still, there are many examples where noninvasive dermatoscopy indicates a brown background and some irregular brown lines. “In my experience, those are not specific for melanoma,” Dr. Jellinek said.

In his presentation, Dr. Jellinek shared slides of overlapping lesions, some of which were melanomas, while others were a nevus or a lentigo. “There is a lot of overlap with benign findings, so noninvasive dermatoscopy is not as specific as we would like,” he said.

KNOW WHEN YOU DON’T KNOW
Despite being able to accurately identify melanoma in many patients, a broad range of people cannot be definitively diagnosed clinically.

“Even for someone like myself, who is experienced with nail disease, there is some point in that spectrum I know I do not know what the diagnosis is, based on clinical exam alone. In fact, it is a fairly broad spectrum.”
Not knowing the diagnosis is something that needs to be explained to the patient, without the patient losing confidence in the doctor. “This becomes the rationale for biopsy.”

Also, a clinician should never worry alone. “In other words, if you look at the nail and you are not sure and are uncomfortable doing a biopsy, just ask for a second opinion.”

**CONDUCT A BIOPSY**

Taking the plunge to conduct a biopsy for an uncertain diagnosis is admirable.

“Most clinicians, when presented with an atypical pigmented lesion on the skin, move very quickly to biopsy and discussion of differential diagnosis and options related to the diagnosis. In fact, sometimes the biopsy happens before the patient is aware of it.”

But when practitioners are confronted by the same situation on the nail, they tend to stop in their tracks because they are uncomfortable doing the biopsy.

“Either you don’t write out and do the biopsy because it is the right thing to do for the patient or you get a second opinion because the thought process should not be any different than pigmented lesions on the skin.”

Knowing where to biopsy is also a consideration. “Even today, I see patients who have been biopsied inappropriately in the wrong area.”

For melanonychia, biopsies need to be performed on the nail matrix, not on the nail bed, he said.

“Hand surgeons call the matrix the germinal matrix and the bed the sterile matrix, which I believe adds to the confusion,” he says. “If we tell people to biopsy the matrix, they might be biopsying what hand surgeons call the sterile matrix or the bed. This is incorrect. They should be biopsying the germinal matrix or what dermatologists call the matrix. This is where the pathologic diagnosis exists.”

**USE DERMATOPOATHOLOGISTS EXPERIENCED WITH NAIL PATHOLOGY**

Nail matrix pathology is similar to cutaneous pathology for melanocytic lesions; however, there are subtle findings that can be featured on a nail biopsy of melanonychia.

“If one is not experienced with melanonychia, these subtle findings may be missed,” he said.

A 2016 article from the *Journal of Cutaneous Pathology* concluded that 50 percent of study biopsy specimens of scattered atypical melanocytes with hyperchromatic nuclei in the nail matrix showed extremely subtle signs on original biopsy, despite clinical presentations that were markedly atypical and suspicious for melanoma.

For pathologists who are not comfortable with the subtle findings associated with nail melanonychia, they should consider either receiving a second opinion or having someone experienced with nail disease look at the specimens.

Overall, though, Dr. Jellinek sees much less invasive melanoma than exists in the literature because he is able to identify melanomas at their early stages.

**Reference**


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**HYPERHIDROSIS RELIEF OVER THE COUNTER**

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To identify the top managed care pharmacy challenges and what your peers are doing about them, our sister publication, Managed Healthcare Executive, conducted its annual pharmacy survey during the first quarter of 2018.

The survey received more than 100 responses from executives at medical practices, hospitals, large healthcare systems, benefit management organizations, health plans, long-term care organizations, group purchasing organizations, consulting firms, and more.

Survey offers insights on the future of healthcare costs — and your role as providers

Dermatology Times Staff

Curbing drug costs

Survey offers insights on the future of healthcare costs — and your role as providers

What is the biggest opportunity to reduce specialty pharmaceutical costs?

39% Performance-based (outcomes-based) pricing

23% More aggressive and expansive utilization management strategies

11% Exclusive specialty pharmacy contracting

10% Increased government regulation

5% Formulary exclusions

12% Other*

Which new pharmaceutical approved over the past 12 months are you most excited about?

40% CAR T-cell therapies (Kymriah and Yescarta)

34% Ocrevus (first approved primary progressive MS drug)

18% Luxturna (gene therapy that delivers a functional RPE65 gene to the patient through a viral vector)

8% Dupixent (first specialty drug for moderate-severe atopic dermatitis)

5% Other

*Other responses included: Increase formulary addition of biosimilars, more competition on the product and supply chain side

Survey continues on page 63.
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...You can’t know where you are going until you know where you are. Understanding the importance of your collection rate, days in A/R, and your accounts receivable aging is just the start to uncovering a breath of information that will put you on the path to higher medical practice performance.
of the nuances that could have an impact on the result, such as carriers that are slower to pay, recognition of accounts in collection, and claims that have aged past 90 or 120 days. It is financially prudent to compute this metric with and without these categories so that performance is accurately captured and not biased by factors that may negatively impact the finances.

**ACCOUNTS RECEIVABLE AGING**

A/R aging analysis is a comparison of the actual accounts receivable aging to the expected accounts receivable aging. Disproportionate percentages indicate an inconsistent policy or procedure in how insurance payer and patient collections are being performed.

The proportion by percentage of the total amount of accounts receivable should be:

Most PM applications can generate an A/R aging report that breaks down claims based on the number of days they have been unpaid, totaled by payer. This helps to identify potential issues from a high level view so that you can prioritize how best to manage the A/R follow-up by dollar amount and by payer.

Days in A/R and A/R aging demonstrate a practice’s ability to quickly turn over A/R and collect all money due.

The bottom line is: You can’t know where you are going until you know where you are. Understanding the importance of your collection rate, days in A/R, and your accounts receivable aging is just the start to uncovering a breath of information that will put you on the path to higher medical practice performance.

Disclosures: Gregory Calvano is CEO of AssuranceMD.

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### PERCENT OF TOTAL A/R

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- **10%** at 61-90 days
- **10%** over 90 days

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4 tips to prevent errors
Applying certain technologies can help you avoid human error

Quick Takes
Medical errors rank as third highest cause of death in U.S.
Technology can help humans prevent mistakes.

LISETTE HILTON | Staff Correspondent

Nearly 20 years ago, the Institute of Medicine’s “To Err is Human” report helped to put medical errors in the spotlight. The IOM report suggested that preventable medical errors killed from 44,000 to 98,000 patients in hospitals each year.

Fast forward to 2016, Johns Hopkins researchers calculated that medical errors cause one in 10 U.S. deaths. Incredibly, the under-recognized cause of death ranks as the third highest cause of death in the U.S., according to the study published May 3, 2016 in The BMJ.

According to the Agency for Healthcare Research and Quality, nearly 700,000 people go to emergency departments each year because of adverse drug events, in which patients experience harm from exposure to medications.

Many use the term pharmacovigilance to describe ways in which physicians and others can prevent medication errors in medicine, according to Ronald S. Litman, D.O., M.L., medical director at the Institute for Safe Medication Practices (ISMP), a nonprofit organization devoted to preventing medication errors.

“Traditionally, medical practitioners are taught to rely on the ‘5 Rights of Medication Administration’: right drug, right patient, right dose, right route, right time,” Dr. Litman says. “But the problem here is that these all rely on human vigilance, which is naturally error prone. Therefore, modern ways of preventing medication errors use technology and engineer systems to prevent humans from making mistakes.”

These four tips can help physicians and others rely less on human vigilance and more on technology and systems, according to Dr. Litman, an anesthesiologist at the Children’s Hospital of Philadelphia.

#1 Prefilled Syringes
Providers normally get drugs in vials or ampules, then take the liquid drug out of the vials and put them into syringes to administer to patients.

“This runs the risk of picking up the wrong ampule, commonly referred to as ‘ampule swap,’ Dr. Litman writes. The good news is more of today’s drugs are available in prefilled syringes, where the practitioner buys the drug pre-filled and pre-labeled. Local anesthetics, often used by aesthetic physicians, are among the drugs available pre-filled. These are better for accuracy and stability but cost more, so many hospitals surgery centers don’t use them, according to Dr. Litman.

#2 Barcoding
Once the drug is in the syringe, what’s to stop the provider from making a human mistake and giving the wrong one? “This is a vexing area of medication safety that is not easily solved. Many hospitals have now use barcoding to enter drug administrations into the electronic health records,” Dr. Litman writes.

For example, when the doctor is ready to administer the medication, he or she scans the barcode on the syringe label, which causes a screen to pop up on the local computer that verifies it is indeed the right drug, at the correct dose, for the right patient, etc. The system can warn the doctor if the patient has any related allergies or other contraindications to using that drug.

But few healthcare providers outside the inpatient setting are set up to use the barcoding system, he writes. “… it’s too new, but is rolling out slowly,” Dr. Litman writes.

#3 Wrong-Route Errors
Wrong-route errors are potentially disastrous for aesthetic physicians and their patients, according to Dr. Litman. They occur when the provider administers a local anesthetic intravenously, instead of locally or around a nerve.

“Many deaths have been reported from this,” Dr. Litman writes. “For over 25 years, an international movement has been working on designing different connectors to prevent this from happening, and it’s being slowly rolled out now.”

Dr. Litman authored a paper published September 2017 in Pediatric Anesthesia, about solutions for wrong route medication errors from tubing misconnections with the universal Luer connector.

“The new International Organization of Standardization standards for small bore connectors, ISO 80369 series, have been developed to reduce the risk of these types of erroneous connections. Tubing connectors for different routes of clinical application will contain differently designed connectors that are physically incompatible. However, design and manufacturing standards have progressed slowly, and clinical roll-outs have been delayed, despite the implementation of California laws to promote their use,” according to the paper.

#4 Proper Labeling
The Joint Commission requires specific elements to be on medication labels, such as the drug’s name, concentration, initials of person that prepared it, expiration date/time, and total volume.

“It is unclear if this actually prevents errors but is meant to be consistent with USP 797 rules and regs, which is essentially equivalent to law,” Dr. Litman writes. “Also, the labels should use a standard color-coded system to help practitioners identify drugs (e.g., opioids are blue, local anesthetics are gray, etc.). Although it makes sense intuitively, this has not been proven to prevent errors more than non-colored labels.”

For More Information: Physicians can learn more about how to prevent medication errors, analyze their practices for error risk, and report errors at ISMP.org.
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IMPORTANT SAFETY INFORMATION
- The skin of certain individuals may become excessively dry, red, swollen or blistered during the use of RETIN-A MICRO.
- Tretinoin has been reported to cause severe irritation on eczematous skin and should be used with utmost caution in patients with this condition.
- If warranted, patients should temporarily reduce the amount or frequency of application, or discontinue use temporarily or altogether. If a reaction suggesting sensitivity occurs, use should be discontinued.
- Unprotected exposure to sunlight, including sunlamps, should be minimized during the use of RETIN-A MICRO, and patients with sunburn should be advised not to use the product until fully recovered because of heightened susceptibility to sunlight with the use of tretinoin.
- Patients should be encouraged to use a sunscreen with an SPF of 15 or higher and protective clothing over treated areas when exposure cannot be avoided.
- Weather extremes, such as wind or cold, also may be irritating to patients under treatment with tretinoin.
- The most common adverse events are mild to moderate irritation (erythema, peeling, dryness, burning/stinging, or itching of the skin).
- RETIN-A MICRO should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus, and caution should be exercised in prescribing for nursing mothers. Safety and efficacy in patients under 12 have not been established.

To report SUSPECTED ADVERSE REACTIONS, contact Ortho Dermatologics at 1-800-321-4576 or FDA at 1-800-FDA-1088 or visit www.fda.gov/medwatch.

Please see Brief Summary of full Prescribing Information on the following page.


Ortho Dermatologics

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The significance of these spontaneous reports in terms of risk to the fetus is not known.

For purposes of comparison of the animal exposure to systemic human exposure, the MRHD applied topically is defined as 1.5 mg Retin-A Micro (tretinoin) gel microsphere. 0.1%, applied daily to a 60 kg person (0.017 mg tretinoin/kg body weight).

Pregnant rats were treated with Retin-A Micro (tretinoin) Gel microsphere, 0.1%, at daily dermal doses of 0.17 mg/day or 0.1 mg/kg/day tretinoin on gestation days 7-19. Doses were administered topically for 24 hours a day while wearing Elizabethan collars to prevent ingestion of the drug. Increased incidences of certain alterations, including domed head and hydrocephaly, typical of retinoid-induced fetal malformations in this species, were observed at 0.5 and 1.0 mg/kg/day. Similar malformations were not observed at 0.2 mg/kg/day, 4 times the MRHD based on BSA comparison.

Oral pregnant rabbits exposed topically for six hours per day to 0.5 or 1.0 mg/kg/day tretinoin with restraint in stocks to prevent ingestion, did not show any malformations at doses up to 19 times (1.0 mg/kg/day) the MRHD based on BSA comparison, but fetal resorptions were increased at 0.5 mg/kg (10 times the MRHD based on BSA comparison).

Oral tretinoin has been shown to cause malformations in rats, mice, rabbits, hamsters, and nonhuman primates.

Tretinoin induced fetal malformations in Wistar rats when given orally at doses greater than 1 mg/kg/day (10 times the MRHD based on BSA comparison). In the cynomolgus monkey, fetal malformations were reported for doses of 10 mg/kg/day but none were observed at 5 mg/kg/day (95 times the MRHD based on BSA comparison), although increased skeletal variations were observed at all doses. Dose-related increases in embryo lethality and abortion also were reported. Similar results have also been reported in pigtail macaques.

In oral peri- and postnatal development studies in rats with tretinoin, decreased survival of neonates and growth retardation were observed at doses of excess of 2 mg/kg/day (19 times the MRHD based on BSA comparison).

Nonteratogenic effects on fetus

Oral tretinoin has been shown to be fetotoxic in rats when administered at doses 24 times the MRHD based on BSA comparison.

Topical tretinoin has been shown to be fetotoxic in rabbits when administered at doses 10 times the MRHD based on BSA comparison.

Nursing Mothers

It is not known whether tretinoin and/or its metabolites are excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Retin-A Micro is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in children below the age of 12 have not been established.

Geriatric Use

Safety and effectiveness in a geriatric population have not been established. Clinical trials of Retin-A Micro (tretinoin) Gel microsphere, 0.1% and 0.04%, did not include sufficient numbers of subjects aged 65 and over to determine whether they responded differently from younger subjects.

OVERDOSAGE

Oral ingestion of large amounts of the drug may lead to the same side effects as those associated with excessive oral intake of Vitamin A.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility

Dermal carcinogenicity testing has not been performed with Retin-A Micro (tretinoin) Gel microsphere, 0.1%, 0.08%, 0.06% or 0.04%.

In a 91-week dermal study in which CD-1 mice were administered 0.017% and 0.035% formulations of tretinoin, cutaneous squamous cell carcinomas and papillomas in the treatment area were observed in some female mice. These concentrations are near the tretinoin concentration of the 0.04% and 0.1% clinical formulations. A dose-related incidence of liver tumors in male mice was observed at these same concentrations. The maximum systemic exposure was associated with the administered 0.017% and 0.035% formulations. The 0.017% and 0.035% formulations are 0.5 and 1.0 mg/kg/day tretinoin, respectively. These doses are two and four times the MRHD based on BSA comparison.

The biological significance of these findings is not clear because they occurred at doses that exceeded the dermal maximally tolerated dose of tretinoin and because they were within the background natural occurrence rate for these tumors in this strain of mice.

There was no evidence of carcinogenic potential when 0.025 mg/kg/day of tretinoin was administered topically to mice (0.1 times the MRHD based on BSA comparison). Studies in hairless albino mice showed that tretinoin and/or its metabolites are not excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Retin-A Micro is administered to a nursing woman.

Postmarketing Experience

The following adverse reactions have been identified during post-approval use of Retin-A Micro Gel. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Temporary hyper- or hypopigmentation has been reported with repeated application of tretinoin.

USE IN SPECIFIC POPULATIONS

Pregnancy

Pregnancy Category C

There are no adequate and well-controlled studies in pregnant women. Retin-A Micro should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Thirty human cases of temporally associated congenital malformations have been reported during two decades of clinical use of tretinoin products. Although no definite pattern of teratogenicity and no causal association have been established from these cases, five of the reports describe the rare birth defect category holoprosencephaly (defects associated with incomplete midline development of the forebrain).
According to healthcare professionals, the number one challenge in medicine these days is curbing costs. Survey respondents expressed some clear thoughts on how to curb rising healthcare costs beginning with collaboration — we need more of it in medicine, said 51% of survey respondents. By working together as a single unit, healthcare professionals may be able to identify the most effective and cost-effective treatments for patients to reduce pharmaceutical costs. 17% percent said that the industry needs more aggressive and expanded utilization of management strategies to reduce costs and 15% suggest the adoption of clinical pathways could curb costs.

“When it comes to working toward a more collaborative system, it’s all about the alignment of incentives. We need to demonstrate efficacy and then give the physicians reason to care about prescribing the most cost-effective treatments,” said Doug Chaet, chief managed care officer of Sentara Healthcare, chair of the American Association of Integrated Health-care Delivery Systems.

Reducing costs could be achieved by adopting performance-based pricing, said 39% of respondents.

Perry Cohen, PharmD, CEO of The Pharmacy Group and the TPG family of companies, agrees.

“In the long-term, pharmaceutical companies need to tie their drug pricing to outcomes. Since health plans have medical and pharmacy claims data, they can calculate total cost of care for patients with certain diseases that are treated by specialty pharmaceuticals and can therefore measure the benefit of value of these medications on the total healthcare spend. This means they have the ability to do outcomes based on contracting and make pharmaceutical companies price their drugs accordingly,” he said.

But only 41% said that performance-based pricing will be used over reference-based pricing in the next three to five years.

“Performance-based pricing has a great appeal, however, to succeed in helping bend the cost curve and improve quality, behavior and cultural change from all players — patients, providers, payers, pharma and other suppliers must occur. Healthcare is notoriously slow to adopt new approaches and performance-based pricing requires all parties to accept risk and uncertainty,” said David Schmidt, president of TPG International Health Academy and a healthcare consultant.

Despite financial forecasts that said biosimilars will reduce the cost of specialty drugs, healthcare professionals who took this survey don’t really believe those reduced costs will come to fruition this year or in years to come. Only 13% said that biosimilars will reduce specialty drug costs in 2018 and 23% said that we will begin to see those cost reductions, but after 2020.

Any cost savings we see from biosimilars this year or next will be far outpaced by so many other factors — the introduction of new specialty drugs, the growing healthcare demands of baby boomers, the increased prevalence of chronic disease, manufacturer pricing, off-label use of drugs, expanding indications of existing drugs and more.

“Early signals indicate that the most significant factor likely to drive specialty trends in 2018 will remain the same as it has for the last several years,” said David Calabrese, RPh, MHP, senior vice president and chief pharmacy officer at OptumRx.

Of new drugs approved in the last 12 months, one approved for moderate-to-severe atopic dermatitis — dupixent — ranked as among those healthcare professionals are most excited about. The others include CART-cell therapies (immunotherapies for cancer), Ocrevus for primary progressive multiple sclerosis, and the gene therapy drug Luxturna (voretigene neparvovec-rzyl) for patients with Inherited Retinal Disease.

And, finally, survey respondents were asked, “Who should play the biggest role in combating the opioid epidemic?” Physicians should take the lead, they said. Specifically: 66% are in favor of providers taking the lead, 17% for government, 10% for payers/PBMs and 7% of pharmacists.
Patient portals slow to boom

Some features are beneficial, but multiple factors hinder full use

Quick Takes

Physicians haven’t embraced portals in a way that shifts workload.
Patients slow to embrace portals as a method of communication.
Multiple factors hinder use for patients, physicians.

Patient portals once were seen as a solution to overworked staff and lack of patient engagement. But even though they’ve been available for decades, portals have yet to meet those lofty expectations, a situation for which both patients and doctors share the blame, experts say.

Portals enable patients to view their health records and lab results online, share the information with other providers, and exchange secure messages with their doctor and practice staff. CMS thought portals were sufficiently important to require them for EHRs seeking meaningful use certification, and then include them as part of the Merit-based Incentive Payment System.

TECHNOLOGY SLOW TO CATCH ON

Patients’ reluctance to use portals is documented in a 2017 Government Accountability Office (GAO) report. It found that, as of 2015, only 30% of outpatient Medicare beneficiaries were using them, even though 87% of Medicare-eligible practices made portals available to their patients.

But the fact that most practices now have portal capability doesn’t mean providers are using the technology to its full capacity, says Michael McCoy, M.D., the first chief health information officer at the Office of the National Coordinator for Health Information Technology.

“Most physicians haven’t really embraced using it in a way that shifts workload, which is one of the things online access was meant to do,” he explains. For example, many practices don’t use portal features, such as allowing patients to schedule visits or check-in online, that would save time and streamline practice operations.

The GAO report found that portal use is lowest among patients at practices in rural or high-poverty areas, areas with a higher-than-average percentage of residents over age 65, and practices with 10 or fewer providers. In other words, age, poverty, and lack of access to broadband often are impediments to widespread use of portals.

Those findings are reflected in physicians’ experiences with getting patients to use portals. Charles Cutler, M.D., an internist in the Philadelphia suburb of Norristown, Pa., says his practice began signing up patients for its portal a little over a year ago, but thus far, not many have used it to communicate with him.

“I have a practice that is largely geriatric and blue collar,” he says. “They still prefer to contact me by telephone. There just hasn’t been that much interest in e-mail.”

A few of Dr. Cutler’s patients have been using the portal to view results of their lab tests, a fact that he usually discovers when the patient comes in for something else.

“I’ll say, ‘I see you had blood tests a few months ago and we haven’t discussed those results,’” he says. “‘I looked at the results online and they were all normal, so I didn’t think I needed to call you,’” he says.

Gordon Jones, M.D., a primary care practitioner in a multi-specialty group based in Sikeston, Mo., says he and his colleagues began signing up patients for its portal about five years ago, but “We have a great deal of difficulty persuading people to get on it,” he says. He estimates that about 10% of his patients are using it.

Part of the problem, he says, lies in Sikeston’s location, a rural area 150 miles from St. Louis and Memphis. And though most of his patients have internet access, few have high-speed broadband in their homes, making portal use more difficult.

The challenge is compounded, he says, by older patients’ discomfort with computers.

“But there’s also the problem that if you go to multiple doctors, they each have their own portal that you have to remember passwords and sign-in codes and everything else, so it becomes just one more thing to be hassled with.”

Patients want an experience through the portal that they find easy to use and where you the doctor, not somebody who is your proxy, communicates back to the patient.” Andrew Carroll, M.D., Chandler, Ariz.

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I’m a medical professional and even I will sometimes leave a doctor’s appointment and think, ‘What did he just say?’”

Betsy Greenleaf, D.O., OB/GYN, Rumson, N.J.

Patient portals slow to flourish FROM PAGE 64

DOCTORS AT FAULT, TOO

Dr. McCoy, who is now CEO of Physician Technology Services Inc., attributes providers’ unwillingness to fully utilize portal features to the fact that they could lead to changes in practice workflows and/or make some staff members redundant—neither of which are easy topics for practices to address.

“Who wants to talk about staff reductions? They’d rather tick along as they are than make some of those hard decisions,” he says.

Moreover, features such as scheduling appointments online now are routine among other types of service providers, and the fact that they’re often not available in healthcare adds to patients’ frustrations with portals, Dr. McCoy notes. “If you can go online to buy an airplane ticket, select a seat, and check in for your flight without ever talking to a human, what’s so difficult about being able to schedule a routine physical exam?”

BENEFITS OF PORTALS

Still, with all their shortcomings, many physicians feel portals benefit them and their patients in a variety of ways.

“From a doctor’s standpoint, one of the nicest parts is the ability to communicate more easily with patients,” says Betsy Greenleaf, D.O., an OB/GYN in a Rumson, N.J., group practice that’s been using portals for about five years.

Dr. Greenleaf frequently uses the portal to communicate lab results to patients. “For tests with normal results, it’s an easy way to send messages about the results rather than tick along as you are and have no idea what the patient knows or is doing about the results,” she says.

Moreover, portals provide opportunities for doctors to ensure their notes are clear and accurate, says Robert Rowley, M.D., a health IT consultant and primary care practitioner in Hayward, Calif. “It requires you to be more transparent and accountable for what you write, because the audience is no longer just you,” he says. “That’s a good thing, in my opinion.”

Andrew Carroll, M.D., owner of a two-physician primary care practice in Chandler, Ariz., says the portal has become a valuable marketing tool. He attributes that in part to his making an “easy-to-use, robust” portal a priority when he purchased his EHR in 2014. In addition, he strives to respond quickly to messages he receives via the portal, and to personalize the responses.

For example, he says, when he sends a patient their lab results, “I’ll create a secure message along the lines of, ‘Your labs are really great, that change we made in your meds seems to be working. Stick with it and I’ll see you in a few months.’”

“Patients want an experience through the portal that they find easy to use and where you the doctor, not somebody who is your proxy, communicates back to the patient,” he says.

Dr. Carroll estimates between 15% and 20% of his patients use the portal, although they’re striving to grow that number by requiring new patients to register electronically, including demographic information, health history, and insurance information. “From day one, we’re trying to show patients that we are a practice using a lot of tech tools to help our patients engage in their healthcare,” he explains.

POSTING LAB RESULTS

Probably the biggest complaint physicians voice regarding portals is how patients often respond to viewing their lab results: with unnecessary worry or by self-diagnosing with the aid of web searches. Cutler says he will sometimes get panicked phone calls from patients due to an abnormality as minor as a slightly elevated electrolyte level.

“You really need a doctor to interpret test results,” he says. “You can’t do it with Google.”

Dr. Greenleaf agrees. “I don’t always like patients having full access to their test results, because then they consult Dr. Google and the next thing you know, they think they have a deadly disease and we’re getting panicked phone calls,” she says. “Sometimes too much information is not good.”

Even viewing lab results can be frustrating for patients, Dr. McCoy says, despite the fact that it’s among the most common reasons they use portals. “Not all portals display the results well, show the highs and lows, and where the patient fits in that range, so the patient winds up getting more raw data than usable information,” he says.

Dr. Rowley, too, has had to talk down panicked patients, but sees it as part of the transformation of the physician’s responsibility brought about by portals and other forms of doctor-patient communication.

“The role of physicians is evolving from being the keeper of all the facts, which we dole out to the patient, to being one of the facts are there for everyone to see ... For me, that’s the most rewarding position for a physician to be in,” Dr. Rowley says.
PODCAST SERIES

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The Food and Drug Administration is in the process of evaluating scientific data on the safety of probiotics and postbiotics in cosmetics, said Linda Katz, M.D., director of the Office of Cosmetics and Color for the FDA.

In speaking at the Skin Microbiome Congress in Boston in May, Dr. Katz, said that although probiotics may have actual live microorganisms, the FDA currently does not have a position on the use of probiotics or postbiotics in cosmetics. Probiotics is a multi-billion dollar industry estimated to grow 7 percent globally in the coming years. Topical cosmetics with probiotics is of particular interest to manufacturers and is rapidly growing area in cosmetics.

According to the Global New Products Database, the use of probiotics has grown exponentially since 2004 when there was no new production to 2017, when its use in skin care products, shower products, hair products, deodorants and color cosmetics skyrocketed.

But what consumers may not realize, Dr. Katz says, is that 90 percent of cosmetic products that carry “probiotic labels” actually have “postbiotics,” which consists of metabolic byproducts from probiotics.

To date, there is no legal definition of probiotics in the United States, but published studies have reported that probiotics can change the composition and function of the microbiome, which is distinct at each site. Probiotics have been proposed to be used as a strategy to promote microbial diversity, but when added to products, there is concern that the use of probiotics will change the existing microbiome of the skin.

Other unknowns Dr. Katz raised in her presentation include:
- Are probiotics still alive in the cosmetics that have preservatives?
- Does the presence of probiotics have an effect on product safety?

Quick TAKES
Drugs are evaluated premarket for efficacy and safety.
Cosmetics are evaluated postmarket for safety alone.
Some products qualify as both a cosmetic and a drug for which drug regulations govern.

What is a Cosmeceutical?

THE TERM cosmeceutical is not defined by any regulation, Dr. Katz said. “This is a term that was supposed to be a cosmetic that does more than a traditional cosmetic.”

Most cosmeceuticals, though, affect both structure and function; therefore, they are to be classified as drugs or drug-cosmetics, depending on the claims. Despite the confusion, the FDA is not considering developing a definition of cosmeceutical. Nor is there a legal definition for “personal care products.”

Is it a Cosmetic, Drug or Both?

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There is no legal definition for “cosmeceutical” or “personal care products.”

Linda Katz, M.D., director, Office of Cosmetics and Color, FDA

Regulations are in place for probiotics in food, but not in cosmetics FROM PAGE 68

- Is there an effect on product quality?
- What are the intended functions of probiotics in cosmetics?
- Are there special considerations for manufacturing cosmetics containing probiotics?
- How can cosmetics containing live microorganisms meet existing microbial contamination limits?
- Does the presence of probiotics in cosmetics affect the shelf life and storage products?
- How are probiotic cosmetics regulated by other countries?

And while many countries, including the United States, have moved to adopt regulations for probiotic use in foods and biotherapeutic pharmaceuticals, there are no regulations in the U.S. or abroad, or even international guidelines on the regulation of probiotics in cosmetics. Another need, she said, is the harmonization of standards in the U.S., Canada and the European Countries.

EXISTING LAWS AND PRACTICES

In her presentation, Dr. Katz reviewed existing laws and recommended practices for cosmetic manufacturing.

First, the FDA does not have any premarket authority, only limited postmarket authority over cosmetics, she said. “However, prior to marketing, companies or individuals who manufacture or market cosmetics have a legal responsibility to ensure the safety of their products. The law does not require specific tests to demonstrate safety of the individual products or ingredients, and the law does not require that these products be sterile, or for the companies to share this information with the FDA,” she said. However, the law does prohibit adulterated and misbranded cosmetics.

In manufacturing cosmetics, there are no required good manufacturing practices (GMPs). “It is by guidance only. Manufacturers are not required to register their product. It is strictly voluntary. Adverse event reporting is also voluntary,” she said.

When a product is considered both a cosmetic and a drug, such as anti-dandruff shampoo, antimicrobial cleansers, antiperspirant deodorant or antacaries toothpaste, producers must abide by drug regulations by registering the product, following GMPs and reporting serious adverse events.

The Federal Food, Drug, and Cosmetic Act (FD&C) defines a cosmetic as a product that cleanses, beautifies, promotes attractiveness or alters appearance. Whereas it defines a drug as a product that is used to treat, prevent or mitigate disease in a way that affects the structure or function of the body.

“When using either a cosmetic or a drug, it is important that if an adverse event occurs, that it be reported to the FDA, especially for cosmetics,” Dr. Katz says. “This will help guide us in where our priorities need to lie and how we devote our resources to ensure that only safe products remain on the marketplace.”

“If a clinician is selling a product that is making drug claims, that product needs to be evaluated for efficacy and safety under the FDA drug regulations,” Dr. Katz states.

When a product falls under both a drug and cosmetic classification, it will require premarket approval through a new drug route or existing monograph. “For those drugs falling under the monograph, there are strict guidelines as to what ingredients can be included in these products and how these products are to be labeled,” Dr. Katz says.

In most cases, there are rules as to how the active and excipient ingredients can be mixed and matched, and for what purposes the drug can be marketed.

### Cosmetics vs. OTC Drug

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**New protocol for MiraDry**

**MIRADRY, INC.** launched a new, improved treatment protocol for the miraDry system. The miraDry fresh protocol reduces overall procedure time by up to 38%, the company says. This results in a treatment that can be administered with greater ease and is more delegateable.

In addition, the MiraDry fresh treatment protocol and software upgrade also offers providers simplified template designs that better conform to miraDry clinician needs and usage patterns, the company says. The new Template System is now consolidated into only four treatment templates and offers an improved visual design which simplifies the procedure, increases ease of use and provides better tattoo transfer to the treatment area.

**FOR MORE INFORMATION:** http://miradry.com/arents/

**Treatment prep/promotional sponges**

**QOSMEDIX** now offers two new facial exfoliating sponges available in two different styles: oblong and teardrop. The unique shape of the Gentle Exfoliating Obiang Sponge (Part # 202412) allows users to easily reach facial contours, while the Finger Mitt Facial Exfoliating Sponge (Part # 968584) conveniently fits onto fingers to exfoliate hard-to-reach areas, the company says.

Both sponges can be washed with mild soap and water for re-use. They are suitable for treatment prep as well as promotional, gift set or giveaway items.

**FOR MORE INFORMATION:** www.qosmedix.com

**Rekze laboratories** launches skin care collection

On July 29 during the Cosmoprof Las Vegas exhibition, **REKZE LABORATORIES** launched its new skin care collection. The new line includes an anti-acne cream, anti-aging cream and slimming cream.

Clinical tests have shown that the anti-acne cream improves skin elasticity (7%), skin firmness (13%), reduces wrinkles length (7%), wrinkles depth (1%), wrinkle count (27%), and wrinkle volume (7%) and areca (7%). It preserves skin hydration and reinforces the hydro-lipid barrier (13%). The anti-aging cream is formulated with delphinage, black orchid extract, relaxor bx complex, hyaluronic acid, collagen, and cocoyrme q10.

Trials of the anti-age cream showed that it reduced secretion of sebum by 25% in four weeks. The cream reduced blackheads (16%), micro cysts (36%), papulas (36%), pusules (53%), as well as other non-inflammatory (18%), and inflammatory lesions (53%) in four weeks. The anti-acne cream is enriched with antioxidants, astringent, antibacterial, antifungal, anti-inflammatory and moisturizing properties to clear acne and prevent breakouts. It is non-comedogenic and non-irritating. Its ingredients include cucumis BG, vitamin E, ceramides, lycopen, phytoxyphosphogine, azelacid acid, retinyl palmitate and collagen.

The slimming cream reduced cellulite build-up, specifically high circumference by 1.6%, stomach circumference (9%), hips circumference (9.7%) and visible symptoms of cellulite (19.5%) in both women and men in four weeks. It is formulated with centella asiatica extract, carnitine, vitamin C, caffeine, retinyl palmitate, lycopene, shape perfection, regestiel and rehks.

Rekze also produces 63 shampoos, 43 conditioners, 24 serums, 28 scalp wipes and 27 styling gels.

**FOR MORE INFORMATION:** www.rekze.com

**Vbeam Prima**

Vbeam Prima, a 595 nm pulsed dye laser. With the addition of a 1064 nm wavelength and a number of other new features, the Vbeam Prima is designed to treat a range of skin conditions, including: rosacea, port wine stains, acne, faciale, leg and spider veins, scars, benign pigmented lesions and wrinkles, warts, stretch marks and photo aging.

"Building on the strong heritage of Vbeam, which has provided life changing aesthetic and dermatologic benefits for millions of patients for more than 20 years, the FDA clearance of the Vbeam Prima represents a step forward in the treatment of vascular and pigmented skin conditions. This important milestone exemplifies Candela’s mission of continuos innovation based on scientifically proven technologies, consistent clinical results and a trusted partnership with both patients and cur medical practitioners. Under our new ownership and new management, we are recommitting to scientific leadership, real-world clinical results and long-term relationships with our customers," said company CEO Geoffrey Crousseau.

Vbeam is considered a"gold standard" for the device based treatment of rosacea, the company stated in a news release. It has also been successful in treating port wine stains and vascular anemias in infants and adults. Vbeam is currently used in 700 universities and hospitals worldwide.

"I’ve worked with the Vbeam platform for years, and I am extremely excited about advancements with the Prima, especially the 50% greater power enabling a 15 mm spot size, both contact and spray cooling, one-day calibration and extended cycle life thanks to a completely re-designed system," said Eric Barnston, M.D., of Main Line Center for Laser Surgery in Ardmore, PA, an investigational site for the device.

**FOR MORE INFORMATION:** www.syneron-candela.com/us/prima

**Candela announces FDA clearance of Vbeam Prima**

On July 17, **CANDELA CORP.** announced the U.S. Food and Drug Administration clearance of Vbeam Prima.
Communicate
Patient-centered care requires individualized tactics

WHITNEY J. PALMER | Staff Correspondent

For many dermatologists, successfully treating patients means taking a more patient-centered approach to care. According to Neil Prose, M.D., a pediatric dermatologist with Duke University Medical Center, you can employ tactics to individualize the care you provide.

"What you do cannot only focus on the conditions you're treating, but also on how your patients feel and what their goals are," he said. "Treating a dermatology condition isn’t a one-size-fits-all matter."

#2 ASK OPEN-ENDED QUESTIONS:
Avoid yes-or-no questions. Questions such as, "How have you been since our last visit?" or, "What new issues have developed?" can provide more information and help you with diagnosis.

#3 RESPECT THE PATIENT:
Learn about your patient’s personal preferences and limitations, and take them into account when examining a treatment protocol. Being mindful of their individual psychological or cultural values can help you design a good treatment strategy and make your patient more comfortable.

#4 INVOLVE THE PATIENT:
Get his or her feedback throughout the appointment. Do they understand what you’re explaining? What are their goals? Include him or her in designing the treatment regimen to ensure greater compliance.

#5 ADDRESS PATIENT DISCOMFORT:
Don’t just quickly prescribe new medication. Discuss what your patient is feeling, including itching, dryness, or pain.

#6 ACKNOWLEDGE EMOTIONS:
Address your patients’ emotions before explaining how you’ll treat the problem. Tell them you hear their disappointment, frustration, or confusion if a treatment failed. Let them know other patients have similar experiences so they don’t feel alone. Also, address any concerns they might have about how their condition could impact their family and friends.

#7 COORDINATE CARE:
You aren’t your patient’s only provider. Work closely with other doctors, ancillary, and support services so they’re aware of your patient’s dermatology needs. Additionally, design a seamless office workflow so your patient’s experience from check-in to check-out is problem-free as possible.

#8 OFFER GUIDANCE:
Give your patients the direction they need to be successful with managing their condition. Discuss medication usage, side effects, and what services are available after the appointment. They should know who to call if any problems arise.

#9 INVITE QUESTIONS:
Ask what your patients want to know. If they have any, let them know you are answering them. Something that it okay to ask about it.

#10 PROVIDE INFORMATION:
Offer as much information as you can about your patient’s condition, care, and prognosis. Explain the treatment process thoroughly and teach your patients strategies on how to manage their condition at home with medication or other self-care techniques.

#11 SIMPLIFY ELECTRONIC RECORDS:
Make your notes in the patient’s electronic health record (EMR) as clear and understandable as possible. This makes it easier for your patient and other providers to understand the dermatology treatment. Also, encourage your patients to read their EMR and use it as a method to foster communication and discussion with you.
CONTRAINDICATIONS

Hypersensitivity
ONEXTON Gel is contraindicated in those individuals who have shown hypersensitivity to clindamycin, benzoyl peroxide, any components of the formulation, or lincomycin. Anaphylaxis, as well as allergic reactions leading to hospitalization, has been reported in postmarketing use with ONEXTON Gel [see Adverse Reactions]

WARRANTS AND PRECAUTIONS

Colitis
Systemic absorption of clindamycin has been demonstrated following topical use of clindamycin. Diarrhea, bloody diarrhea, and colitis (including pseudomembranous colitis) have been reported with the use of topical and systemic clindamycin. If significant diarrhea occurs, ONEXTON Gel should be discontinued.

Severe colitis has occurred following oral and parenteral administration of clindamycin with an onset of up to several weeks following cessation of therapy. Antiperistaltic agents such as opiates and diphenoxylate with atropine may prolong and/or worsen severe colitis. Severe colitis may result in death.

Studies indicate toxin(s) produced by Clostridia is one primary cause of antibiotic-associated colitis. The colitis is usually characterized by severe persistent diarrhea and severe abdominal cramps and may be associated with the passage of blood and mucus. Stool cultures for Clostridium difficile and stool assay for C. difficile toxin may be helpful diagnostically.

Ultraviolet Light and Environmental Exposure

Minimize sun exposure (including use of tanning beds or sun lamps) following drug administration [see Nonclinical Toxicology].

ADVERSE REACTIONS

The following adverse reaction is described in more detail in the Warnings and Precautions section of the label:

Colitis [see Warnings and Precautions].

Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in clinical trials of a drug cannot be directly compared to rates observed in the clinical trials of another drug and may not reflect the rates observed in clinical practice.

These adverse reactions occurred in less than 0.5% of subjects treated with ONEXTON Gel. Because postmarketing adverse reactions are reported voluntarily from a population of up to several weeks following cessation of therapy. Antiperistaltic agents such as opiates and diphenoxylate with atropine may prolong and/or worsen severe colitis. Severe colitis may result in death.

Table 1: Local Skin Reactions—Percent of Subjects with Symptoms Present. Results from the Phase 3 Trial of ONEXTON Gel 1.2%/3.75% (N = 243)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Before Treatment (Baseline)</th>
<th>Maximum During Treatment</th>
<th>End of Treatment (Week 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erythema</td>
<td>Mild 6 0</td>
<td>Mild Mod.* 28 5</td>
<td>Mild Mod.* 15 2 0</td>
</tr>
<tr>
<td></td>
<td>Severe 10 1</td>
<td></td>
<td>Severe 10 &lt;1 0</td>
</tr>
<tr>
<td>Burning</td>
<td>14 3 &lt;1</td>
<td>15 3 0</td>
<td>7 2 0</td>
</tr>
<tr>
<td></td>
<td>Severe 5 &lt;1</td>
<td>7 1 &lt;1</td>
<td>3 &lt;1 0</td>
</tr>
<tr>
<td></td>
<td>Mild 5 &lt;1</td>
<td>7 0 &lt;1</td>
<td>3 &lt;1 0</td>
</tr>
</tbody>
</table>

*Mild = Moderate

Postmarketing Experience

Because postmarketing adverse reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Anaphylaxis, as well as allergic reactions leading to hospitalizations, has been reported in postmarketing use of products containing clindamycin phosphate/benzoyl peroxide.

DRUG INTERACTIONS

Erythromycin

Avoid using ONEXTON Gel in combination with topical or oral erythromycin-containing products due to its clindamycin component. In vitro studies have shown antagonism between erythromycin and clindamycin. The clinical significance of this in vitro antagonism is not known.

Concomitant Topical Medications

Concomitant topical acne therapy should be used with caution since a possible cumulative irritant effect may occur, especially with the use of peeling, desquamating, or abrasive agents. If irritation or discomfort occurs, reduce frequency of application or temporarily interrupt treatment and resume once the irritation subsides. Treatment should be discontinued if the irritation persists.

Neuromuscular Blocking Agents

Clindamycin has been shown to have neuromuscular blocking properties that may enhance the action of other neuromuscular blocking agents. ONEXTON Gel should be used with caution in patients receiving such agents.

USE IN SPECIFIC POPULATIONS

Pregnancy

Pregnancy Category C.

There are no adequate and well-controlled studies in pregnant women treated with ONEXTON Gel. ONEXTON Gel should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Animal reproductive/developmental toxicity studies have not been conducted with ONEXTON Gel or benzoyl peroxide. Developmental toxicity studies of clindamycin performed in rats and mice using oral doses of up to 600 mg/kg/day (240 and 120 times amount of clindamycin in the highest recommended adult human dose based on mg/m², respectively) or subcutaneous doses of up to 200 mg/kg/day (80 and 40 times the amount of clindamycin in the highest recommended adult human dose based on mg/m², respectively) revealed no evidence of teratogenicity.

Nursing Mothers

It is not known whether clindamycin is secreted in human milk after topical application of ONEXTON Gel. However, orally and parenterally administered clindamycin has been reported to appear in breast milk. Because of the potential for serious adverse reactions in nursing infants, a decision should be made whether to discontinue the use of ONEXTON Gel while nursing, taking into account the importance of the drug to the mother.

Pediatric Use

Safety and effectiveness of ONEXTON Gel in pediatric patients under the age of 12 have not been evaluated.

Geriatric Use

Clinical trials of ONEXTON Gel did not include sufficient numbers of subjects aged 65 and older to determine whether they respond differently from younger subjects.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenicity, mutagenicity and impairment of fertility testing of ONEXTON Gel have not been performed.

Benzoyl peroxide has been shown to be a tumor promoter and progression agent in a number of animal studies. Benzoyl peroxide in acetone at doses of 5 and 10 mg administered topically twice per week for 20 weeks induced skin tumors in transgenic Tg.AC mice. The clinical significance of this is unknown.

Carcinogenicity studies have been conducted with a gel formulation containing 1% clindamycin and 5% benzoyl peroxide. In a 2-year dermal carcinogenicity study in mice, treatment with the gel formulation at doses of 900, 2700, and 15000 mg/kg/day (1.8, 5.4, and 30 times amount of clindamycin and 2.4, 7.2, and 40 times amount of benzoyl peroxide in the highest recommended adult human dose of 2.5 g ONEXTON Gel based on mg/m², respectively) did not cause any increase in tumors. However, topical treatment with a different gel formulation containing 1% clindamycin and 5% benzoyl peroxide at doses of 100, 500, and 2000 mg/kg/day caused a dose-dependent increase in the incidence of keratoacanthoma at the treated skin site of male rats in a 2-year dermal carcinogenicity study in rats. An oral (gavage) carcinogenicity study in rats, treatment with the gel formulation at doses of 300, 900 and 3000 mg/kg/day (1.2, 3.6, and 12 times amount of clindamycin and 1.6, 4.8, and 16 times amount of benzoyl peroxide in the highest recommended adult human dose of 2.5 g ONEXTON Gel based on mg/m², respectively) for up to 97 weeks did not cause any increase in tumors. In a 52-week dermal photocarcinogenicity study in hairless mice, (40 weeks of treatment followed by 12 weeks of observation), the median time to onset of skin tumor formation decreased and the number of tumors per mouse increased relative to controls following chronic concurrent topical administration of the higher concentration benzoyl peroxide formulation (5000 and 10000 mg/kg/day, 5 days/week) and exposure to ultraviolet radiation.

Clindamycin phosphate was not genotoxic in the human lymphocyte chromosome aberration assay. Benzoyl peroxide has been found to cause DNA strand breaks in a variety of mammalian cell types, to be mutagenic in S. typhimurium tests by some but not all investigators, and to cause sister chromatid exchanges in Chinese hamster ovary cells.

Fertility studies have not been performed with ONEXTON Gel or benzoyl peroxide, but fertility and mating ability have been studied with clindamycin. Fertility studies in rats treated orally with up to 300 mg/kg/day of clindamycin (approximately 120 times the amount of clindamycin in the highest recommended adult human dose of 2.5 g ONEXTON Gel, based on mg/m²) revealed no effects on fertility or mating ability.

PATIENT COUNSELING INFORMATION

See FDA-approved patient labeling (Patient Information).

Manufactured for:

Valeant Pharmaceuticals North America LLC

Bridgewater, NJ 08807 USA

By:

Valeant Pharmaceuticals International, Inc.

Laval, Quebec H7L 4A8, Canada

U.S. Patent 8,298,434

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Rev 10/2016

ONX.0075.USA.17
ALL ABOARD ONEXTON GEL

Efficacy and tolerability matter when it comes to treating acne. In the pivotal trial, ONEXTON GEL was shown to treat both inflammatory and noninflammatory acne, and no patients discontinued due to an adverse event.1,2

TOLERABILITY > EFFICACY

INDICATION
ONEXTON (clindamycin phosphate and benzoyl peroxide) Gel, 1.2%/3.75% is indicated for the topical treatment of acne vulgaris in patients 12 years of age or older.

IMPORTANT SAFETY INFORMATION
• ONEXTON Gel is contraindicated in patients with a known hypersensitivity to clindamycin, benzoyl peroxide, any component of the formulation, or tetracyclines.
• ONEXTON Gel is contraindicated in patients with a history of regional enteritis, ulcerative colitis, or antibiotic-associated colitis.
• Diarrhea, bloody diarrhea, and colitis (including pseudomembranous coli) have been reported with the use of topical and systemic clindamycin. ONEXTON Gel should be discontinued if significant diarrhea occurs.
• Oral and parenterally administered clindamycin has been associated with severe colitis, which may result in death.
• Anaphylaxis, as well as other allergic reactions leading to hospitalizations, has been reported in postmarketing use of products containing clindamycin/benzoyl peroxide. If a patient develops symptoms of an allergic reaction such as swelling and shortness of breath, they should be instructed to discontinue use and contact a physician immediately.
• The most common local adverse reactions experienced by patients in clinical trials were mild and moderate erythema, scaling, itching, burning, and stinging.

• ONEXTON Gel should not be used in combination with erythromycin-containing products because of its clindamycin component.
• ONEXTON Gel should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. A decision should be made whether to use ONEXTON Gel while nursing, taking into account the importance of the drug to the mother.
• Patients should be advised to avoid contact with the eyes or mucous membranes.
• Patients should minimize exposure to natural and avoid artificial sunlight (tanning beds or UVA/UVB treatment) while using ONEXTON Gel. To minimize exposure to sunlight, protective clothing should be worn and a sunscreen with SPF 15 rating or higher should be used.

To report SUSPECTED ADVERSE REACTIONS, contact Ortho Dermatologics at 1-800-321-4575 or FDA at 1-800-FDA-1088 or visit www.fda.gov/medwatch.

Please see Brief Summary of full Prescribing Information on the following page.


LEARN MORE AT ONEXTON.COM

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TERMS AND CONDITIONS APPLY
LONGER CONSULTS, COMORBIDITY SCREENING, DIETARY CONSIDERATIONS IMPACT OUTCOMES

COMPREHENSIVE PSORIASIS MANAGEMENT

Individualize biologic therapy for different patient populations
Psoriasis is a common disease affecting approximately 7.5 million patients in the United States, 1.5 million (20%) of which have moderate to severe psoriasis (affecting more than 10% of their body surface area). Dr. Menter, chairman of dermatology, Baylor University Medical Center, Dallas, says that less than 500,000 of 1.5 million patients with moderate to severe psoriasis are currently being treated with any form of systemic or biologic therapy. Therefore, over 1 million patients with moderate to severe psoriasis in the United States are not receiving appropriate therapy. In addition to inappropriate drug selection, Dr. Menter says a patient's adherence to prescribed therapies can also significantly contribute to inadequate disease control and suboptimal treatment outcomes.

**CONNECTION TO PATIENT COMMUNICATION**

“People are very busy today and find it difficult to...”

**THE PATIENT WEIGHS IN: PSORIASIS SYMPTOM INVENTORY (PSI)**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itch</td>
<td>1-5</td>
</tr>
<tr>
<td>Redness</td>
<td>1-5</td>
</tr>
<tr>
<td>Scaling</td>
<td>1-5</td>
</tr>
<tr>
<td>Burning</td>
<td>1-5</td>
</tr>
<tr>
<td>Itching</td>
<td>1-5</td>
</tr>
<tr>
<td>Stinging</td>
<td>1-5</td>
</tr>
<tr>
<td>Cracking</td>
<td>1-5</td>
</tr>
<tr>
<td>Flaking</td>
<td>1-5</td>
</tr>
<tr>
<td>Pain</td>
<td>1-5</td>
</tr>
</tbody>
</table>

**ADHERENCE**

Adherence in psoriasis has always been an issue, particularly for patients with mild to moderate symptoms who are typically prescribed topical regimens. As psoriasis is a life-long disease without cure, many patients over time can become frustrated and indifferent towards a positive outcome for their disease and will not regularly apply therapy as advised by their doctor.

“People are very busy today and find it difficult to...”
For moderate to severe plaque psoriasis, some roadblocks are a good thing.

**INDICATION**

SILIQ™ injection is indicated for the treatment of moderate to severe plaque psoriasis in adult patients who are candidates for systemic therapy or phototherapy and have failed to respond or have lost response to other systemic therapies.

**IMPORTANT SAFETY INFORMATION**

**WARNING: SUICIDAL IDEATION AND BEHAVIOR**

Suicidal ideation and behavior, including completed suicides, have occurred in patients treated with SILIQ. Prior to prescribing SILIQ, weigh the potential risks and benefits in patients with a history of depression and/or suicidal ideation or behavior. Patients with new or worsening suicidal ideation and behavior should be referred to a mental health professional, as appropriate. Advise patients and caregivers to seek medical attention for manifestations of suicidal ideation or behavior, new onset or worsening depression, anxiety, or other mood changes [see Warnings and Precautions (5.1) in the full Prescribing Information].

Because of the observed suicidal behavior in subjects treated with SILIQ, SILIQ is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the SILIQ REMS Program [see Warnings and Precautions (5.2) in the full Prescribing Information].

**Crohn’s Disease** SILIQ is contraindicated in patients with Crohn’s disease. In clinical trials, which excluded Crohn’s patients, one SILIQ-treated patient was withdrawn after developing Crohn’s disease.

**SILIQ Risk Evaluation and Mitigation Strategy (REMS) Program** SILIQ is available only through a restricted program called the SILIQ REMS because of observed suicidal ideation and behavior in patients treated with SILIQ. Before prescribing SILIQ, prescribers must be certified with the program, have each patient sign a Patient-Prescriber Agreement Form, and provide the patient a Wallet Card describing symptoms requiring immediate medical evaluation. Pharmacies must be certified and only dispense to patients authorized to receive SILIQ. More information is available at SILIQREMS.com.

Please see Brief Summary of Full Prescribing Information on following pages.
There's no getting around it.

Only SILIQ works by blocking IL-17 Receptor A, tapping the brakes on a key factor in the progression of plaque psoriasis.

If your patients have been around the block with other treatments, maybe it's time to try an alternate route.

**INDICATION**

SILIQ™ injection is indicated for the treatment of moderate to severe plaque psoriasis in adult patients who are candidates for systemic therapy or phototherapy and have failed to respond or have lost response to other systemic therapies.

**IMPORTANT SAFETY INFORMATION (cont'd)**

**Infections** SILIQ may increase the risk of infections. Serious infections and fungal infections were observed at a higher rate in patients treated with SILIQ than placebo-treated patients in clinical trials, including one case of cryptococcal meningitis that led to discontinuation of therapy.

- Consider risks and benefits prior to prescribing SILIQ in patients with a chronic infection or history of recurrent infection
- Instruct patients to seek treatment if signs or symptoms of a chronic or acute infection occur

**Risk for Latent Tuberculosis (TB) Reactivation** Evaluate patients for TB prior to initiating treatment with SILIQ and do not treat patients with active TB. Initiate treatment for latent TB prior to starting SILIQ and consider anti-TB therapy prior to initiation in patients with history of latent TB if adequate treatment cannot be confirmed. Monitor closely for symptoms of active TB during and after treatment.

**Immunizations** Avoid use of live vaccines in patients treated with SILIQ.

**Adverse Reactions** The most commonly reported adverse reactions in clinical trials were arthralgia, headache, fatigue, diarrhea, oropharyngeal pain, nausea, myalgia, injection site reactions, influenza, neutropenia, and tinea infections.

To report SUSPECTED ADVERSE REACTIONS, contact Valeant Pharmaceuticals at 1-800-321-4576 or FDA at 1-800-FDA-1088, or visit www.fda.gov/MedWatch.

Please see Brief Summary of Full Prescribing Information on following page, including Boxed Warning about suicidal ideation and behavior.


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**CONTRAINDICATIONS**

SILIQ is contraindicated in patients with Crohn’s disease because SILIQ may cause worsening of disease [see Warnings and Precautions].

**WARNINGS AND PRECAUTIONS**

Suicidal Ideation and Behavior: Suicidal ideation and behavior, including 4 completed suicides, occurred in subjects treated with SILIQ in the psoriasis clinical trials. There were no completed suicides in the 12-week placebo-controlled portion of the trials. SILIQ users with a history of suicidality or depression had an increased incidence of suicidal ideation and behavior as compared to users without such a history [see Adverse Reactions]. A causal association between treatment with SILIQ and increased risk of suicidal ideation and behavior has not been established. Prescribers should weigh the potential risks and benefits before using SILIQ in patients with a history of depression or suicidality. Patients with new or worsening symptoms of depression or suicidality should be referred to a mental health professional, as appropriate. Advise patients and caregivers to seek medical attention for manifestations of suicidal ideation and behavior, new onset or worsening depression, anxiety, or other mood changes [see Warnings and Precautions].

Because of the observed suicidal ideation and behavior in subjects treated with SILIQ, SILIQ is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the SILIQ REMS Program [see Warnings and Precautions].

**ADVERSE REACTIONS**

The following serious adverse reactions are discussed in greater detail in other sections of labeling:

- **Suicidal Ideation and Behavior** [see Warnings and Precautions]
- **Infections** [see Warnings and Precautions]
- **Crohn’s Disease** [see Contraindications, Warnings and Precautions]

**Clinical Trial Experience:** Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

The overall safety population included 4558 subjects (3066 SILIQ, 613 ustekinumab, 879 placebo) in controlled clinical trials and open-label extension studies. The majority of subjects were male (69%), white (91%), and aged 40-64 years old (58%). One-third of subjects reported previous biologic use prior to enrollment. Across the clinical development program, 4464 subjects received at least one dose of SILIQ; 3755 subjects were exposed to SILIQ for at least 1 year.

Weeks 0 to 12: Data from one multicenter, randomized, placebo-controlled trial (Trial 1), two multicenter, randomized, placebo- and active-controlled trials (Trials 2 and 3), and one dose-finding trial (Trial 4) in plaque psoriasis were pooled to evaluate the safety of SILIQ (210 mg weekly at Weeks 0, 1, and 2, followed by treatments every 2 weeks [Q2W]) compared to placebo for up to 12 weeks after treatment initiation.

During the 12-week randomized treatment period, about 1% of the subjects in the treatment groups (SILIQ, ustekinumab, and placebo) discontinued treatment because of adverse events. Adverse events leading to discontinuation of SILIQ included neutropenia, arthralgia, and urticaria. The proportion of subjects who developed serious adverse events was similar among the SILIQ, ustekinumab, and placebo groups.

Table 1 summarizes the adverse reactions that occurred at a rate of at least 1% and at a higher rate in the SILIQ 210 mg Q2W group than in the placebo group during the 12-week randomized treatment period of the pooled trials.

**Table 1: Adverse Reactions Occurring in ≥1% of Subjects in the SILIQ Group and More Frequently Than in the Placebo Group in Plaque Psoriasis Trials through Week 12**

<table>
<thead>
<tr>
<th>Adverse Reactions</th>
<th>Placebo (N=679) n (%)</th>
<th>SILIQ 210 mg every 2 weeksa (N=1496) n (%)</th>
<th>Ustekinumab (N=613)b n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthralgia</td>
<td>29 (3.3)</td>
<td>71 (4.7)</td>
<td>15 (2.4)</td>
</tr>
<tr>
<td>Headache</td>
<td>31 (3.5)</td>
<td>64 (4.3)</td>
<td>23 (3.8)</td>
</tr>
<tr>
<td>Fatigue</td>
<td>10 (1.1)</td>
<td>39 (2.6)</td>
<td>16 (2.6)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>10 (1.1)</td>
<td>33 (2.2)</td>
<td>5 (0.8)</td>
</tr>
<tr>
<td>Oropharyngeal pain</td>
<td>10 (1.1)</td>
<td>31 (2.1)</td>
<td>8 (1.3)</td>
</tr>
<tr>
<td>Nausea</td>
<td>10 (1.1)</td>
<td>28 (1.9)</td>
<td>6 (1.0)</td>
</tr>
<tr>
<td>Myalgia</td>
<td>3 (0.3)</td>
<td>26 (1.7)</td>
<td>4 (0.7)</td>
</tr>
<tr>
<td>Injection site reactions (pain, erythema, bruising, hemorrhage, pruritus)</td>
<td>11 (1.3)</td>
<td>23 (1.5)</td>
<td>12 (2.0)</td>
</tr>
<tr>
<td>Influenza</td>
<td>4 (0.5)</td>
<td>19 (1.3)</td>
<td>7 (1.1)</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>4 (0.5)</td>
<td>15 (1.0)</td>
<td>5 (0.8)</td>
</tr>
<tr>
<td>Tinea infections</td>
<td>2 (0.2)</td>
<td>15 (1.0)</td>
<td>3 (0.5)</td>
</tr>
</tbody>
</table>

a subjects receiving 210 mg of SILIQ at Weeks 0, 1, and 2, followed by treatment every two weeks during the 12-week period

b Trials 2 and 3 included the active comparator, ustekinumab.

Adverse reactions that occurred in less than 1% of subjects in the SILIQ group were conjunctivitis and candida infections (including oral [0.2%], genital [0.1%], and esophageal [0.1%] versus none in the placebo group).

**Week 0 to End of Trial:** Through Week 52, exposure-adjusted rates of serious adverse events were similar between subjects treated with SILIQ and those treated with ustekinumab. Through the end of the trial, the exposure-adjusted rates of treatment-emergent serious adverse events were similar to those seen in the 52-week period in the subjects treated with SILIQ.

Specific Adverse Reactions: **Suicidal Ideation and Behavior:** During the 12-week randomized treatment period in the pooled trials, one subject in the SILIQ group attempted suicide and none in the placebo or ustekinumab groups. From initiation through Week 52 of the trials, suicidal ideation or behavior occurred in 7 of 4019

In studies of psoriasis, which excluded subjects with active Crohn’s disease, Crohn’s disease occurred in one subject during treatment with SILIQ and led to discontinuation of therapy. In other trials, exacerbation of Crohn’s disease was observed with SILIQ use. SILIQ is contraindicated in patients with Crohn’s disease.

**Immunizations:** Avoid use of live vaccines in patients treated with SILIQ. No data are available on the ability of live or inactivated vaccines to elicit an immune response in patients being treated with SILIQ.
subjects (0.2 per 100 subject-years) treated with SILIQ and in 2 of 613 subjects (0.4 per 100 subject-years) treated with ustekinumab. During the course of the clinical trials for plaque psoriasis, suicidal ideation or behavior occurred in 34 of 4464 subjects treated with SILIQ (0.37 per 100 subject-years). Eight of the 10 subjects who attempted or completed suicide had a history of depression and/or suicidal ideation or behavior [see Warnings and Precautions].

Infections—During the 12-week randomized treatment period, infections occurred in 25.4% of the SILIQ group compared to 23.4% of the placebo group. The majority of infections consisted of nasopharyngitis, upper respiratory tract infection, pharyngitis, urinary tract infections, bronchitis, and influenza, and did not necessitate treatment discontinuation. The SILIQ group had a higher rate of fungal infections compared to the placebo group (1.8% vs 0.9%). The fungal infections were primarily non-serious skin and mucosal candida infections [see Warnings and Precautions].

Neutropenia—During the 12-week randomized treatment period, neutropenia occurred in 0.7% of subjects in the SILIQ group. Most adverse reactions of neutropenia were transient. In subjects with normal absolute neutrophil count (ANC) at baseline, a reduction in ANC occurred in 8.9% of subjects in the SILIQ group, compared to 3.3% in the ustekinumab group, and 3.6% in the placebo group. Neutropenia, grade 3 (<1000/mm³) occurred in 0.5% of subjects in the SILIQ group compared to 0.2% of subjects in the ustekinumab group and none in the placebo group. From Week 0 to end of trial, the exposure-adjusted rate of treatment-emergent neutropenia was 0.4 per 100 subject-years (0.1 per 100 subject-years were grade 3). No serious infections were associated with cases of neutropenia.

Immune Reactivity: As with all therapeutic proteins, there is potential for immunogenicity with SILIQ. Approximately 3% of subjects treated with SILIQ developed antibodies to brodalumab through the 52-week treatment period. Of the subjects who developed antibodies to brodalumab, none had antibodies that were classified as neutralizing. However, the assay to test for neutralizing antibodies had limitations detecting neutralizing antibodies in the presence of brodalumab; therefore, the incidence of neutralizing antibody development could be underestimated.

The detection of antibody formation is highly dependent on the sensitivity and specificity of the assay. Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in an assay may be influenced by several factors, including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to SILIQ with the incidence of antibodies to other products may be misleading.

DRUG INTERACTIONS

Live Vaccinations: Avoid use of live vaccines in patients treated with SILIQ [see Warnings and Precautions].

CYP450 Substrates: The formation of CYP450 enzymes can be altered by increased levels of certain cytokines (e.g., IL-1, IL-6, IL-10, TNFα, IFN) during chronic inflammation. Treatment with SILIQ may modulate serum levels of some cytokines. Therefore, upon initiation or discontinuation of SILIQ in patients who are receiving concomitant drugs which are CYP450 substrates, particularly those with a narrow therapeutic index, consider monitoring for effect (e.g., for warfarin) or drug concentration to inform a drug associated risk. Human IgG antibodies are known to cross the placental barrier, but no direct data are available concerning the potential to cross the placenta and enter breast milk. Management of pregnancy should be based on consideration of the background risk of major birth defects and miscarriage for the indicated population. In U.S. clinical trials, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively. Therefore, SILIQ should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus. No data are available regarding the potential for SILIQ to affect labor or delivery. The safety and effectiveness of SILIQ have not been evaluated in pediatric patients.

Geriatric Use: Of the 3066 plaque psoriasis subjects initially randomized to SILIQ in clinical trials, 192 (6%) were ≥65 years old and no subjects were ≥75 years old. Although no differences in safety or efficacy were observed between older and younger subjects, the number of subjects aged 65 years and older was not sufficient to determine whether they responded differently from younger subjects.

NONCLINICAL TOXICOLOGY

Carcinogenesis, Mutagenesis, Impairment of Fertility: Animal studies have not been conducted to evaluate the carcinogenic or mutagenic potential of SILIQ. The published literature is mixed on the potential effects on malignancy risk due to the inhibition of the IL-17RA, the pharmacological action of SILIQ. Some published literature suggests that IL-17A directly promotes cancer cell invasion, which suggests a potential beneficial effect of SILIQ. However, other reports indicate IL-17A promotes T-cell mediated tumor rejection, which suggests a potential adverse effect by SILIQ. However, inhibition of the IL-17RA with SILIQ has not been studied in these models. Therefore, the relevance of experimental findings in these models for malignancy risk in humans is unknown.

In cynomolgus monkeys, there were no effects on fertility parameters such as changes in reproductive organs or sperm analysis following subcutaneous administration of brodalumab at dose levels up to 90 mg/kg/week for six months (26 times the MRHD on a mg/kg basis). The monkeys were not mated in this study to evaluate effects on fertility.

USE IN SPECIFIC POPULATIONS

Pregnancy: Risk Summary—There are no human data on SILIQ use in pregnant women to inform a drug associated risk. Human IgG antibodies are known to cross the placental barrier, therefore, SILIQ may be transmitted from the mother to the developing fetus. In a combined embryofetal development and pre- and post-natal development study, no adverse developmental effects were observed in infants born to pregnant monkeys after subcutaneous administration of brodalumab during organogenesis through parturition at doses up to 26 times the maximum recommended human dose (MRHD) [see Data].

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively. Data: Animal Data—A combined embryofetal development and pre- and post-natal development study was conducted in cynomolgus monkeys administered brodalumab. No brodalumab-related effects on embryofetal toxicity or malformations, or on morphological, functional or immunological development were observed in infants from pregnant monkeys administered weekly subcutaneous doses of brodalumab up to 26 times the MRHD from the beginning of organogenesis to parturition (on a mg/kg basis of 90 mg/kg/week).

Lactation: Risk Summary—There are no data on the presence of brodalumab in human milk, the effects on the breastfed infant, or the effects on milk production. Brodalumab was detected in the milk of lactating cynomolgus monkeys. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for SILIQ and any potential adverse effects on the breastfed infant from SILIQ or from the underlying maternal condition.

Pediatric Use: The safety and effectiveness of SILIQ have not been evaluated in pediatric patients.
find the time or energy to commit and follow through with a long-term therapy, even though they are the ones making the appointment with the dermatologist to address their psoriasis symptoms. We use double the amounts of super potent topical steroids per patient per capita, more than anywhere else in the world because patients want to be over their symptoms as soon as possible. Everyone wants a quick fix, but patients need to understand that psoriasis is a chronic life-long disease,” Dr. Menter says.

Choosing the appropriate vehicle can be instrumental in improving treatment outcomes. Scalp psoriasis, for instance, is known to be very difficult to treat and can be recalcitrant to standard therapies. Here, it is paramount to consider the patient’s type of hairstyle when choosing among the different sprays, gels, and oil-based vehicles. According to Dr. Menter, the clinician needs to have understanding of the individual patient’s particular needs and aim to prescribe the appropriate therapy and vehicle for each individual case, facilitating treatment adherence by the patient.

“I’m not sure all dermatologists take or have the time to do this in their busy daily practices. Nursing staff or physician assistants following appropriate training could or should take the time and explain in greater detail to the patients how, when, and how often a prescribed therapy should be applied, as well as the importance of following through with the therapy. I believe that longer and more in-depth consultations with the dermatologist, nursing staff, or physician assistants could make a difference in improving outcomes,” Dr. Menter says.

"BY FORMING A STRONG THERAPEUTIC ALLIANCE WITH PATIENTS AND BY ASKING THEM ABOUT THEIR EXPECTATIONS FOR TREATMENT, CLINICIANS HAVE A BETTER CHANCE OF PROVIDING PATIENTS WITH MORE EFFECTIVE AND DURABLE RELIEF FROM THEIR PSORIASIS SYMPTOMS."


QUALITY OF LIFE

Improving the quality of life of patients is one of the central goals in psoriasis therapy. Tracking disease severity is one way the clinician can have a better idea of the patient’s status. The Psoriasis Symptom Inventory (PSI) is comprised of eight usual symptoms seen in psoriasis (i.e., itching, scratching, burning, stinging, etc.), and patients rank their status on a 0 to 4-point score basis. According to Dr. Menter, the PSI is proving to be very useful in helping to categorize where patients are in terms of their disease severity, which can often reflect their psychological state regarding their psoriasis. Clinicians can then, perhaps more quickly, adjust treatment to hopefully improve clinical treatment outcomes, leading to a higher quality of life.

“We have to be very aware to carefully assess the symptomatology of our patients and treat them appropriately. The PSI can give the physician some insight into some of the symptoms that patients experience but perhaps seldom talk about. I believe such assessment tools can help clinicians better understand what patients are going through and further help them choose an appropriate therapeutic plan for the typical complex mosaic of psoriasis symptoms,” Dr. Menter says.

REFERENCE


2. Hema N. Viswanathan, PhD; Alex Mutebi, PhD; Cassandra E. Milmont; et al. “Measurement Properties of the Psoriasis Symptom Inventory Electronic Daily Diary in Patients with Moderate to Severe Plaque Psoriasis,” Value in Health Journal. September 2017. DOI: https://doi.org/10.1016/j.jval.2016.11.020
Obesity may intensify other risk factors in pediatric psoriasis

by Ilya Petrou, M.D. | Staff Correspondent

A recent study found that children with psoriasis are at an increased risk of developing comorbidities compared to those without psoriasis, and obesity appears to be an important independent risk factor for the development of these comorbidities.

The study, published in *JAMA Dermatology*, shows that, in addition to needing to manage the cutaneous symptoms of the disease, patients with psoriasis are also at a higher risk for developing comorbidities such as obesity, hyperlipidemia, hypertension, diabetes, metabolic syndrome, polycystic ovarian syndrome, nonalcoholic liver disease, and elevated function enzyme levels.

“The existence of these comorbidities in children with psoriasis is not really new to us. After the associations with these comorbidities were recognized in adult psoriasis patients, we began to recognize these associations in the pediatric population as well. What’s striking is the importance of obesity as an independent risk factor for the development of these comorbidities,” said Megha M. Tollefson, M.D., the study’s corresponding author.

Dr. Tollefson and Mayo Clinic colleagues determined the risk of these comorbidities in children with and without psoriasis, after accounting for obesity. Children with psoriasis were significantly more likely to develop each of the comorbidities than those children without psoriasis, and obesity was found to be a strong risk factor for the development of each comorbidity, even in those children without psoriasis.

“While we found that psoriasis certainly does play a bit of a role in the development of these comorbidities, obesity is a much larger issue in relation to the development of these comorbidities,” Dr. Tollefson says.

In addition to managing symptoms, physicians should focus on other factors associated with preventing and identifying the onset of comorbid conditions. It is important to recognize that obesity is probably a much larger factor in children who have psoriasis and are obese; spending time talking about that with families is paramount. Also, it is very important to bring in the primary care specialist or pediatrician in a multidisciplinary forum to appropriately address the different comorbidities that can occur in this patient population, Dr. Tollefson adds.

**REFERENCE**

Ovarian reserve low in premenopausal women with psoriasis

Study indicates female patients of reproductive age may benefit from additional medical services

by Whitney J. Palmer | Staff Correspondent

Women with psoriasis could have a harder time getting pregnant, according to new research.

Based on a study published in the Taiwanese Journal of Obstetrics & Gynecology, these patients have a diminished ovarian reserve or a number of follicles capable of producing a mature, healthy egg for fertilization.

Current data suggest female hormones released during pregnancy impact the course of psoriasis, and, at the same time, psoriasis affects pregnancy outcomes. However, no previous research exists into the ovarian reserve and function of psoriatic patients.

According to study authors, knowing how psoriasis might affect pregnancy chances can be very important for women interested in having a family.

“Average age of diagnosis in women with psoriasis is 28, a prime age for pregnancy,” the authors wrote. “Therefore, many female patients with psoriasis are concerned about adverse effects of the disease on their future fertility.”

Although age is a factor in determining whether a woman can get pregnant, it has limited usefulness in predicting individual ovarian performance. Consequently, knowing a woman’s ovarian reserve is increasingly important clinically.

And, the measure of a number of factors can help determine the quality of a woman’s ovarian reserve. These include basal follicle stimulating hormone (FSH), estrogen (E2), FSH/luteinizing hormone (LH) ratio, Inhibin B, and antimullerian hormone (AMH). Ovarian volume (OV) and antral follicle count (AFC) determine ovary size and shape.

THE STUDY

The study, conducted between January and September 2014, occurred in Aksaray University Research and Training hospital in Turkey. It was designed to determine whether women with psoriasis who hadn’t undergone previous treatment had a reduced ovarian reserve compared to women without psoriasis. They also investigated if disease severity was associated with ovarian reserve.

Researchers selected participants based on their type of psoriasis, presence of hair and nail psoriasis, and the severity of disease. Participants were excluded for infertility, pregnancy, gynecological pathologies, polycystic ovarian syndrome, breastfeeding, gynecological surgery history, chronic liver or kidney failure, smoking, cancer, or other dermatological, inflammatory, physical, or psychiatric disorders. Women who previously received any systemic treatment and hormone medication were also excluded due to potential effects on ovarian function.

Researchers enrolled 14 women with psoriasis for this study. Nine had plaque type psoriasis, three had guttate type, and two had palmoplantar type. A control group of 35 women without psoriasis also

**Take AWAYS**

- Average age of psoriasis diagnosis in women is 28.
- Measures indicate diminished ovarian reserve in this small group.
- Women of reproductive age with psoriasis could benefit from further analysis before starting systemic therapy.

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Poor diet, psoriasis flares, often intertwined

by Lisette Hilton | Staff Correspondent

There are two important reasons for physicians to address the role of diet when managing psoriasis patients. One is to limit risks of cardiovascular and metabolic comorbidities. The other is to potentially improve psoriasis severity.

Evidence suggests certain food types can flare psoriasis and losing weight can improve treatment response for some with psoriasis, according to Rajani Katta, M.D., co-author of an article that examines how dietary changes can impact skin diseases — including psoriasis, published earlier this year in Skin Therapy Letter.

“We know that patients who have psoriasis are at higher risk for diabetes, high blood pressure, heart disease and a number of metabolic abnormalities. It’s really important that psoriasis patients know that and realize that changing their diet can be an important part of preventing these comorbidities,” said Dr. Katta, a dermatologist with Texas Children’s Hospital in Houston.

DIETARY TRIGGERS

Smoking and high alcohol intake are recognized psoriasis triggers, however, dietary factors may also play a role, she said.

The question about whether what patients eat could make their psoriasis worse needs more research, but there are evidence-based suggestions dermatologists can make about certain food types.

“One that has been researched more extensively is the role of gluten,” Dr. Katta says. Psoriasis patients are bound to ask about gluten because gluten’s role is mentioned extensively and high up on Google searches on diet and psoriasis.

“The gist of it is that gluten-containing foods can act as a trigger in a small percentage of patients, but definitely not all,” she said.

Dr. Katta says an important clue about whether to pursue gluten as a trigger is to ask psoriasis patients about gastrointestinal symptoms, such as abdominal pain, diarrhea, or of evidence of certain nutrient deficiencies, including iron deficiency.

“Those are clues that they may have celiac disease,” she said.

Dr. Katta refers those psoriasis patients to gastroenterology for a workup, and she might order a test for antibodies to gluten.

“There was one large study that found there was about a two-fold higher risk of celiac disease in patients with psoriasis,” Dr. Katta says. “There’s not a high risk of celiac disease baseline, so even a two-fold higher risk is not a huge number, but it’s definitely an increased risk and that’s why we take it seriously when psoriasis patients have gastrointestinal symptoms.”

Researchers have also found patients who have antibodies to gliadin in their bloodstream, but do not have celiac disease, fare better on psoriasis treatment when they’re on a gluten-free diet than matched controls.

APPLYING KNOWLEDGE TO PRACTICE

Physicians should ask psoriasis patients about gastrointestinal symptoms. It’s an easy screening tool for better managing those patients, Dr. Katta said.

Physicians who take patients’ height, weight and blood pressure during office visits, should calculate body mass index (BMI) and consider referring patients who are overweight or obese to a nutritionist. Derma-
Dermatologists can tackle the touchy subject with their patients by mentioning their higher risk of comorbidities. They should also mention that there is evidence to suggest that weight loss can improve psoriasis patients’ treatment response, reflected by improved psoriasis area and severity index, or PASI, scores.

Providers can direct patients to the review published July 2014 in the Journal of the American Academy of Dermatology (JAAD) in which authors concluded that a number of studies have shown weight loss may be a preventative and adjunctive therapy for psoriasis or psoriatic arthritis treatment in patients who are overweight or obese.

“Given the vast body of popular literature available to patients, it is important for clinical providers to familiarize themselves with the evidence supporting various dietary plans. By doing so, they will be able to engage their patients and partner with them to maximize the impact of pharmacologic and non-pharmacologic interventions,” the JAAD authors write.

Disclosures: Dr. Katta is author of the book Glow: The Dermatologist’s Guide to a Whole Foods Younger Skin Diet.

REFERENCES

FOODS THAT TRIGGER SKIN FLARES

Diet can affect skin conditions including acne, atopic dermatitis, psoriasis and rosacea. In a review that focuses on these four conditions, plus aging, Rajani Katta, M.D., and Mary Jo Kramer, B.S., writing in Skin Therapy Letter, highlight trigger foods that should be avoided.

ACNE

Clinical trials have established an association between high-glycemic-load diets and acne. One randomized clinical trial showed that after 12 weeks on a low glycemic load diet, patients experienced a significant improvement after 12 weeks. Researchers say that the diet may have lowered androgen bioavailability, altered skin sebum production, decreased skin inflammation and reduced sebaceous gland size.

AGING SKIN

The authors write that a diet high in advanced glycation end products (known as AGEs), which are found in deep-fried foods, can promote the loss of elasticity in skin.

ATOPIC DERMATITIS

The consumption of six common foods are milk, eggs, wheat, soy, seafood, and nuts may trigger a flare within minutes to hours.

PSORIASIS

Gluten-containing foods may act as a trigger for some patients. Gluten-containing foods may trigger flares in some patients, but not all. Celiac disease testing is recommended for psoriasis patients with gastrointestinal symptoms. While estimates vary, one large study found a 2.2 fold higher risk of celiac disease in psoriasis patients. The is little evidence that connects certain food types with psoriasis flares, but one observational study suggested benefits from consuming the Mediterranean diet.

ROSACEA

The evidence is sparse in this area, but surveys of patients suggest that some spices and hot sauce can trigger foods as well as tomatoes (30%), chocolate (23%), and citrus (22%). Alcohol was another frequent trigger, including wine (52%) and hard liquor (42%), as well as hot beverages such as coffee (33%) and tea (30%).
Recommendations for individualized biologic therapy

by John Jesitus | Staff Correspondent

A new study advises selecting biologic therapies for psoriasis based on individual factors such as patients’ comorbidities, preferences and clinical situations, as well as the advantages and disadvantages of particular biologic treatments. The study appears in the February issue of the American Journal of Clinical Dermatology.

Authors led by Jashin J. Wu, M.D., reviewed available evidence to formulate expert-opinion algorithms for comorbidities, such as psoriatic arthritis (PsA), tuberculosis and hepatitis B, as well as psoriasis in children and women of childbearing potential.

Few patients present with psoriasis and no other health issues, said Dr. Wu, of Kaiser Permanente Los Angeles Medical Center. Probably the most common comorbidity dermatologists see, he said, is psoriatic arthritis, which afflicts around one-third of patients with psoriasis. In such cases, Wu et al. recommend the TNF inhibitors adalimumab, etanercept and infliximab, in that order, as first-line options, as all have been shown to inhibit radiographic progression of PsA, as well as other disease signs and symptoms.

“The efficacy of TNF inhibitors for PsA is comparable. However, infliximab is more effective at clearing skin lesions, followed by adalimumab and then etanercept,” they write.

For patients with PsA who do not respond to TNF inhibitors, the authors recommend as second-line -treatment the interleukin (IL)-17 inhibitor class, which includes secukinumab, ixekizumab and brodalimumab (equal-weight recommendations). If IL-17 inhibition fails, the authors recommend the IL-12/23 inhibitor ustekinumab, especially for patients with severe psoriasis and mild arthritis.

**PSORIASIS WITH PSORIATIC ARTHRITIS**

Psoriatic arthritis affects one-third of psoriasis patients. In these cases, Dr. Wu’s prefers TNF inhibitors as first-line options in this order:

FIRST: adalimumab
SECOND: etanercept
THIRD: infliximab

If TNF inhibitors fail in these cases, his second-line treatment includes IL-17 inhibitors:

Secukinumab, Ixekizumab, Brodalimumab

If IL-17s fail, third-line treatments include IL-12/23 inhibitors:

Ustekinumab

**WOMEN WITH PSO**

Approximately one-fourth of patients with psoriasis are females of childbearing potential. For pregnant or nursing women, the authors recommend the following as among possible treatments, but caution these are based on limited data:

- **Certolizumab Pegol.** Approved by the Food and Drug Administration in May, certolizumab pegol is indicated for adults with moderate-to-severe plaque psoriasis. In clinical trials, it was shown to have minimal to no fetal transfer through the placenta or via nursing.

- **Ustekinumab.** With evidence limited to case reports, ustekinumab was found to be relatively safe, with no clear reported safety signals in pregnant women.

**PEDIATRIC PSORIASIS**

“Usually psoriasis presents in the late teens or early 20s. If it does present in childhood, it’s usually mild, and patients do not need systemic therapies,” Dr. Wu said. But for those rare cases when they are needed, the authors recommend the following as among the leading treatment options:

- **Etanercept** (FDA-approved for treating moderate-to-severe plaque psoriasis in children ages 4-17 years)
Ustekinumab (approved for moderate-to-severe plaque psoriasis in children ages 4-17)

Adalimumab

CASES COMPlicated BY INFECTIONS

For patients with psoriasis and latent tuberculosis infection (LTBI), ustekinumab is first-line and IL-17 inhibitors second.

Multiple cases of serious TB infections have been associated with TNF inhibitor use for chronic inflammatory conditions, so TNF inhibitors are third-line. Wu et al. also note that physicians must determine patients’ LTBI status and provide anti-TB prophylaxis for positive patients one to two months before initiating biologic therapy.

For psoriasis cases complicated by inflammatory bowel disease, adalimumab, infliximab and ustekinumab are first-line therapies.

LIMITATIONS TO THE STUDY

The study did not include IL-12/23 inhibitors guselkumab and tildrakizumab. When these recommendations were written, there was little data for guselkumab, which was FDA-approved in July 2017, and tildrakizumab, which is not yet approved. The study authors are planning to update algorithms to incorporate these and other recently approved biologics.

REFERENCE


Women participated. The median age of the psoriasis group was 31 with an average body mass index of 27.39. The control group was statistically similar with an average age of 29 and 24.24, respectively. The median age for women in both groups for their first period was 13.

OVARIAN FUNCTION

To determine ovarian function, investigators took blood samples from both groups during their menstrual cycle’s early follicular phase (days 2-4) to analyze E2, FSH, LH, and thyroid stimulating hormone levels. A gynecologist also used transvaginal ultrasound to assess women’s ovarian volume and to measure total antral follicles sized 2-10mm in diameter.

According to study results, participants with psoriasis had substantially higher FSH levels than the control group (6.76 (1.96); 5.71 (2.24), respectively, p<0.05). Higher FSH levels indicate follicle depletion. Additionally, FSH/LH ratio was higher in psoriasis patients than the control group (1.52 (0.86); 0.92 (0.54), respectively, p<0.05). This ratio also points to a diminishing ovarian reserve. Psoriasis patients’ AFC was also significantly lower than the controls’ (5 (2.5); 7 (4.5), respectively, p<0.05). AFC is known to decline with age.

However, there were no noticeable differences among other hormone levels, ovarian, or uterus volumes.

“Results support diminished ovarian reserve in premenopausal women with psoriasis,” the authors wrote.

Findings did not indicate a significant difference in the incidence of spontaneous abortion between women with psoriasis and the control group. Existing research is also contradictory on the rate of this pregnancy outcome.

The study did have limitations, the authors wrote. Investigations didn’t adequately assess AMH levels. This measurement is a leading clinical ovarian reserve assessment factor. In addition, the patient population didn’t include enough women with severe psoriasis.

Based on study findings, women of reproductive age with psoriasis could benefit from additional medical services surrounding pregnancy, according to the authors.

“Early referral to a reproductive endocrinologist or obstetrician when there is a risk of diminished ovarian reserve can improve pregnancy planning and management, especially before starting systemic treatment for psoriasis,” they wrote.

REFERENCES

Psoriasis is associated with a small reduction of pulmonary function and those with psoriasis are more likely than people without the disease to report shortness of breath, according to a population-based study published in the British Journal of Dermatology.

“Dermatologists are generally well aware that psoriasis is a systemic inflammatory disease with a range of comorbidities, including cardiovascular disease and diabetes. Our results add to evidence that pulmonary disease is part of the deal, and although the magnitude of reduced pulmonary function in patients with psoriasis found in our study was small, it can contribute to shortness of breath in individual patients,” says study author Peter Riis Hansen, M.D., D.M.Sc., Ph.D., of Herlev and Gentofte Hospital, Hellerup, Denmark.

Dermatologists, Dr. Hansen says, play a significant role in screening for psoriasis comorbidities and asking about shortness of breath as a routine part of medical history-taking.

“Our results put pulmonary symptoms a bit more on the clinical radar in patients with psoriasis and they emphasize that smoking cessation remains a fundamental part of psoriasis treatment,” he says.

Until now, there had been only a small study on pulmonary function in psoriasis subjects, which found reduced pulmonary function in psoriasis patients. Other research suggests that smoking is a risk factor for psoriasis. And epidemiological studies have linked psoriasis to increased risk of pulmonary infections, chronic obstructive pulmonary disease (COPD) and asthma.

Dr. Hansen and colleagues studied 20,422 adults older than 20 years of age in the Danish General Suburban Population Study, which included 1,173 people with psoriasis. Participants had pulmonary function tests with handheld spirometers, as well as answered questions about whether they had psoriasis, shortness of breath and pneumonia during the past decade.

At the study’s start, psoriasis patients were more likely than controls to smoke, report shortness of breath.
breath or prior pneumonia. They also had a higher mean body mass index than those without psoriasis. The increased risks of shortness of breath and pneumonia remained significantly higher in the psoriasis group even after adjusting for smoking.

The researchers found forced expiratory volume in the first second in percent of expected values was reduced, at an average 93.2 in the psoriasis group, versus 94.9 in controls. The forced expiratory volume in the first second- forced vital capacity ratio was also lower among psoriasis patients at an average 0.76 versus 0.77. However, force vital capacity was similar in both groups. And after adjusting for smoking, only the average reduction in forced expiratory volume in the first second remained significant in the psoriasis group.

The finding that forced vital capacity was similar in both groups suggests that psoriasis’s predominate pulmonary effect is on airway obstruction. And the finding related to the forced expiratory volume in the first second- forced vital capacity ratio in the psoriasis group is compatible with COPD or asthma and in line with observational studies that have found an increased risk of COPD in psoriasis patients, the authors note.

The authors write they’re tempted to speculate that psoriasis-related inflammatory airway injury and remodeling plays a role in psoriasis’s potential associations with respiratory infections and more.

“Indeed, psoriasis is considered to be an interleukin 23/T helper cell 17-driven disease and similar inflammatory mechanisms have been implicated in the pathogenesis of airway inflammation,” they write.

Dr. Hansen says these findings are an extension of what is known about smoking’s link to psoriasis, as well as psoriasis patients’ increased risks for pulmonary infections, chronic obstructive pulmonary disease and asthma.

“[Our study demonstrates] a small reduction of pulmonary function in psoriasis. Preliminary studies have suggested that subjects with severe psoriasis have increased subclinical airway inflammation and inflammatory pathways may coincide between psoriasis and obstructive lung disease,” he says. “More research is needed to define these mechanisms and their clinical consequences.”

These results indicate that pulmonary disease should be counted among psoriasis comorbidities, and they underscore that psoriasis is a systemic inflammatory disease and not just a skin disorder, Dr. Hansen says.

REFERENCES

“DERMATOLOGISTS ARE GENERALLY WELL AWARE THAT PSORIASIS IS A SYSTEMIC INFLAMMATORY DISEASE WITH A RANGE OF COMORBIDITIES, INCLUDING CARDIOVASCULAR DISEASE AND DIABETES. OUR RESULTS ADD TO EVIDENCE THAT PULMONARY DISEASE IS PART OF THE DEAL, AND ALTHOUGH THE MAGNITUDE OF REDUCED PULMONARY FUNCTION IN PATIENTS WITH PSORIASIS FOUND IN OUR STUDY WAS SMALL, IT CAN CONTRIBUTE TO SHORTNESS OF BREATH IN INDIVIDUAL PATIENTS.”

Peter Riis Hansen, M.D., D.M.Sc., Ph.D.,
Herlev and Gentofte Hospital, Denmark
**In clinical trials: Candidates for psoriasis**

by John Jesitus | Staff Correspondent

New treatment prospects for common and uncommon skin ailments address targets ranging from various forms of interleukin (IL) to eotaxin-1. During this year’s American Academy of Dermatology annual meeting, investigators presented findings from trials for investigational drugs. Here’s an update.

**Ustekinumab** (Stelera, Janssen) is approved for moderate to severe plaque psoriasis, active psoriatic arthritis and moderately to severely active Crohn’s disease. In October 2017, the FDA approved ustekinumab for adolescents with moderate to severe plaque psoriasis who are candidates for phototherapy.

This IL-23 inhibitor improved psoriasis and reduced vascular inflammation in a phase four crossover study, suggesting that inhibiting IL-12/23 in psoriasis may reduce cardiovascular risk. Researchers randomized 21 patients to placebo and 22 patients to ustekinumab. “We found that at week 12, those who got ustekinumab had a 6.6% reduction in aortic vascular inflammation, while the placebo group saw a 12% increase,” said Joel M. Gelfand, M.D., M.S.C.E., of the University of Pennsylvania. Additionally, “We’ve shown that when you clear the skin with a drug that blocks interleukin 12 and 23, you also have significant improvements in aortic inflammation,” to a level on par with a statin.

**Risankizumab** (AbbVie) is an investigational IL-23 inhibitor in development for psoriasis, psoriatic arthritis and other inflammatory diseases. In April, AbbVie submitted a biologics license application to the FDA completing a phase three trial in which risankizumab met all primary endpoints in the trial.

It works by inhibiting IL-23’s p19 subunit, reducing psoriatic inflammation. In two phase three psoriasis trials, patients received 150 mg risankizumab, 45 or 90 mg ustekinumab (weight-based) or placebo at weeks 0, 4, 16, 28 and 40, with placebo crossover to risankizumab at week 16. “Across both trials, all primary and ranked secondary endpoints achieved statistical significance, with p values of <0.001 versus placebo and ustekinumab,” said Marek Honczarenko, M.D., Ph.D., vice president, immunology development, AbbVie. At one year, 82% and 81% of risankizumab-treated patients achieved Psoriasis Area and Severity Index (PASI) 90, versus 44% and 51% of ustekinumab-treated patients.

**Guselkumab** is a monoclonal antibody approved to treat adults with moderate to severe plaque psoriasis. It maintained high efficacy with continuous treatment versus withdrawal in an extension of the VOYAGE 2 phase three trial. At week 28, investigators re-randomized 375 patients who had achieved PASI 90 to receive either continued treatment or withdrawal and possible retreatment upon loss of ≥ 50% of their week 28 improvement. PASI 90 responses among the respective cohorts at week 72 were 86% and 11.5%. Maintenance of PASI 90 after drug withdrawal was associated with continued suppression of IL-17A, IL-17F and IL-22. Among the withdrawal cohort, 87.6% achieved PASI 90 within 6 months of commencing retreatment.

**Bimekizumab** (UCB) is an IL-17A and IL-17F inhibitor under investigation for the treatment for psoriasis. In a phase 2b trial for moderate-to-severe psoriasis, it provided rapid, substantial clinical improvements by neutralizing IL-17A and IL-17F. Investigators randomized 250 patients to receive 64 mg, 160 mg, 160 mg with 320 mg loading dose, 320 mg, 480 mg or placebo, given monthly for 3 months. At week 12, 46.2%-79.1% of bimekizumab-treated patients achieved PASI 90, versus 0% of placebo-treated patients (p<0.0001, all doses).

Disclosures: Dr. Thaçi is an investigator and advisor for Galápagos and Morpheus, developers of MORT06, and is an investigator, advisor and speaker for Sanofi-Regeneron. Dr. Fiorino is an employee and shareholder of Immune Pharmaceuticals Inc., developer of bertilimumab. Dr. Gelfand is a consultant to several companies that market psoriasis treatments, including Janssen, which supported his study via a grant to the University of Pennsylvania. Dr. Honczarenko is an AbbVie employee.

**REFERENCE**