# Classify Melasma and Vitiligo Before Treatment

BY AMY PFEIFFER

SANTA MONICA, CALIF. — The key to treating pigmentary disorders is making an accurate diagnosis using a Wood's lamp and classifying the patient's condition, according to Dr. Anand Ganesan.

"One of the things that is easy to learn but is easily forgotten is how to really prepare your patients when they first walk in the door, and for you to assess how well they are going to respond to the treatments that you are offering," said Dr. Ganesan, who is a professor of dermatology at the University of California, Irvine.

Dr. Ganesan discussed the etiology, diagnosis, and treatment of pigmentary disorders, as well as the triaging of patients with these conditions, at a cosmetic dermatology seminar sponsored by Skin Disease Education Foundation (SDEF).

## Melasma

About 75% of melasma patients are female, and the condition is common in darker-skinned patients, he said. The exact cause of melasma is unknown, but triggers may include sun exposure, family history, phenytoin exposure, oral contraceptives, pregnancy, and increased estrogen.

The Wood's lamp is used to determine the classification of melasma: epidermal, dermal, or mixed. "If you can categorize your patients, you can actually predict very nicely how well they are going to respond to your treatment," he said.

In white and Hispanic patients, melasma appears as a reflected darker image. In patients with skin types V or VI the color will appear a little reddish, but a change can be seen over the pigmented area.

Melasma that has an epidermal component will respond well to almost any treatment. Dermal melasma tends to respond better to laser therapies. Darker-skinned patients will respond best to hydroquinone, while lighter skin responds best to peels and lasers.

Patients with melasma need to use a broad-spectrum sunscreen (UVA and UVB coverage with an SPF of 30 or more) every day, regardless of sun exposure, because fluorescent lighting emits some UVA rays, said Dr. Ganesan.

**'If you can categorize your patients, you can actually predict very nicely how well they are going to respond.'**

DR. GANESAN

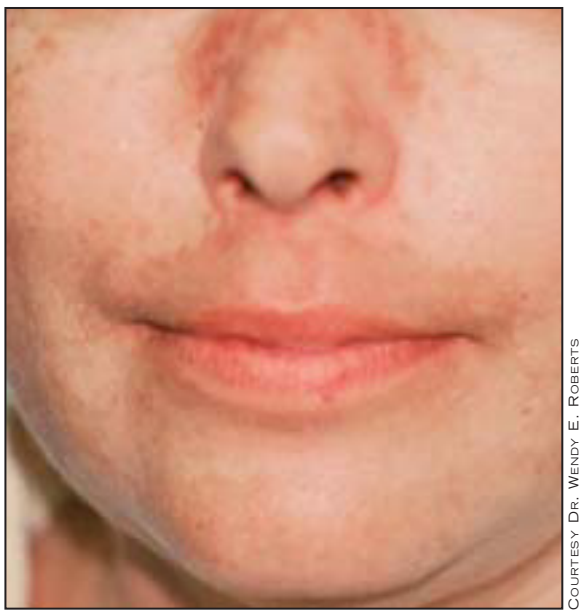
Birth control pills, cosmetic products, and phototoxic drugs should be discontinued if they appear to help cause the melasma.

Combining topical products is more effective than using tretinoin, hydroquinone, or steroids alone, he said, adding that it is important to balance an agent's potential for irritation with its strength because increased inflammation will result in poor clinical outcomes.

For patients who cannot tolerate hydroquinone, there are some less effective alternatives: kojic acid, which can be more irritating than hydroquinone; azelaic acid; mequinol, which has been shown to have some depigmenting activity and is less effective than hydroquinone; arbutin, which is a botanically related compound that can cause depigmentation; and licorice extract, available in Ayurvedic and other commercial preparations.

Chemical peels are not effective as single agents for treating melasma but may be slightly synergistic when used with hydroquinone. Peels are operator dependent, said Dr. Ganesan, so if the clinician has extensive clinical experience with them they may be a treatment option.

Studies suggest that the Q-switched Nd:YAG and ruby lasers, used in conjunction with hydroquinone, may be effective in treating dermal or mixed melasma. Positive results also have been seen with Fraxel lasers.



COURTESY DR. WENDY E. ROBERTS

**Possible melasma triggers include sun exposure, phenytoin exposure, and oral contraceptives.**

## Vitiligo

The underlying factor thought to cause vitiligo is melanocyte susceptibility to destruction.

As with melasma, the diagnosis should be made with a Wood's lamp, which can distinguish vitiligo from other hypopigmenting conditions. Biopsy, along with Fontana-Masson staining, can be helpful to determine if melanocytes are present, Dr. Ganesan said.

There are two types of vitiligo: segmental (unresponsive to light therapy) and generalized (responsive to light therapy). Treatment options include photo therapy, lasers, surgery, and topical solutions. Given the safety and tolerability of narrow-band UVB, it is favored over treatment with PUVA.

A 380-nm excimer laser can be used to treat small surface areas, such as those on the face, but is less effective on the hands. An excimer laser should be used aggressively with dose escalation for best treatment results, Dr. Ganesan said. Because aggressive dosing regimens can lead to increased burning, it is best for treating localized areas and for patients who seek rapid improvement.

Although the excimer laser should be avoided when treating underarms, the device works well on the eyelids, he continued. It produces less response on the hands and feet but is an option if narrow-band UVB has failed.

Surgical options for treating vitiligo include punch grafting and suction blister grafting. Punch grafting has been found very effective for treating nonactive segmental lesions. A side effect of punch grafting is cobblestoning, which can diminish over time.

Dr. Ganesan disclosed having no conflicts related to his presentation.

SDEF and this news organization are both owned by Elsevier. ■

# Lasers, Intense Pulsed Light Ease Pigmentation Disorders

BY AMY PFEIFFER

SANTA MONICA, CALIF. — The ideal device for treating pigmentation disorders would reduce wrinkles, pigment, and redness in one pass with a low amount of pain and give patients a fast, easy recovery, according to Dr. E. Victor Ross.

"There's no device that does all those things, but the devices that actually selectively target blood and melanin are possibly the closest thing to it," Dr. Ross said at a cosmetic dermatology seminar sponsored by Skin Disease Education Foundation (SDEF).

Dr. Ross of the Scripps Clinic in San Diego discussed the pros and cons of using intense pulsed light (IPL) devices, pulsed dye lasers (PDL), and potassium-titanyl-phosphate (KTP) lasers for treating pigmentation disorders.

Both pigmentation and vascular disorders can be treated in one pass using IPL therapy and KTP lasers, he said. The PDL was the first "boutique laser" to treat vascular lesions, he noted. Next came the KTP laser to treat isolated vessels. When IPL treatment entered the scene, it displaced the other devices because of its versatility, but all three approaches have a role in treating blood and pigment lesions. "My favorite on a daily basis is the KTP laser," he acknowledged.

**My favorite laser on a daily basis for treating pigmentation disorders is the KTP.**

DR. ROSS

PDL treatment is fast, and if a patient doesn't mind the resulting purpura, the PDL is probably the best device for improvement of redness in a single treatment, said Dr. Ross.

The PDL remains the standard for treating port wine stains. Nevertheless, it is not possible to reduce both red and brown facial lesions with this laser, and it cannot, in one pass, treat both blood and pigment lesions.

KTP lasers can treat both small and large spots. The spot-size reduction allows for safer treatment of darker-skinned (skin types IV and V) patients with telangiectasias. In addition, the device has a good vascular-to-pigment damage ratio. When a 1- to 5-mm spot size is used, vessel reduction can be seen in real time.

"It is nice to see a blood vessel disappear as you see it, which you can't do with the IPL," said Dr. Ross. "It's just fun to do." The handpiece is also light and easy to use.

KTP therapy has higher costs, however, and tends to cause more pain than IPL treatment. After KTP treatment, edema can be severe, and overtreatment can cause pitting.

IPL therapy is raising the bar for treating pigmentation. Filtration is better with an IPL device, lamp pumping is smoother, cooling has been added to the device, and the radio frequency has been improved. Most importantly, it is safe, he said.

One of IPL's drawbacks is that the divergence of the beam means the handpiece must be held close to the skin, which may compress vessels. Also, the nonlaser properties of IPL make it difficult to focus on small spots, so it can be challenging to use on discrete lesions. Finally, with large spot treatment capability comes the potential for big side effects, Dr. Ross noted.

He disclosed being a consultant for, and receiving research grants from, Palomar. Dr. Ross also has received research support from Cutera Inc., Lumenis, Candela Corp., Ulthera Inc., and Sciton Inc.

SDEF and this news organization are both owned by Elsevier. ■