HAIR REMOVAL

With the right patient and the right device, you can achieve phenomenal results with hair removal. However, there is a difference between permanent hair removal and hair management, and patients must understand this. With the right laser, and the right choice of hair, permanent hair removal is possible. High-powered lasers can achieve permanent hair removal in six or seven treatments, while hair management lasers may never achieve permanent removal or require 20 or more treatments. A $10,000 to $20,000 low-powered device won't deliver the same results as an $80,000 or $100,000 high-powered device.

For permanent hair removal, you need to target not just pigment, but also hemoglobin. You need to destroy not only the hair shaft, but the entire hair follicle and stem cells. That's achieved by manipulating pulse durations and wavelengths.

"When treating hair, the more pigment you have in a hair shaft, the more light is absorbed, the more heat generated, the more destruction of the hair follicle," explains Dr. Battle. "So, the optimal hair is a black coarse hair. As you start moving from that, either in diameter or in color, the results get worse."

What's the optimal wavelength for hair removal? According to Dr. Battle, shorter wavelengths — 694 nm ruby laser, 755 nm alexandrite laser, 800 nm diode laser — are best for skin types I, II or III, and the best choice is to treat fine hair and light-colored hair because they're readily absorbed by pigment. The 800 nm diode laser and 1064 nm Nd:YAG laser are less absorbed by pigment, so those are safer for skin types IV through VI.

The 800 nm diode laser can be used for most skin types. The diode can be used with short pulse durations to treat the thin hair and lighter hair common to Caucasians.

"Using longer pulse durations and lower energy, you can treat up to skin type V safely. With adjunct cooling you can do darker," says Dr. Battle. "To safely treat skin type VI on a consistent basis, use an Nd:YAG laser, which has a longer wavelength that is not readily absorbed by pigment, which allows for shorter pulse durations of higher energy."

With hair removal, the faster you can overwhelm the hair with energy, the more effective the hair removal. "With every hair removal laser, if you can see peri-follicular erythema and edema, you know you will get good results," explains Dr. Battle. "If the hair follicle is swollen and red, you will get the results you're looking for."

A pulse duration of 30 ms and shorter with higher wattage is probably the most effective way to treat hair. But long pulse durations with lower power provides skin protection. Keep in mind that you must adjust the laser for each individual patient.

Dr. Battle cautions that when working with tanned individuals, you must remember that a tan can vary significantly over the surface of the skin, so be prepared to adjust the laser as treatment moves over various body surfaces.

In addition to the greater amount of pigment, dark-skinned people often have multiple ethnic backgrounds, which makes treating with lasers more difficult since there may be a strong genetic factor with melanin.

"Mixed race individuals also often have a wide variety of hair types, so you must adjust your laser parameters for the hair as well as for the skin as you treat veins. Treatment of darker-skinned individuals should be limited to sclerotherapy.

TREATING VEINS

Vascular laser technology has improved dramatically, moving from the small veins of the face to the larger, deeper veins of legs. Many vascular conditions can be treated, including birthmarks, telangiectasias, hemangiomas and rosacea.

"Veins have traditionally been treated using a microsecond pulse, which creates a mechanical injury," says Dr. Battle. "New lasers use a longer millisecond pulse, which creates a thermal injury. The older method produced vessel rupture, resulting in significant purpura. The new lasers vaporize the structure, reducing purpura."

According to Dr. Battle, the gold standard for treating veins has been the 585 nm pulsed dye laser in microsecond pulse durations. The results are remarkable, Dr. Battle says, but many patients do not like the heavy purpura, which lasts for weeks. Hemangiomas of the mucosal surfaces can also be treated.

Virtually any laser or light source that targets hemoglobin can be used to treat vascular conditions. Because of the wavelength of Nd:YAG, it penetrates deeper into the skin, making it ideal for treating leg veins. However, blistering is a common side effect, although there's no sure way to determine when it might occur.

Because they tend to be deeper, adult port wine stains respond better to longer pulse devices. Spider veins can be effectively treated with either a pulsed dye or a KTP laser. Intense pulsed light (IPL) works best for treating telangiectasias and facial rosacea.

Dr. Battle cautions, however, that because of the high fluences needed to treat veins, treatment of darker-skinned individuals should be limited to sclerotherapy.
HAIR REMOVAL

continue from page 57

move over the body,” says Dr. Battle. “Dark-skinned individuals have more medical problems with hair, including hypertrichosis and hirsutism. Most get ingrown hair and beard bumps, because of a shape of a hair follicle.”

People of color often have delayed side effects to laser, often as much as 2 to 3 days. Thus, test spots may be unreliable as an immediate indicator of safety. You may want to test a patient, then have them return several days later for actual treatment.

Cooling is extremely important and the darker someone is, the more important cooling becomes. There are four options for cooling: pre-cooling prior to pulsing, parallel cooling during the pulsing, post cooling afterward, and bulk cooling by cooling the skin with ice for several minutes before starting treatment.

“There are many effective cooling agents: ice, a cooled gel layer, a cooled glass chamber or sapphire window, a pulsed cryogen spray or cooled airflow,” explains Dr. Battle. “A few machines use a sapphire window and do parallel cooling of the skin during treatment.” An effective adjunct cooling system is a German device called a Zimmer CRYO 5 that blows air chilled to -30°C.

Cooling has no impact on the effectiveness of the laser, but can dramatically decrease side effects.

A primary side effect of laser hair removal is hypopigmentation, which can take up to 2 to 3 years to resolve. It is a problem primarily in darker skinned individuals, but can be a real problem with heavily tanned Caucasians. Caution patients about this risk.

Dr. Battle recommends that the patient stop plucking, so that the hair bulb remains in the skin to maximize treatment.

SKIN REJUVENATION

Skin rejuvenation is either complexion blending using a laser that targets pigment and hemoglobin, or collagen remodeling to eliminate fine wrinkles and acne scars, using a light source to stimulate fibroblasts to create more collagen.

“Despite manufacturers’ claims, there are not really any lasers that do both,” says Dr. Battle. “For the lasers that do complexion blending, we can target hemoglobin in pigment, so we can very nicely blend complexion and cause a face that’s full of dark spots and blood vessels to improve. We can treat sun damage, photaging, pigmentation and rosacea very well.”

Because pigment absorbs energy at multiple wavelengths, a number of devices can be used for complexion blending, including diode, KTP and pulsed dye lasers and IPL devices. You must rely on experience with various patient skin types to select the best device for a particular patient or application. IPL devices can treat a broader range of pigmented lesions on a safer platform, but because of the lower energy levels, it can take a lot longer to achieve results, perhaps up to 6 months. For more immediate effects, Dr. Battle recommends the shorter wavelengths of the pulsed dye lasers and the Q-Switch Nd:YAG lasers.

SKIN RESURFACING

Though we are getting excellent results with CO2 and Erbium resurfacing, we are doing less of this because patients do not want the 2- to 4-week downtime or the scabbing that is associated with this procedure. If you’re going to perform skin resurfacing with these devices, it’s important that you select patients well. Be sure that you set the right expectations and explain the scabbing and downtime so that the patient is fully aware of what will happen after the procedure is performed.

TREATMENT OF SCARS

According to Dr. Battle, vascular lasers have been used for a while to lighten red scars. Now, UVA and UVB lasers are available to darken leukoderma, a light spot, such as a stretch mark, skin grafts or scars. Patients can get immediate darkening with UVA and a more long-term darkening with UVB. Treatments are once a week for 10 treatments and then once every 2 months for maintenance.
**BRIEF SUMMARY OF PRESCRIBING INFORMATION**

**Brevoxyl-4 Creamy Wash**  
(benzoyl peroxide 4%)

**Brevoxyl-8 Creamy Wash**  
(benzoyl peroxide 8%)

**ACNE WASH FOR TOPICAL USE**

Rx only **Rx only**

**INDICATIONS AND USAGE**

Brevoxyl-4 Creamy Wash and Brevoxyl-8 Creamy Wash are indicated for use in the topical treatment of mild to moderate acne vulgaris. Brevoxyl-4 Creamy Wash and Brevoxyl-8 Creamy Wash may be used as an adjunct in acne treatment regimens including antibiotics, retinoic acid products, and sulfur/salicylic acid containing preparations.

**CONTRAINDICATIONS**

Brevoxyl-4 Creamy Wash and Brevoxyl-8 Creamy Wash should not be used in patients who have shown hypersensitivity to benzoyl peroxide or to any of the other ingredients in the product.

**PRECAUTIONS**

General — For external use only. Avoid contact with eyes and mucous membranes.

Avoid contact with hair, fabrics or carpeting as benzoyl peroxide will cause bleaching.

Carcinogenesis, Mutagenesis, Impairment of Fertility — Based upon all available evidence, benzoyl peroxide is not considered to be a carcinogen. However, data from studies using mice known to be highly susceptible to cancer suggest that benzoyl peroxide acts as a tumor promoter. The clinical significance of the findings is not known.

Pregnancy: Category C — Animal reproduction studies have not been conducted with benzoyl peroxide. It is also not known whether benzoyl peroxide can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Benzoyl peroxide should be used by a pregnant woman only if clearly needed.

Nursing Mothers — It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when benzoyl peroxide is administered to a nursing woman.

**ADVERSE REACTIONS**

Contact sensitization reactions are associated with the use of topical benzoyl peroxide products and may be expected to occur in 10 to 25 of 100 patients. The most frequent adverse reactions associated with benzoyl peroxide use are excessive erythema and peeling which may be expected to occur in 5 of 100 patients. Excessive erythema and peeling most frequently appear during the initial phase of drug use and may normally be controlled by reducing frequency of use.

**HOW SUPPLIED**

Brevoxyl-4 Creamy Wash is supplied in 170.1 g (6.0 oz) tubes NDC 0145-2474-06.

Brevoxyl-8 Creamy Wash is supplied in 170.1 g (6.0 oz) tubes NDC 0145-2484-06.

Store at controlled room temperature, 15°-30°C (59°-86°F).

Stiefel Laboratories, Inc.
Coral Gabies, Fl 33134 896551 Rev. 0502

---

**TREATING PIGMENTED LESIONS**

Dr. Battle says that it's possible to do some wonderful things on pigmented spots using IPL, pulsed dye, or a Q-Switched diode laser. IPL works best for lentigines, pulsed dye for birthmarks. Pachyderma, which we really had no great treatment for before, responds well to most of the vascular lasers.

**TATTOO REMOVAL**

According to Dr. Battle, tattoo removal is actually more difficult today because inks have gotten to be much more sophisticated. While black tattoos and basic colors, can often be removed almost completely, newer ink colors and metallic and fluorescent inks are very difficult to treat.

**MANAGING PATIENT EXPECTATIONS**

The hardest thing with lasers and with cosmetic therapy in general may be adjusting patient expectations. A patient's response to a particular treatment regime will improve if you effectively manage the patient's expectations.

"Laser treatment can be used to gradually improve appearance, but it will not take back 30 years of life," warns Dr. Battle. "Make sure that patients know the limitations, treatment regimes, side effects and recovery times that they can expect!!"