



LESLY DAVIDSON, MD's FORUM

Electrolysis successful where laser hair removal fails

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- ◆ Direct comparison of lasers and electrolysis difficult due to price variations based on body area and hair type being treated
- ◆ Electrolysis useful in treating areas that are inappropriate for lasers
- ◆ Potential adverse events with electrolysis are generally similar to those with lasers

Mount Pleasant, S.C. — Electrolysis provides a safe, permanent alternative for patients who don't want or are not appropriate for laser treatments.

"Lasers have gotten very popular, but they don't fulfill all a dermatologist's needs for hair removal. When lasers came along, many dermatologists didn't understand that they can't do everything that electrolysis does," says Lesly Davidson, M.D., a dermatologist in private practice in Mount Pleasant, S.C.

Electrolysis, which uses current passed through a needle inserted down the hair follicle, has existed since the late 1800s, Dr. Davidson says. And it's the only method approved by the Food and Drug Administration (FDA) for permanent hair removal. In contrast, she says that FDA-approved lasers are approved for permanent hair reduction only.

Because lasers work by destroying pigment, Dr. Davidson says, "Lasers are great for removing dark hair on white skin, but they're not great for removing other colors of hair — particularly white or vellus hair."

Electrolysis works on these hairs because its mechanism of action has nothing to do with pigment, she says. However, it's more time-consuming than lasers because it must be done hair by hair.

No direct comparison

Establishing direct comparisons between laser treatments and electrolysis is difficult because prices in both arenas vary depending on factors such as the body area being treated and how much and what kind of hair is present, Dr. Davidson says.

"The average electrolysis treatment costs between \$35 and \$52 for a half-hour," she says.

In one case, treating an average patient's bikini line required about 20 treatments (averaging 24 minutes each) over two years.

"The total cost was \$601," Dr. Davidson says.

In contrast, Dr. Davidson says dermatologists typically charge in the neighborhood of \$300 to \$500 per laser treatment session.

"According to the American Society of Plastic Surgeons, the average price of a laser treatment is \$429," she says.

A typical bikini line treatment requires three to six sessions. At a rate of \$500 per treatment, "That's up to five times as expensive as electrolysis. But it's a lot more convenient," although patients also will require ongoing maintenance laser treatments to keep the hair away, she says.

"It's not that one treatment is better than the other. Each has advantages in different situations," Dr. Davidson says. If a patient is concerned about predominantly white facial hair, "Laser is not going to treat that at all," she says.

If an African-American patient with very dark skin wants to remove dark hairs, "You can't do a treatment that's going to be effective in that scenario" because patients would experience burning, Dr. Davidson says.

Additionally, many physicians will not treat certain body locations such as the eyebrows and between the eyes with lasers. "There have been many reports of eye damage caused by lasers in these areas," Dr. Davidson says. "In fact, the French Society of Dermatology recommends not ablating

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eyebrows with lasers (Le Jeune M, Autié M, Monnet D, Brézin AP. *Eur J Dermatol.* 2007;17(6):553-554. Epub 2007 Oct 19)."

Hand-in-hand

Electrolysis can work hand-in-hand with laser treatments to treat areas inappropriate for lasers. It's part of the American Electrology Association's (AEA) mission to remind dermatologists that in such cases, "There's probably an electrologist in your town who would be more than happy to fill the gap," Dr. Davidson says.

Somewhat similarly, she says, when treating the face with a laser, "In any area that is strongly affected by androgens, we have seen many cases of paradoxical hypertrichosis." This consists of thick, dark hairs growing in the lateral face or sideburn area and neck.

"That can be very frustrating — a patient is trying to remove hair, and they start getting more hair. This is another area where electrolysis is a better way to go," Dr. Davidson says.

However, "The problem is that for doctors to know a lot about electrolysis, they have to get to know an electrologist or learn about the AEA because electrolysis is not a medical specialty — it's an age-old beauty specialty, for lack of a better term," Dr. Davidson says. "Even though many states license electrologists, there's not a lot of research in the literature because electrologists don't write scientific papers."

Moreover, the few scientific publications that mention electrolysis position it as a competitor in studies designed to cast favorable light on a new laser, Dr. Davidson says.

"Since there's nothing else in the medical literature about electrolysis, that's the only place where doctors are getting information" about the procedure, she says.

"Perhaps it's hard for people who have lasers to be as aware that sometimes they need to use something else," Dr. Davidson says.

Dermatologists need electrolysis to remain a viable treatment option, however, because patients who can't undergo laser hair removal treatments will struggle without it, she says.

"It would be a shame to lose it," she says. For the foreseeable future, "We're always going to need electrolysis to do the things that laser can't."

Dr. Davidson says that in her practice, she does not provide any laser treatments and refers many patients each week to local electrologists (she also refers appropriate patients to laser treatment providers).

"Whenever excess hair growth comes up, I usually talk about the pros and cons of either option," she says.

Adverse events

Potential adverse events (AEs) associated with electrolysis are generally similar to laser AEs, Dr. Davidson says. The most common ones include redness and swelling, which last up to a few hours, in the treated area.

"Some people consider electrolysis painful," she says. "That's certainly true of lasers, too. There are ways to get around that," such as using topical anesthetics.

Electrolysis also can cause temporary hyperpigmentation, and occasionally bruising or small areas of crusting, Dr. Davidson says. "Scarring is extremely rare. It has been reported when electrolysis is not done correctly."

Disclosures: Dr. Davidson is a volunteer for the AEA.

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