

## Stain remover

### Laser surgery painlessly lightens abnormal pigmentation

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Dressed in a pink seersucker sundress, wisps of blond hair sticking up in pink barrettes atop her head, Nicole Misterek looks like she's headed for a birthday party rather than an operating room.

In the arms of her Grandma Stacy, Nicole waits quietly until nurse Diane Klenk comes to get her. She's been through this 10 times before, but she still gets teary when Klenk gently takes her from Grandma and brings her beyond the double doors.

Just 15 minutes later, Nicole is sitting on a recovery room gurney, smiling and alert, ready for some cookies. "Did it hurt?" asks Beata Misterek as she hugs her 3½-year-old daughter. The blond pigtails bounce as Nicole shakes her head. No. It didn't hurt.

"It's only when she goes away from us that she cries," Misterek says. "The separation is the only hard part."

Actually, the hard part - at least from a technical standpoint - is handled by Dr. David Goldberg, co-director of the Vascular Malformation Clinic at Hackensack University Medical Center.

He and his associates at Skin Laser & Surgery Specialists of NY/NJ treat about 1,000 patients like Nicole every year, kids who have strawberry-red birthmarks or "stork bites" on their faces and necks. This abnormal pigmentation is known as a port-wine stain or PWS.

To lighten the stain, physicians use quick, precise laser treatments while kids are under general anesthesia. It's simple physics: A PWS is made up of small blood vessels. The red blood cells in those vessels absorb light from the laser beam, becoming so hot that they damage the vessel walls around them. The body's reaction to that injury is to shrink or break up the blood vessels, reducing the red color.

Multiple treatments are necessary because many layers of blood vessels must be targeted, and sometimes it takes more than one treatment to shrink a particular vessel sufficiently. Even then, laser surgeons can't guarantee that the mark will disappear completely, but usually they can lighten it by at least 75 percent.

"Hello, Gorgeous!" Goldberg calls out to Nicole in the recovery room. She grins at him.

Goldberg points out purplish dots on Nicole's left cheek and neck, bruise-like results of the blood vessel damage that will disappear in about a week. A bunch of glittery "tattoos" sparkle on her other cheek, souvenirs of a carnival she attended the day before. Like the temporary tattoos, the purple dots are painless.

In another few weeks, she'll come back for her 12th treatment. She may need as many as 20 before Goldberg is satisfied that the mark - which covers much of the left side of her head and neck - is as light as possible.

"I'm very optimistic," says Misterek, who lives in Hillsdale. She and her husband, Jerry, don't enjoy putting Nicole through this, but they know their daughter will someday thank them.

"I love her as she is, but children can be cruel," she explains. "In the park, older children were laughing at her, and parents would ask me if she got burned. I'm doing this for her own good."

When Laura Butrico was born 23 years ago, her parents couldn't help her avoid the schoolyard taunts about the red stain that covers 60 percent of her face.

Laser treatment wasn't available till Butrico was 12, and by that time the affected blood vessels had become too large for the laser beams to shrink them effectively. The South Plainfield family traveled to Children's Hospital in Philadelphia anyway, because Laura wanted to give it a try.

"It was really hard in school, and that's why I went through the laser," Butrico recalls. It didn't help much. Today, strangers at the supermarket where she works frequently make comments.

"Customers can be very rude," says her mother, Sue. "Some will say 'You look like you're wearing a mask,' or 'What happened to your face?' And she'll say, 'Excuse me, I can hear.'"

Butrico's PWS stems from a more serious disorder, Sturge-Weber Syndrome, an excess of blood vessels on the skin, eye, and brain that can cause seizures, glaucoma, and



Port-wine stains on Nicole Masterek's face and neck are being lightened by repeated laser surgeries performed by Dr. David Goldberg at Hackensack University Medical Center.



developmental delays. Babies born with port-wine stains are tested for Sturge-Weber and for another disorder, Klippel-Trenaunay Syndrome.

Kaelin Ball, a 17-year-old honors student at Randolph High School, still receives laser treatments for a stubborn, heart-shaped PWS related to Sturge-Weber. When Kaelin was 3 months old, her mother, Karen, started the Sturge-Weber Foundation to provide education, family support, and funding for research into causes and cures.

Since Ball got a toll-free number - (800) 627-5482 - and put up a Web site (sturge-weber.com), she's gotten inquiries from 40 to 50 families every month; the two latest were from Zaire and Uzbekistan. Ball raises money and awareness through spring Week of Awareness fund-raisers held nationally, such as an April Restaurant Day in Basking Ridge.

In the meantime, technological advances have made laser treatment more effective and available to infants, who benefit most.

"Fifteen years ago, we used an argon laser," says Goldberg. "But the 'zap,' or pulse duration, was so long it overheated the skin and led to scarring."

Now, laser surgeons use pulsed-dye lasers, whose light is more selectively absorbed and penetrates deeper into the stain. "The zap is short enough so there's no excess heat and we can treat children from 2 weeks and up." Goldberg recommends that parents ask if their surgeon uses the newest V-beam or V-star machines.

"We still don't get everybody clear," he says. "Some marks are more purple and don't respond as well. And for people who are darker complected, the current laser treatment can't penetrate."

One day, doctors may be able to inject a

substance into the bloodstream to make stubborn birthmarks better absorb the light of the laser. And a new generation of lasers will be able to penetrate the pigmentation in darker skin.

"It's a very exciting arena, and we're changing the lives of children," says Goldberg.

That's why Sherri and Joseph Moleti of Washington Township are here in the Hackensack recovery room with their 3-year-old, Vincent, who got his 17th treatment just after Nicole.

"He doesn't want to go [to the hospital]," says Sherri Moleti. Her pajama-clad son is telling the nurses about his hot tub at home, unbothered by the purple dots that form a circle on his left cheek. "But we explain that we go to the doctor to make his face better. This way, he won't have other children making fun of him when he's older." ■