

# How early can laser treatment for port-wine stains in infants be initiated?

BY DOUG BRUNK

FROM ASLMS 2021

**TREATING PORT-WINE BIRTHMARKS** with pulsed-dye laser (PDL) can be safely done within the first few days after birth as an in-office procedure without any complications, results from a single-center study showed.

“The current modality of choice for the treatment of port-wine birth-

marks is pulsed-dye laser,” Chelsea Grimes Fidai, MD, said during the annual conference of the American Society for Laser Medicine and Surgery. “When performed by a highly trained expert at efficient frequencies, PDL is a safe, effective treatment that is successful in the majority of patients. We know that earlier treatment yields maximal clearance. However, just how early can you initiate treatment?”

To find out, Dr. Fidai, Roy G. Geronemus, MD, and colleagues at the Laser and Skin Surgery Center of New York, conducted a retrospective chart review of 39 infants with port-wine birthmarks who were treated with a 595-nm PDL between 2015 and 2020 at the center. Of the 39 infants, the average age at first treatment was 18 days, with a range from 5 to 29 days. The youngest patient was born prematurely at 35

weeks’ gestation and presented for his first treatment even before his expected due date. Most (74%) had facial lesions with the remaining distributed on the trunk or extremities. The average number of treatments was 15 over the course of 15 months.

The initial settings chosen for facial lesions were a 10-mm spot size, a fluence of 8.0 J/cm<sup>2</sup>, and a

Continued on following page ▶

◀ Continued from previous page

1.5-millisecond pulse duration. For body lesions, the typical initial settings were a 12-mm spot size, a fluence of 6.7 J/cm<sup>2</sup>, and 1.5-millisecond pulse duration. Corneal eye shields were placed for all cases with port-wine birthmarks approaching the eyelid. “We do recommend a treatment interval of every 2-3 weeks, with longer intervals for patients of darker skin type until the child is 2 years old, at which time the

interval is increased to every 3-6 months,” said Dr. Fidai.

Patients in the study experienced the expected short-term side effects of erythema, edema, purpura, and mild transient postinflammatory hyperpigmentation, but there were no cases of atrophy, scarring, infection, or permanent pigmentary change.

“Families seeking early treatment of port-wine birthmarks can be reassured that it can be safely initiated within the first few days after birth,” Dr. Fidai concluded. “This procedure can be quickly and confidently performed as an in-office procedure without any complications. The early intervention allows for treatment without general anesthesia, and it maximizes the chance of significant clearance as early in life as possible.”

During a question-and-answer session, the abstract section chair, Albert Wolkerstorfer, MD, PhD, expressed concern about the effect of PDL on developing infants. “We do repeated treatments at this young age without any type of anesthesia,” said Dr. Wolkerstorfer, a dermatologist at the Netherlands Institute for Pigment Disorders, department of der-

matology, University of Amsterdam.

“Will that influence the development of the child, especially when I hear there might be 15 or 20 treatments done within the first year of life? I think this is a problem where we need to ask the experts in the field of pain management in children, like pediatric anesthesiologists, to find the right way, because I think that the results that you showed are fantastic. I don’t think we can achieve that at a later age, although there’s no direct comparison at this moment.”

Dr. Fidai said that she understood the concern, but pointed to a 2020 article by Dr. Geronemus and colleagues that assessed treatment tolerance and parental perspective of outpatient PDL treatment for port-wine birthmarks without general anesthesia in infants and toddlers (J Am Acad Dermatol. 2020 Sep 30;S0190-9622[20]32652-9. doi: 10.1016/j.jaad.2020.09.056). “The kids recover pretty quickly after the treatment,” she said. “There has never been any longstanding issue from the parents’ perspective.”

Dr. Fidai reported having no financial disclosures. Dr. Geronemus disclosed having financial conflicts with numerous device and pharmaceutical companies. Dr. Wolkerstorfer disclosed that he has received consulting fees from Lumenis and InCyte and equipment from Humeca and PerfAction Technologies. He has also received grant funding from Novartis and InCyte, and he is a member of InCyte’s advisory board.

dbrunk@mdedge.com



A facial port wine stain in an infant is shown.

Courtesy RegionalDerm.com