Great Caution Urged in Lasering Infantile Hemangiomas

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MAUI, HAWAII — A conservative and highly selective approach to pulsed dye laser therapy is appropriate for treating infantile hemangiomas, Dr. Ilona J. Frieden said at the annual Hawaii Dermatology seminar sponsored by Skin Disease Education Foundation.

Pulsed dye laser (PDL) therapy of infantile hemangiomas isn’t nearly as well established as it is for port-wine stains. (See related story, page 42.)

It has become clear that PDL success with port-wine stains in infants can’t be generalized to infantile hemangiomas, she continued.

Infantile hemangiomas are much more complicated lesions than port-wine stains,” cautioned Dr. Frieden, professor of clinical dermatology at the University of California, San Francisco.

Superficial appearing infantile hemangiomas can run much deeper than is evident upon physical examination. The characteristic growth patterns of hemangiomas of infancy are less predictable than those of port-wine stains, and the lesions feature a very fragile epidermal layer that’s prone to ulceration.

“I think there’s growing recognition that the clinical history of an infant who has episodes of bleeding due to laser therapy is definitely greater than with port-wine stains,” she continued.

Dr. Frieden was coauthor of a report detailing such complications in a dozen patients following PDL treatment of superficial infantile hemangiomas. All had undergone involution. The children experienced severe ulceration with scarring, pain, and in one case life-threatening hemorrhage. The other four had permanent atrophic scarring with no ulceration (Lasers Surg. Med. 2006;38:116-23).

Other downsides of PDL for infantile hemangiomas include near-universal expense and the potential that the therapy will delay the use of more effective therapies, such as corticosteroids or propranolol.

The literature on PDL for infantile hemangiomas is best assessed with an especially critical eye, according to Dr. Frieden. Uncontrolled case series by laser enthusiasts are the norm.

There has been only a single properly randomized controlled trial of PDL treatment of infantile hemangiomas. In this 121-patient study, dermatologists at Birmingham (England) Children’s Hospital found the rate of cleared lesions or minimal residual signs at age 1 year was 42% in the PDL group and 44% in observation only controls. Moreover, both skin atrophy and hypopigmentation were at least threefold more common in the PDL treated group (Lancet 2002;360:521-7).

Consensus exists among pediatric dermatologists that a reasonable use of PDL in infantile hemangiomas is to mop up residual telangiectasias once a lesion has undergone involution. Beyond that limited application, however, all is controversy. Dr. Frieden believes laser therapy isn’t appropriate for lesions in the early proliferative phase because of limited efficacy coupled with the potential for serious complications.

And while PDL therapy for infantile hemangiomas that undergo ulceration has its advocates, she considers it merely a third-line treatment, behind local wound care — the first-line therapy — and corticosteroids.

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