Reconsider Sclerotherapy to Treat Facial Veins

BY PATRICE WENDLING
Chicago Bureau

CHICAGO — Dermatologists shouldn't shy away from sclerotherapy to treat facial and even periocular veins, David Green, M.D., reported at the American Academy of Dermatology's Academy 2005 meeting.

Although sclerotherapy is widely used to remove varicose and telangiectatic veins on the lower extremities, it is underutilized at other sites, such as the face, hands, chest, and feet, he said.

Physicians are particularly reluctant to remove periocular veins.

"Everyone seems to have this universal caveat: 'Don't treat them because there's a risk it may cause blindness or stroke,' " he said, "but there are no reports of anyone ever having such an adverse event."

Physicians are particularly reluctant to remove periocular veins for fear doing so might cause blindness or stroke, but there are no reports of such an adverse event.

More to the point, such complications are unlikely because the periocular veins treated by sclerotherapy do not directly communicate with the orbital and cerebral venous systems, said Dr. Green, who is in private practice in Bethesda, Md.

Preseptal veins of the eyelid drain into the superficial temporal vein or the anterior facial vein, which themselves drain into the external jugular vein and the internal jugular vein, respectively.

Postseptal veins more directly join the orbital veins, but these are not visible on the eyelid and, as such, are never treated by sclerotherapy.

For sclerosant to drain into the superior ophthalmic vein, the flow would have to be toward the top of the head from the angular vein. This is hemodynamically unlikely because a liquid tends to follow the course of least resistance. Sclerosant travels in an antegrade direction into progressively larger veins.

Even if some sclerosant entered the superior ophthalmic vein, it would be rapidly diluted, making it increasingly harmless to the endothelial and mural layers, he said. As a precaution, Dr. Green injects laterally away from the angular vein and applies pressure just above the angular vein during the infusion.

Injections should never be made into the angular vein, he said.

Injections also are made under low pressure to minimize the risk of retrograde flow into smaller diameter veins and to prolong the duration of contact between the sclerosant and the mural layers of the targeted veins.

A concentration of 0.5%-1% sodium tetradecyl sulfate is used for facial veins, compared with a 0.25% solution usually required for lower-extremity veins of comparable diameter. The volume infused is 1-6 mL, depending upon the length of the veins and number of tributaries present.

"It's counterintuitive based upon gravitational hydrostatic pressures and vein wall diameters, but if we infuse the same concentration on facial veins as we use on the lower extremities, full mural denaturation is apparently not achieved and the veins persist," he explained.

Hypertonic saline should not be used for periocular sclerotherapy because it is quite painful and causes significant muscle cramping because of its high sodium concentration.

Complications such as linear hyperpigmentation and capillary telangiectatic matting—which occur in about 30% and 16%, respectively, of lower-extremity sclerotherapy cases—are rare after treating periocular veins.

Although capillary telangiectasias on the nose or face respond well to a variety of lasers, venous telangiectasias in these areas are more effectively treated with sclerotherapy. The amount of light from a laser needed to heat the volume of blood in a venous telangiectasia and achieve full mural denaturation may be high enough to burn the skin, Dr. Green noted.

Unlike lower-extremity sclerotherapy, posttreatment compression is not necessary in the periocular area.

If a vein is visually gone at 6 months, it can be safely assumed that it has been permanently ablated and will not reappear, he said. ■