

Low-Level Energy Therapy Aids Wound Care

BY KERRI WACHTER
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ORLANDO — Low-level energy is an effective technique for enhancing wound healing, said Dr. Robert F. Jackson, who offered a few postsurgery tips at the annual meeting of the American Academy of Cosmetic Surgery.

Dr. Jackson, a practicing cosmetic surgeon in Marion, Ind., focused on the use of ultrasonic massage, electrical stimulation, and low-level laser therapy.

After liposuction, external ultrasonic massage can correct minor irregularities, decrease edema, and help prevent long-term induration, he said. The therapy also stimulates tissue and wound healing.

Dr. Jackson typically starts this therapy 1 week after surgery and treats patients twice weekly until the induration is gone. He uses a level of 2 W/cm² continuous for 6 minutes per area on the extremities, and 20 minutes for the abdomen and back.

"If you've got induration that you haven't really treated for a long time, you can still treat it, but at that point you'll also have to mechanically stretch the tissue as you use the ultrasonic therapy," Dr. Jackson said.

"It's a very good marketing tool—my patients enjoy it," he said.

When used after cosmetic surgery procedures, electric stimulation improves blood flow, increases wound tensile strength, reduces edema, inhibits bacterial growth, and reduces pain. The primary

purpose, however, is to reduce postoperative pain and edema, Dr. Jackson said. Electric stimulation immediately reduces swelling and improves wound healing. And ultimately, the technique improves the end result of the surgery.

"The Department of Health and Human Services tested all of the adjunctive therapies for pressure sores. ... The only [therapy] they recommended for wound care management was the use of electric stimulation," he said.

Dr. Jackson typically starts this therapy the day after surgery and treats patients twice a week in 20-minute sessions until the wounds are satisfactorily healed. He recommends starting with an intensity of 100 pulses per second and increasing the intensity until the patient can feel the pulsation. Use this intensity for a few minutes and then increase the intensity until it just becomes uncomfortable for the patient. Then reduce the intensity gradually.

Low-level laser therapy is a relatively

new modality that involves the application of low-power monochromatic and coherent light to injuries and lesions. This therapy is believed to promote blood vessel growth. Dr. Jackson uses low-level laser therapy for wound and ulcer healing. The therapy also reduces pain after surgery.

He uses a 635-nm laser for 8 minutes to enhance wound healing. For incision healing, he treats patients once or twice weekly for 3 weeks. Treatments for ulcers continue until healing is complete. ■

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ry and physical exam; ultrasound imaging should be performed if more than three hemangiomas are present to check for involvement of the liver or spleen, said Dr. Hochman of Charleston, S.C.

Dr. Buckingham warned that hemangiomas on the upper or lower eyelid can endanger vision permanently and deserve referral to a pediatric ophthalmologist.

There is no consensus on treating hemangiomas. Photodynamic therapy (PDT), steroids, and surgery are the main treatment options. Treat superficial or rapidly proliferating hemangiomas every 4-8 weeks with PDT, a safe option with very little risk of scarring, he said.

PDT on the area around an ulcerated hemangioma can help heal the ulcer, data show. Retreat every 4-6 weeks if needed, Dr. Buckingham suggested. PDT also cleans up residual telangiectasias.

For deep hemangiomas, inject steroids into the lesion or try a 10-week course of oral steroids during proliferation; expect a 30%-90% response. Combine steroids and photodynamic therapy for compound lesions. Refer children on oral steroids to an endocrinologist for weekly evaluation.

Reserve surgical debulking for cleanup during involution, or during the proliferative phase for hemangiomas that don't respond to steroids or that threaten vision.

"You don't have to get every bit of tissue out. These are benign tumors in young children, and we have plenty of opportunity in ensuing years to clean things up," Dr. Hochman said. ■

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