Peak Lidocaine Levels Found Safe During Mohs

BY BRUCE JANCIN

SAN FRANCISCO — The use of moderate to large volumes of dilute lidocaine for tumescent anesthesia during Mohs surgery on the face and neck was free of signs of lidocaine toxicity in a prospective single-center study.

Of 19 patients who underwent Mohs surgery for medium to large tumors on the face, scalp, or neck, none had a plasma lidocaine level anywhere close to the 5-mcg/mL threshold above which early signs of systemic lidocaine toxicity can occur, Dr. Murad Alam reported at the annual meeting of the American Academy of Dermatology.

The patients received injections totaling 5-48 mL of 1% lidocaine with 1:100,000 epinephrine and 1:10 sodium bicarbonate. Each patient had six blood draws for measurement of lidocaine levels; they were obtained before the first anesthetic injection and again immediately before and after each surgical stage, with the final draw an average of 4.4 hours following the first. In addition, active inquiry was repeatedly made of patients regarding any possible signs or symptoms of lidocaine toxicity.

Plasma lidocaine levels remained undetectable—below 0.1 mcg/mL—at all time points in three-quarters of the patients and never exceeded the 3.0-mcg/mL mark in the rest, according to Dr. Alam, chief of cutaneous and aesthetic surgery at Northwestern University, Chicago.

He explained that this study was undertaken because large volumes of tumescent anesthesia, akin to those widely utilized in liposuction, are increasingly being employed for excision of large skin cancers. Lidocaine injections to the face, neck, and scalp result in faster systemic absorption and higher peak levels than elsewhere in the body.

At plasma lidocaine levels above 5 mcg/mL, patients show the early signs of lidocaine toxicity, including tinnitus, muscle twitches, tongue numbness, a metallic taste, dizziness, diplopia, and visual halos. Levels above 10 mcg/mL put patients at risk for seizures, respiratory and cardiac arrest, and coma, Dr. Alam noted.

The pattern of rising plasma lidocaine levels over time documented in this study suggests that peak levels in patients undergoing Mohs surgery above-the-shoulders occur 3-5 hours after the start of surgery, he added. ■

From Ice to Surgicel, Tips to Help Control Mohs Bleeding

BY DAMIAN McNAMARA

MIAMI BEACH — Minimizing bleeding during and after Mohs surgery can be a challenge, according to Dr. Susan H. Weinkle.

"In Bradenton [Fla.] where I practice, almost everyone is taking an anticoagulant," Dr. Weinkle said. As a Mohs surgeon "we realize that the risk of a thrombotic event is much worse for the patient than the risk of bleeding." She recommended that patients with a history of a transient ischemic attack or thrombotic event, in particular, be allowed to continue their anticoagulant therapy.

Consider using flesh-colored bandages, and provide written instructions to leave them on for 48 hours.

DR. WEINKLE

Ask patients to provide a comprehensive list of all the medications and supplements they take, Dr. Weinkle said at the South Beach Symposium. "Sometimes patients do not tell you the whole story, so you need a complete history." Patients may be taking ginkgo biloba or consuming a lot of cinnamon, which can thin the blood.

Meticulous hemostasis is important; do your best to maintain a dry field intraoperatively during Mohs surgery, said Dr. Weinkle, a private practice dermatologist in Bradenton. Epidermal sutures often can halt superficial bleeding along the edge of a wound. If excessive bleeding occurs intraoperatively, you may need to tie off a larger vessel. Also, avoid placing a patient in the Trendelenburg position.

How you bandage is also important to minimize the risk of postoperative bleeding. Provide pressure with a large bandage because "as the anesthetic goes away, you can get rebound vasodilatation," Dr. Weinkle said. Consider using flesh-colored bandages, and provide written instructions to leave bandages in place for 48 hours and to restrict activities.

Other strategies to prevent or manage postoperative bleeding include the application of ice, direct pressure for 15 minutes, and the use of Surgicel Absorbable Hemostat (Ethicon Inc.).

Surgicel looks like a little piece of gauze, Dr. Weinkle said. "One of my patients [who lives] 2 hours away went to the ED. They laid this on top of his sutured wound and it stopped" bleeding.

"One thing I want you to take home today—Surgicel is absolutely magical stuff," Dr. Weinkle said. (She stated that she had no relevant disclosures.) It is particularly helpful for controlling bleeding on more challenging wound sites. ■

Public Rates Plastic Surgeons As Best for Cutaneous Repair

BY ALICIA AULT

AUSTIN, TEX. — The public does not appear to perceive that Mohs surgeons are as capable as plastic surgeons when it comes to removing cutaneous lesions and repairing facial defects, according to a survey of 467 patients.

Dr. Vinh Q. Chung of the department of dermatology at Emory University, Atlanta, said that he often has been asked what he called an "absurd" question by patients—whether they should see a plastic surgeon. To determine why they did not consider a Mohs surgeon to be capable, he and his colleagues conducted a prospective survey of 250 patients at the Emory Student Center and 217 at the Emory Dermatology Clinic.

In the first part, they were asked to rate seven questions about specialists' training and surgical skills on a visual analog scale. Survey respondents were asked to rate dermatologists, plastic surgeons, general surgeons, emergency physicians, and family practitioners.

When they were asked which specialist had the greatest ability to create absolutely no scar, 63% (136) of derm clinic patients and 64% (160) of students said that they had a high confidence in plastic surgeons; a little more than 20% of each group gave the same marks to dermatologists. The scores were significantly higher for plastic surgeons on every question, Dr. Chung said at the annual meeting of the American College of Mohs Surgery.

In the second part of the survey, patients were given a series of images of surgical scars. The images were all the same, but each was labeled with a specialty. The goal was to see if the label biased the patient's perception, he said.

Respondents were asked to rate the image on a scale of 1-10, with 10 being the highest score. Interestingly, scores were fairly consistent among all the images, with dermatologists and plastic surgeons ranking the highest. The dermatology clinic patients' mean score for plastic surgeons was 5.86, compared with 5.48 for the students. Derm clinic patients' mean score for dermatologists was 5.91, compared with 5.28 assigned by the students.

"Our study supports our suspicion that the public has more confidence in the brand 'plastic surgery' than the brand 'dermatology' when it comes to cutaneous surgeries," he said. This was especially surprising since it came from patients in the dermatology clinic. On the other hand, patients were able to be objective when they evaluated the scars.

Students should be required to spend at least a day in the operating room to see what Mohs surgery is, and dermatologic surgeons should continue to "promote our reputation as the experts for skin surgeries," he said. ■

Melanoma Incidence Climbs Quickly Between 1992 and 2004

BY KATE JOHNSON

MONTREAL — The incidence of melanoma in the United States increased rapidly over a 10-year period, regardless of tumor thickness and socioeconomic status, reported Dr. Eleni Linos.

"This has implications for preventive screening and primary care," she said at the annual meeting of the Society for Investigative Dermatology.

Dr. Linos and her coinvestigators examined data from the Surveillance, Epidemiology, and End Results (SEER) registry between 1992 and 2004 (J. Invest. Derm. 2009 Jan. 8 [doi: 10.1038/jid.2008.423]). They focused on non-Hispanic white patients, in whom 90% of melanomas occur, said Dr. Linos, who declared having no conflicts of interest. They identified 70,596 cases.

During the study period, the incidence of melanoma of all thicknesses increased from 18 per 100,000 in 1992 to 26 per 100,000 in 2004—an annual increase of 3%, said Dr. Linos of Stanford (Calif.) University. The steepest increase was seen in men aged 65 years and older, in whom the incidence rose from 73 to 126 new cases per 100,000. "The vast majority of melanomas that are diagnosed are thin, and that is why we have not seen such a dramatic increase in mortality rates," she explained. Overall mortality rose by 0.4% annually.

Melanoma trends were examined according to socioeconomic status to determine whether the findings could be explained by better screening in those with a higher status. Similarly, tumor thickness was examined to determine whether the increased incidence could be explained by more diagnoses of thin, clinically insignificant tumors.

"We found parallel increases across all socioeconomic groups and thicknesses, representing a true increase in clinically significant tumors," she said. ■