

Cosmetic Surgery Times

Where the Exchange on Aesthetic Perspective Begins

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Newer anesthetics found effective after 30-minute application

By John Jesitus
Contributing Editor

— A comparative study of Topicalaine, EMLA, and ELA-Max 5 showed Topicalaine and ELA-Max 5 to be effective after a 30-minute application period.

Joshua P. Fogelman, M.D., who recently reported results of a study, said that 30 minutes after the anesthetics were removed, Topicalaine and EMLA demonstrated the highest efficacy.

Dr. Fogelman, whose efforts were assisted by Paul M. Friedman, M.D., Vicki Levine, M.D., and Robin Ashinoff, M.D., is a chief resident at the NYU Medical Center's Department of Dermatology.

The study follows previous research by the same team which sought to gauge the effectiveness of ELA-Max, EMLA, and two other topical anesthetics (tetracaine gel and betacaine-LA ointment) after a 60-minute application time. This research showed ELA-Max and EMLA delivered superior performance both after the initial application period and 30 minutes later.

"Because some physicians don't want to have their patients wait in a waiting room or at home for 60 minutes before a procedure," Dr. Fogelman said, "we decided this time to try an application period which may be more clinically relevant."

Forearms tested

After randomly applying equal amounts of the anesthetics or a control to the volar forearms of 24 test subjects, the researchers assessed the degree of anesthesia achieved by applying a Q-switched Nd:YAG laser emit-

ting energy at 1064 nm.

Similar testing was performed 15 and 30 minutes after removal of the anesthetics, with patients' responses being recorded on an ordinal scale of zero to four.

Immediately after 30 minutes of occlusion under a Tegaderm dressing, only EMLA's performance was not statistically superior to control. In contrast, Dr. Fogelman said Topicalaine and ELA-Max 5 were quite statistically superior ($p = 0.002$). However, all three anesthetics were statistically superior to control at 15 and 30 minutes after removal.

In comparing the anesthetics, researchers found both Topicalaine and ELA-Max 5 statistically superior to EMLA immediately after removal, while Topicalaine was the top performer 15 minutes after removal. At the 30-minute mark after removal of the anesthetics, Topicalaine and EMLA outperformed ELA-Max 5.

"The other finding we noted was that Topicalaine posted the lowest mean pain score at each time interval," Dr. Fogelman stated, "but it was statistically significant only at the 15-minute interval."

Side effects rare

As for the medications' side effects, which included blanching or erythema at the site of application, these were very rare and tended to resolve themselves within two hours after anesthetics were removed.

Dr. Fogelman added: "One surprising



Dr. Fogelman

conclusion was that ELA-Max 5 was not as effective as Topicalaine at 15 and 30 minutes after removal." In the previous study, ELA-Max (not ELA-Max 5) and EMLA were the superior anesthetics. A possible explanation for this is that occlusion is not recommended for either ELA-Max or ELA-Max 5, though this was the methodology that both studies employed. With that in mind, Dr. Fogelman and his colleagues will begin a study by year's end to determine the effect of occluded vs. nonoccluded application methods.

Although the new study improves upon its predecessor in that it was randomized and included twice as many subjects, it's not immune to criticism.

As Dr. Fogelman pointed out: "A big weakness in any anesthetic study performed in this way is patients' subjective reporting of pain sensations," which are hard to quantify and therefore can make comparing various products' performance levels difficult.

Another problem with studies like Dr. Fogelman's involves the differences in pain scores noted. Just because one anesthetic may fail to deliver statistically superior performance at certain intervals, that doesn't mean it's not providing patients with adequate relief in a clinical setting.

Accordingly, Dr. Fogelman determined whether to use a product based solely on test scores is for each physician to decide.

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