Polyacrylamide Hydrogel Filler Shows Promise

At six months post-treatment, the investigational agent was as effective as hyaluronic acid in easing nasolabial folds.

By Jill Stein

PHOENIX—Polyacrylamide hydrogel, an investigational filler, is as effective as hyaluronic acid (HA) for aesthetic enhancement of nasolabial folds six months after the final treatment, according to the results of a phase 3 trial announced here at the 2009 American Society for Dermatologic Surgery Annual Meeting. In addition, researchers say it retains its effectiveness at least 12 months after the final treatment.

Because polyacrylamide hydrogel is non-resorbable and non-migrational, it offers promise as a long-lasting tissue filler, investigators said. Rhoda S. Narins, M.D., Clinical Professor of Dermatology at New York University School of Medicine, and colleagues randomized 315 men and women in a 2:1 design to receive 2.5% polyacrylamide hydrogel or HA. Patients were allowed up to two touch-up treatments. The study was conducted at 13 sites in the United States, each of which contributed 19 to 33 patients.

“While soft-tissue augmentation with injectable fillers are now the standard approach to correct age-related facial defects, extending the duration of effect remains an ongoing goal in the development of soft-tissue fillers,” said Dr. Narins. Director of the Dermatologic Surgery and Laser Center of New York.

Polyacrylamide hydrogel acts as a tissue substitute, occupying extracellular space and augmenting skin and underlying tissue that is depleted due to aging. The filler does not migrate within the tissue after injection because of its large molecular size and high cohesive properties.

Botulinum Toxin Gel May Improve Lower Cannthal Lines

BOSTON—An investigational botulinum toxin A (BoNT-A) topical gel can significantly improve the appearance of moderate to severe lower cannthal lines (LLCs), according to a study presented here at the American Academy of Dermatology’s 2009 Summer Academy Meeting.

The gel, called RT001, combines a novel peptide transport system that facilitates transcutaneous delivery without altering toxin function. An adequate concentration of this peptide is necessary to achieve efficacy in improving LLCs, according to investigator Francisco Perez Atamoros, M.D., of Centro Dermatologico Teneriffy in Mexico City.

He conducted a randomized, controlled study involving 77 adults with moderate to severe LLCs. Subjects had a mean age of 59.2 years (range: 28-85 years). They were assigned to one of two cohorts (cohort 1 and cohort 2). In each cohort, subjects received placebo or a single 1.65 mg BOTULINUM, see page 9

Adding Lidocaine to a Filler Eases Injection Site Pain

Investigators find that this approach significantly reduces post-injection pain compared with using topical anesthetic prior to treatment.

BOSTON—Premixing Dermocoll-PS5 2%—a porcine collagen-derived dermal filler that uses novel ribose cross-linking technology—with lidocaine is an effective alternative to the use of topical anesthetic for treating nasolabial fold (NLF) wrinkles, researchers reported at the American Academy of Dermatology’s 2009 Summer Academy Meeting.

In a study, this combination significantly reduced pain associated with injection and both patients and clinicians reported decreased wrinkle severity and low incidence of adverse events. Previous studies have demonstrated that adding lidocaine directly to a dermal filler such as calcium hydroxylapatite and hyaluronic acid prior to injection decreases injection discomfort.

The new study, by Melanie D. Palm, M.D., and Mitchel P. Goldman, M.D., of Cosmetic Laser Associates of La Jolla in La Jolla, Calif., included 10 patients (nine women and one man) with NLF wrinkles. Their mean age was 51 years. Subjects received injections with the filler in both NLFs. On the left side of the face, a topical anesthetic cream (lidocaine 5%) was applied to clean skin in a 1/8 inch layer and left in place for 30 minutes prior to injection. On the right side of the face, patients were injected with a mixture of the filler and 0.3% lidocaine that was prepared 10

LIDOCaine, see page 8

BY THE NUMBERS

More Men Seeking Aesthetic Procedures

Overall, the number of non-invasive aesthetic procedures performed on men has more than doubled from 2005 to 2006, rising from 42,447 to 91,665 procedures during that four-year period, according to statistics compiled by the American Academy of Cosmetic Surgery. Shown here are the procedures with the largest percentage increases during that period.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Percentage Increase</th>
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<tbody>
<tr>
<td>Laser resurfacing</td>
<td>406%</td>
</tr>
<tr>
<td>Chemical peel</td>
<td>220%</td>
</tr>
<tr>
<td>Hyaluronic acid</td>
<td>172%</td>
</tr>
<tr>
<td>Botulinum</td>
<td>114%</td>
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</tbody>
</table>

Source: data from the American Academy of Cosmetic Surgery, 2006 Premier Procedures
MINIMALLY INVASIVE PROCEDURES HAVE CAUSED A COSMETIC REVOLUTION. Recent statistics show that 10.4 million minimally invasive cosmetic surgery procedures were performed in 2008 up 55% from the previous year. In most cosmetic offices, Botox (Allergan, Inc., Irvine, Calif.) and Dysport (Medicis Aesthetics, Scottsdale, Ariz.) are kept in a central refrigerator, although it is dispensed to numerous treatment rooms throughout the workday. This involves frequent trips to the central storage area to fetch individual doses of the neuromodulators, which are time-consuming, inconvenient, and inefficient. In addition, cosmetic consumers are impatient. A surgical follow up can quickly turn into a Botox/Dysport or filler appointment. Having the neuromodulators drawn up and right at hand can facilitate a quick decision to have another procedure at an appointment. When a patient says, “I was kind of thinking about having some Botox today,” I would tell her, “Yes, you can do it right now,” while pointing to the mini fridge. In the past, we would have to interrupt the surgical “flow” to leave the room to get product.

There is a current consumer trend of miniaturization of appliances. Counter-top refrigerators are available and can be used to cool and/or heat (figure 1). These mini fridges sell for about $150.

The mini fridge is lightweight (~15 lbs), convenient, portable (12.5” x 13.5” x 17.5”) and affordable. These counter-top appliances operate on standard household current and are also equipped with a DC adapter for use elsewhere, such as a car. The unit is digitally thermostatically controlled and cools to 44° and warms to 140° while maintaining the selected temperature. The temperature is displayed on a large digital LCD readout that is easily readable across the room. The mini fridge has a clear door, three adjustable sliding shelfs, and a light that can be programmed to illuminate continually or only when the door is opened. The door has a secure latch but does not lock. Portable locking devices are available (figure 2).

This author keeps a mini fridge in each room where Botox or Dysport may be injected, making it immediately accessible for the staff, surgeon, and patient. These appliances have eliminated unnecessary trips out of the treatment room. We use a large volume of Botox. We draw up syringes in the morning for the anticipated patients. Using a 25 cc dilution of preserved saline, we draw up four syringes of 0.5 cc (20 units) and two syringes of 0.25 cc (10 units). For Dysport, we prepare a 3 cc dilution, which translates into five syringes of 0.6 cc (60 units). Use a ratio of three Dysport units per one Botox unit for injections. Regardless of which product is used, the last syringe has less volume due to the loss in the needle, needless, etc. The smaller syringes are used for touch ups or for those patients requiring extra units. The syringes are inventoried and labeled and placed in each treatment room in the mini fridge, where they are logged after usage (figure 3).

In addition to neuromodulator storage, there are other medications that we use frequently and which require refrigeration. The mini fridge provides convenient storage of these medications so they can be accessed without multiple trips to the central supply (figure 4).

HEATING, TASTING

The ability to simply and economically refrigerate medications in the treatment rooms has changed our practice for the better, but we also use some units for heating instead of cooling. IV fluids, tumescence anesthesia, and even small towels are easily warmed with the mini fridge set in the heat mode, which...

REFERENCES

Dr. Niamtu is a board-certified oral and maxillofacial surgeon who limits his practice to cosmetic facial surgery in Richmond, Va.