

IMPROVING THE PATIENT EXPERIENCE AND OUTCOMES WITH AESTHETIC INJECTABLES: A NEW STRATEGY

An emerging technology seeks to improve injector training. Here's what an expert says about injectable safety and the new system.

A Q&A WITH STEVE YOELIN, MD



What are the main risks associated with cosmetic injectables? Which are inherent to the products and which are technique dependent?

Dr. Yoelin: The big risk with any dermal filler, regardless of composition, is the possibility of intravascular injection. However, most instances of intravascular injection, which may be common, are most likely inconsequential due to collateral circulation within the face.

When intravascular injection does occur, many variables impact the outcome. These variables include, but are not limited to, speed of injection, amount of material injected, type of material used, size of the vascular structure in question, and the region of the face in question.

Many practitioners feel that, when injecting dermal fillers in a bolus-type fashion, the injector should aspirate prior to injecting in order to develop a better idea as to whether or not the needle tip may have inadvertently

penetrated a vascular structure. However, aspiration is not a surefire way to ensure that the needle tip is not in a vascular structure because of the possibility that no "flash" is visible in the barrel of the dermal filler syringe even when the needle is, in fact, in a blood vessel.

The hyaluronic acid class of dermal fillers—the largest such class in the US in terms of market share—has the advantage of reversibility because the enzyme hyaluronidase reverses the effect of hyaluronic acid.

A comprehensive understanding of facial anatomy will improve patient outcomes and risk profiles. In order for practitioners to improve their understanding of facial anatomy, a variety of educational options are available. For example, company-sponsored on-label programs and continuing medical education (CME) programs represent insightful educational options. Additionally, a variety of companies are developing alternative educational approaches. For example, TruInject, a biotechnology startup based in Orange County, California, is developing an interactive training device to provide practitioners with simulated injecting experience (see sidebar).

BOTTOM LINE

A comprehensive understanding of facial anatomy will improve patient outcomes and risk profiles. Cannulas are becoming more popular since their introduction in the US. Many practitioners feel that this form of injecting dermal fillers is safer than needles.

Are residencies and fellowships preparing core specialists to be safe injectors?

Since injectables is still a relative young and growing field, residencies and fellowships vary to some degree in the level of comprehensiveness of their injectables instruction. As the specialty continues to grow, I suspect that residencies and fellowships will continue to develop their injectables instruction.

There is increasing focus on cannulas as potentially safer than needles, but are practitioners adopting them?

Cannulas are becoming more popular since their introduction in the US. Many practitioners feel that this form of injecting dermal fillers is safer than needles. Cannulas' adoption by physicians is hampered by their relatively high learning curve. I recommend that practitioners interested in using cannulas first study their effective and safe use in a classroom format or from another practitioner.

How might TruInject change the injectables training landscape?

Most current educational programs focus on either learning via demonstration from an experienced practitioner or via direct practice on a live model with feedback from an experienced practitioner.

In contrast, TruInject is one of the first companies to pioneer an approach in which practitioners practice on a virtual model. ■

WHAT IS TRUINJECT?



The TruInject Injector System is a comprehensive medical injection training device designed to increase injector skill and confidence with location critical aesthetic injections, according to developers. The TruInject system includes a smart injector, computer interface, and true-to-life model head, which allows the trainee to measure the depth of the injection with nanometer accuracy, record the speed of the injection, and, with 3-D technology, view the anatomy of the face. The TruInject system is expected to be widely available by early 2015.

Dr. Yoelin likens the system to an airplane flight simulator.

Founder Gabrielle Rios, pictured above, recently garnered a bronze Stevie Award for women in business for the invention.

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