Ophthalmic Procedure Training During COVID-19: Virtual and In-Person Training of the Suprachoroidal Injection Procedure

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Purpose

The purpose of this analysis was to evaluate virtual and in-person training modalities in educating retinal specialists and other ophthalmology professionals on performing a suprachoroidal injection with the SCS Microinjector®. Significant travel and site visitation restrictions associated with the COVID-19 pandemic required alternative virtual methodologies be developed to continue training when traditionally utilized in-person wet lab instruction was not permitted.

Methods

- Trainees for the suprachoroidal injection procedure included retina physician investigators participating in clinical trials and non-physicians, including medical science liaisons and other ophthalmology professionals.
- Training modalities included review of a short film on the procedure, a slide review of key procedural steps, and practice injections with a custom-designed synthetic eye, moderated by a certified trainer providing live feedback. Virtual training was conducted via videoconference; both trainee and trainer connected via webcam with audio connection; all supplies were mailed prior to training.
- Following completion of training, a follow-up survey was sent to every trainee. Trainees were asked about training component preferences and confidence to perform the procedure on a 5-point Likert scale.

Results

- A total of 33 trainees completed the survey following suprachoroidal injection training, including 23 physicians and 10 non-physicians. A total of 12 training sessions were completed virtually and 21 were completed in person. Physicians reported an average confidence to perform the procedure of 4.8 (range 4-5), while non-physicians reported an average of 4.2 (range 3-5), although non-physician trainees will never be performing the procedures in patients. There was a small increase in procedure confidence in physicians receiving in-person training versus virtual (4.9 vs. 4.0).
- Physicians in person were asked about training component preferences and confidence to perform the procedure on a 5-point Likert scale.

Example Virtual Training Setup

- More than two-thirds (69.7%) of all trainees felt that the training was comprehensive and that no additional elements were required, with physicians expressing this sentiment more often (73.9% vs. 60.0%). All trainees, across all sessions, indicated that there were no unnecessary aspects of the training, as conducted.
- “It was great. [The] model made it easy.” - Physician trained in person
- “The training was excellent. [The trainer] did a fantastic job explaining the injectors and the procedure, as well as troubleshooting potential pitfalls.” - Physician trained in person

Recommended Retraining

- Annual
- Biannual
- None
- Other

Conclusions

- Across all groups, the most useful component of training was identified as the hands-on wet lab with the synthetic eye model (67%) followed by the live trainer feedback and Q&A (24%). None of the trainees felt the powerpoint slide review to be the most important.

- Among trainees who completed virtual or in-person training, physician trainees felt highly confident in their ability to perform the procedure in patients in the future.
- Practice injections with an eye model and live feedback should be incorporated into training curriculums, whether virtual or in-person.
- Retraining, if implemented, should be either annual or consist of a single refresher given just before the physician performs the procedure for the first time in patients.
- Larger sample sizes, especially of virtually trained physicians, could help further optimize training strategies.