

REMOTE DIAGNOSIS AND TREATMENT OF GLAUCOMA



A novel laser can be used in conjunction with telemedicine.

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Approximately 70 million people worldwide have glaucoma,¹ and clinicians are currently facing a large backlog of these patients who require surgical care because of delays brought on by the COVID-19 pandemic. It has become clear during this period that the ability to diagnose and treat glaucoma remotely could expand patient access to meaningful care.

Many patients with glaucoma are elderly and/or have other comorbidities, both of which increase their risk of infection by SARS-CoV-2 and other viruses. The use of telemedicine² is therefore an attractive means of reducing contact between patients and clinic staff and facilitating fewer and shorter office visits.

Recently, we gained experience with a novel laser platform that provides automated glaucoma laser treatment in seconds and can be used in conjunction with telemedicine. The prototype with which we worked can be activated remotely, reducing

the length of time the surgeon is in the OR. Our initial impression is that the treatment is suitable for a variety of patients (see *Personal Results*).

WHAT IS DIRECT SELECTIVE LASER TRABECULOPLASTY?

Direct selective laser trabeculoplasty (DSLST) is a noncontact automated procedure indicated for the treatment of open-angle glaucoma. The procedure is performed directly through the limbus without gonioscopy and can be completed in a matter of seconds. Alignment of the laser with the limbus is automated, and no contact lens is required. The surgeon performs a sense check, and the automated rapid gaze tracking ensures that only the designated area is treated to avoid the risk of off-target laser exposure.

DSLST is a promising treatment option that can be paired with telemedicine to streamline patient care. Technicians, optometrists, and nurses can perform the initial setup steps of the procedure, and the ophthalmologist can activate the laser either in person or remotely once the laser is ready.

In many parts of the world, patients have limited access to care owing to a limited number of surgeons or geographical barriers to accessing care. A wider range of eye care providers able to deliver care would mean that treatment could be delivered to patients closer to their homes.

CONCLUSION

Technology is evolving. In the future, it could become a reality for clinicians

to facilitate procedures remotely without the need for a surgeon to be physically present. DSLST appears to be a practical, intuitive procedure and has the potential to increase patient access to effective care across the world. Long-term data, currently being collected in a randomized controlled trial, will shed more light on DSLST's safety and efficacy. ■

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PERSONAL RESULTS

One of us (M.D.) is participating in an international multicenter randomized controlled study comparing direct selective laser trabeculoplasty (DSLST) with standard selective laser trabeculoplasty. None of the 14 eyes treated with DSLST experienced an adverse event, and patients reported that treatment was quick and painless. In comparison, all 13 patients who underwent standard selective laser trabeculoplasty complained of discomfort.