

Summary and Conclusion

Until recently, laser procedures for presbyopia correction required the creation of an opening into the cornea and removal of the epithelium to apply treatment to the deeper stroma. However, the intraCOR presbyopia treatment with the femtosecond laser changes that. We now have the ability to focus the treatment directly into the stroma, without cutting the cornea or creating an intrastromal pocket. Additionally, this intrastromal correction does not require removal of the epithelium. Therefore, the structural integrity of the cornea is maintained.

IntraCOR has a minimal rate of infection and promotes wound healing.

Another advantage to intraCOR is the quick procedure time; presbyopia correction lasts approximately 20 seconds. During intraCOR, gas bubbles initially form in the cornea, and the patient's vision is blurred for 2 to 3 hours. When the bubbles dissolve, the cornea clears, distance visual acuity returns, and the patient immediately notices the change in near visual acuity. By 1 day postoperative, the majority of patients experience a gain in near visual acuity.

IntraCOR is a promising treatment option for presbyopic patients and for patients with lower amounts of myopia or hyperopia. In contrast to many other surgical procedures, the complete intrastromal ablation pattern is created without any need of cutting the corneal surface, which minimizes potential risks of infection.

Also the concept of lentotomy for improving presbyopic crystalline lens flexibility is very promising.

The treatment of presbyopia with fs laser-induced cuts is one reasonable approach to cure the loss of accommodation ability. Therefore, it seems to be possible to increase the flexibility of the lens tissue of presbyopic crystalline lenses. If the lens capsule is strong and elastic enough, it will thicken the whole crystalline lens in a way that helps to reduce the loss of accommodation, and as a consequence may treat presbyopia.