



Innovation for ROP

Kothari Dual Function Laser Depressor

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Laser treatment for Retinopathy of Prematurity (ROP) in premature infants presents unique anatomical and physiological challenges. One of the most significant difficulties encountered during indirect laser photocoagulation is the inaccessibility of the inferior peripheral retina. The peripheral target retina is anterior and closer to the limbus than in adults. Slippage of the traditionally used depressor towards the fornix, thereby depressing more posterior parts of the retina, is common. There is limited ability to rotate the globe downward, compounded by Bell's phenomenon, requiring additional forceful painful depression. Furthermore, the small palpebral fissure and delicate conjunctiva make other traditional methods inefficient and often insufficient for complete and safe treatment, especially in the inferior quadrants of the retina.

To address these limitations, we designed an innovative instrument designed specifically for laser treatment in infants with ROP. This instrument features a slim, curved, atraumatic tip that is introduced into the inferior conjunctival fornix. Behind this tip is an atraumatic bollard which serves to depress the anterior retina, bringing it into view. The instrument serves two simultaneous purposes:

Rotation of the Globe:

The instrument gently rotates the eyeball via the conjunctival fornix, providing stable countertraction to overcome Bell's phenomenon. This ensures improved control over globe position without the need for excessive manual manipulation or reliance on sharp conjunctival forceps.

Depression of Anterior Retina:

The curved bollard on the inside of the instrument allows it to act as a scleral depressor, subtly indenting the globe to expose the anterior and peripheral retina, particularly in the inferior quadrants. This makes it easier for the surgeon to apply confluent laser burns even in previously inaccessible areas.

Clinical Advantage:

This dual-function instrument enhances the ease, completeness, and safety of laser treatment in premature infants with ROP. By stabilizing the globe and providing controlled retinal depression simultaneously, it reduces procedural time, improves access to difficult retinal zones, and minimizes the risk of retinal skip areas that can lead to disease progression.

Manufactured by OVATION International, Jaipur