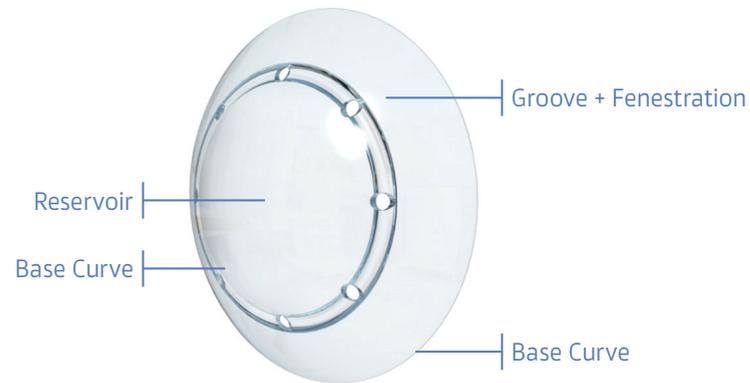


## Company Background

EyeYon Medical Ltd. is a pioneer in ophthalmologic medical devices, focusing on developing cornea-focused sight-saving solutions for more than a decade. Our innovative technologies are targeted to preserve the vision of millions of patients worldwide.



## Hyper-CL™ Lens Design



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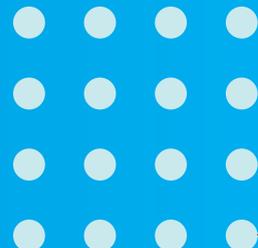
🌐 www.eye-yon.com

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# Bacterial Keratitis PMS using Hyper-CL™

Single-Center in India



## Background

Bacterial Keratitis is a severe bacterial infection of the cornea which can, in severe cases, cause loss of vision. A particular feature of Bacterial Keratitis is its rapid progression; corneal destruction may be complete in 24-48 hours with some of the more virulent bacteria. Early treatment is crucial to minimizing any visual-threatening sequelae.

Topical antibiotic eye drops are the preferred method of treatment in most cases. Antimicrobial ointments lack solubility, and their penetration into the cornea is limited.

**Hyper CL™ is first-of-its-kind Therapeutic Contact Lens that also acts as a reservoir for therapeutics.** Our study objective was to compare the efficacy of the Hyper-CL™ Therapeutic Contact Lens and antibiotic (Hyper-CL™ group) with a conventional antibiotic alone (Control group) in treating Bacterial Keratitis.

## Study Design

A randomized open-label clinical trial using Hyper-CL™ therapeutic contact lens to treat Bacterial Keratitis study was conducted by Prof. Lionel Raj from Dr. Agarwal's Eye Hospital & Research Institute in Tirunelveli, India during 2019-2020.

Thirty-five (35) patients diagnosed with Bacterial Keratitis were randomized into two groups; 17 patients were treated with the Hyper-CL™ and antibiotics; the control group was composed of 18 patients who received only topical antibiotics. Patients were treated with the Hyper-CL™ lens for a minimum of 48 hours.

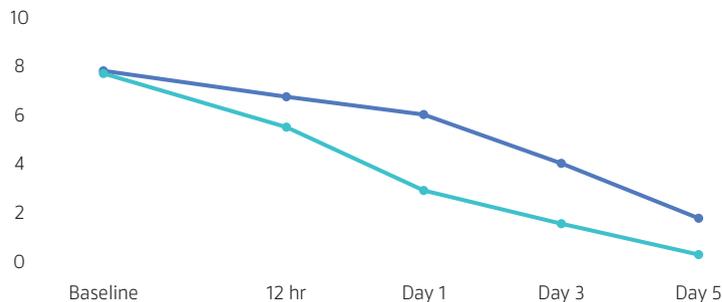
## Results Summary

**In the Hyper CL™ treated group, we saw significant improvement in both pain level and severity of the infiltrate.**

The pain was reduced by 4.77 points in the Hyper-CL™ group, and only by 1.89 points in the control group on Day-1 ( $p < 0.001$ ).

By Day-3, the pain was reduced by 6.12 points in the Hyper-CL™ group and 3.89 points in the control group ( $p < 0.0001$ ).

The Hyper-CL™ group subjects were completely pain-free by Day-5.



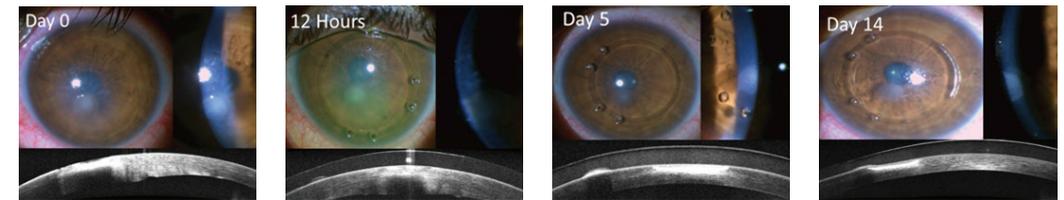
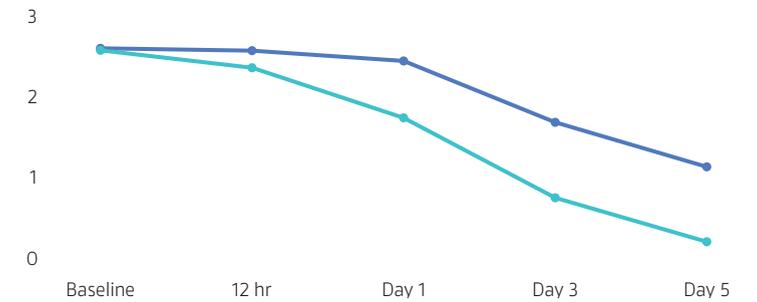
## Results Summary

### Bacterial Keratitis Severity

Control Group  
Hyper-CL™ Group

Infiltrates significantly improved in the first 12 hours of treatment at the Hyper-CL™ group. The average resolution of infiltration in the Hyper-CL™ group was 0.27 mm, and in the control Group (antibiotic only), only 0.04mm ( $p=0.02$ ).

On Day-5, infiltrate resolved by a mean of 2.45 mm in the Hyper-CL™ group, whereas in the control group, only by 1.50 mm ( $< 0.0001$ ).



Mean BCVA also improved faster in the Hyper-CL™ group than in the control group. No serious adverse events occurred while using the Hyper-CL™.

## Conclusions

The severity of Bacterial Keratitis significantly improved within the first 1-3 days of treatment with Hyper-CL™ and antibiotics, compared with the control group where improvement was slower over time.

Using Hyper-CL™ Therapeutic Contact Lens extends direct contact time between the drugs and the cornea.

The use of Hyper-CL™ demonstrated:



**Better & Faster healing of the cornea**



**Significant improvement in pain**



**Earlier Vision recovery**



**Reduced treatment burden**



**No serious adverse events occurred while using the Hyper-CL™**