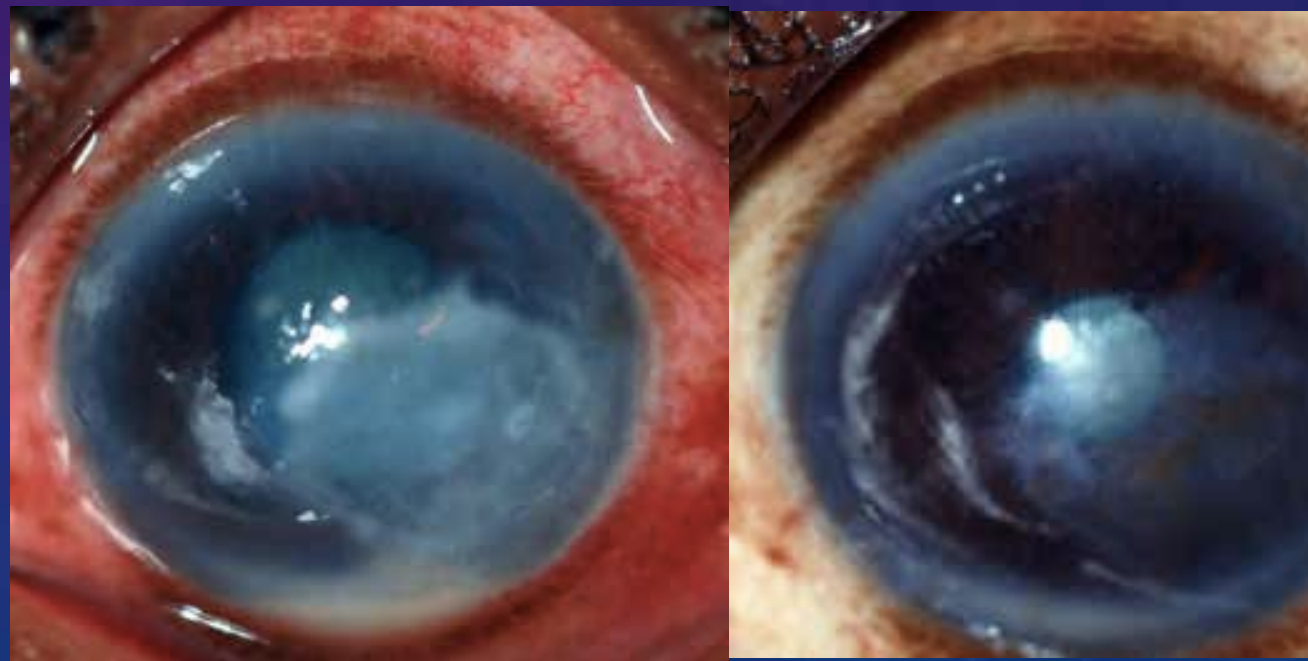


EFFICACY OF CORNEAL CROSSLINKING **BACTERIAL KERATITIS**

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FINANCIAL DISCLOSURE

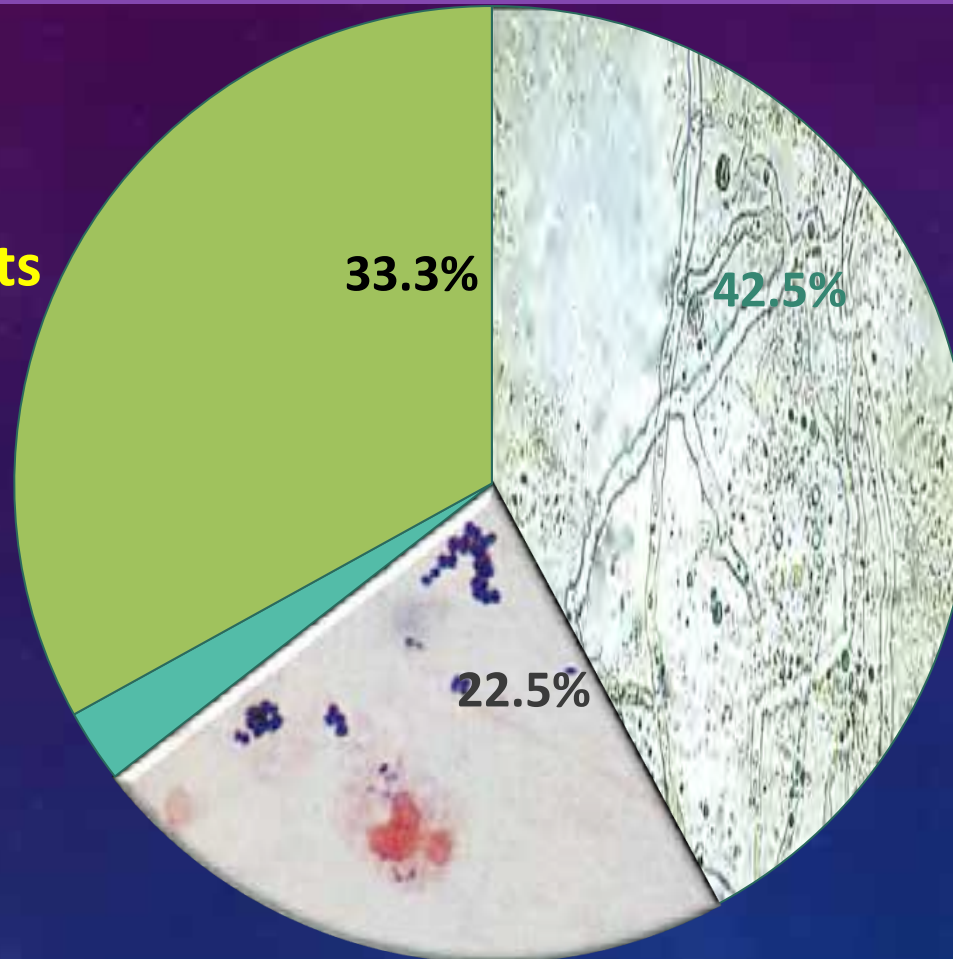
No Financial interest

BACKGROUND



MICROBIAL KERATITIS-CAUSATIVE ORGANISMS

-New cases
-Therapeutic grafts



- Fungal keratitis
- Bacterial keratitis
- Mixed (fungus and bacteria identified)
- Organism Unidentified

Culture positive-43.3%,

Most common Fungus isolated-Aspergillus flavus

Most common bacteria- Coagulase negative streptococci

PURPOSE

- A pilot study to assess the efficacy of CXL in bacterial keratitis *specifically for augmenting the healing process.*

MATERIALS & METHODS

- Prospective, randomised trial
- 40 cases that were distributed into 2 groups of 20 each .
- **Randomization**- 1:1 ratio by **rand** and **sort** function in Microsoft Excel
- **Allocation concealment**- by sequentially numbered opaque sealed envelopes (**SNOSE**)

CXL FOR BACTERIAL KERATITIS

Smear positive bacterial keratitis

(N = 40)

CXL Group (N = 20)
Continuation of antibacterial
**+
Collagen cross-linking**

No-CXL Group (N = 20)
Continuation of antibacterial

STANDARD MEDICAL THERAPY

Gram Positive

- Cefazoline e/d 1hrly
- Moxifloxacin e/d 1hrly
- Gatifloxacin e/o HS

Gram Negative

- Fortified Tobramycin e/d 1hrly
- Fortified Gentamicin e/d 1 hrly

PACK CXL – DRESDEN PROTOCOL



Enrolment Characteristics

	CXL N=20	No CXL N=20	P-value
Age	39.5	56	0.10
Male sex	8	11	0.59
Infiltrate diameter, mm	6.79	5.48	0.12
Hypopyon size, mm	1.3	1.0	0.82

Statistically
NOT
significant

ENROLMENT CHARACTERISTICS

Causative organism	Treatment Group	
	CXL N=20	No CXL N=20
Staphylococcal	7	6
Sterptococcal	6	8
Pseudomonas	1	2
No growth	5	4

RESULTS

Outcome at 3 weeks

CXL
N=20

No CXL
N=20

Treatment failure

Threatened limbal involvement

0

3

Healed

20 (18+2)

17(15+2)

RESULTS

- **Group A** 15 of 20 Cases showed scarring within 3 week of medical therapy alone and of the remaining 5, 2 of them scarred with continued medical therapy for 2 more weeks and **3 of them required therapeutic keratoplasty** for non resolution.
- **Group B** 18 of 20 cases showed scarring within 2 week of Medical therapy along with 1 CXL therapy at presentation. The remaining 2 scarred within 3 weeks

TREATMENT FAILURE THREATENED LIMBAL INVOLVEMENT

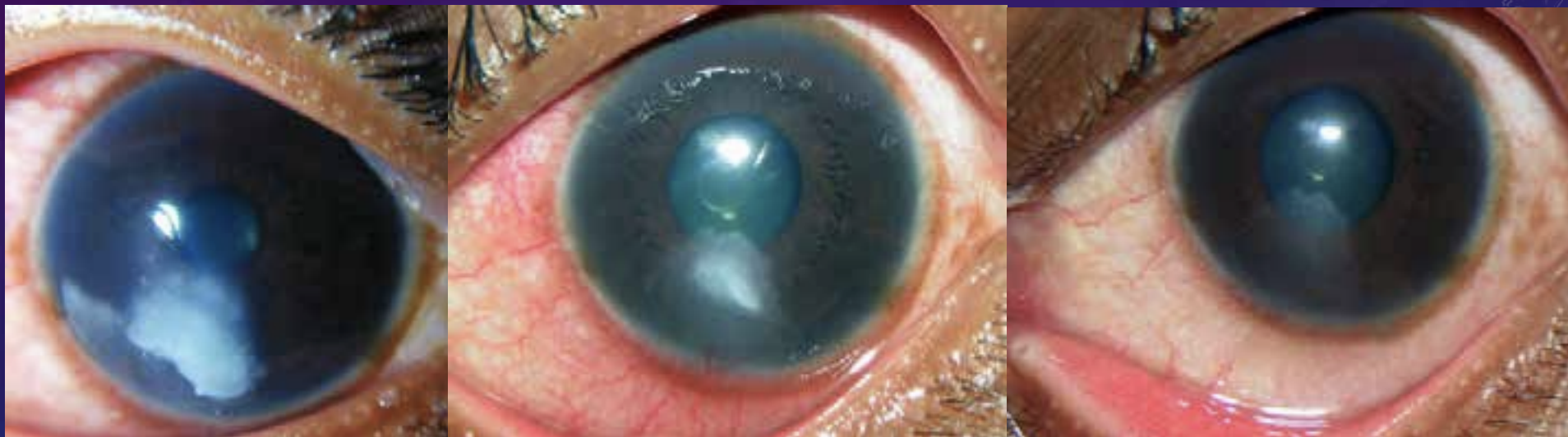
- Non CXL group 3 cases - 2 Pseudomonas & 1 case
No growth



CXL GROUP CASES

The background is a dark blue gradient with faint, light blue technical graphics. On the right side, there are several circular gauges or dials with numerical scales (100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210) and arrows. There are also some dashed lines and other circular patterns scattered across the background.

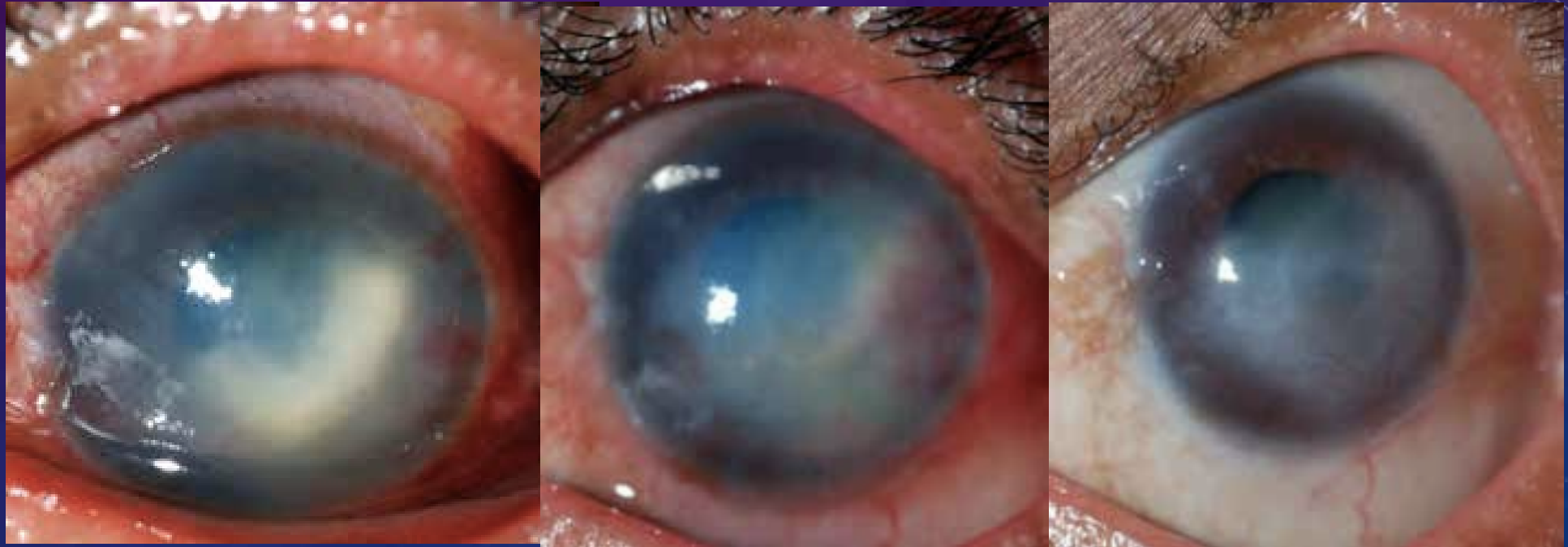
34Y/M
STAPH.AUREUS



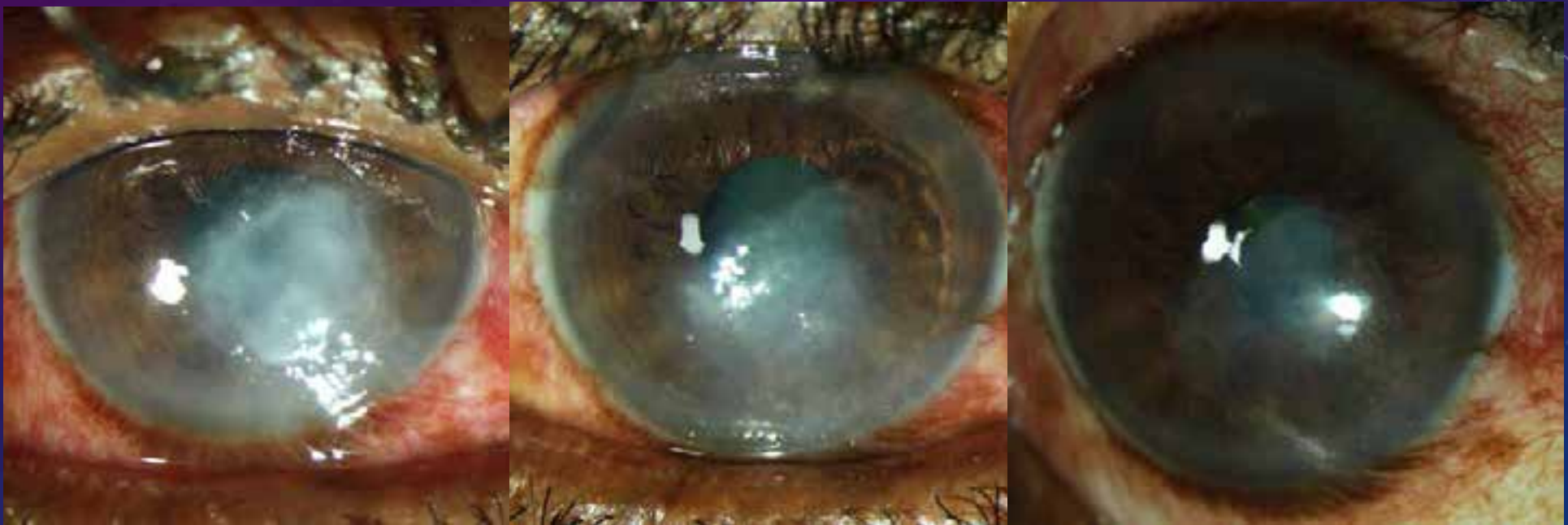
52/F
STREPTO. PNEUM



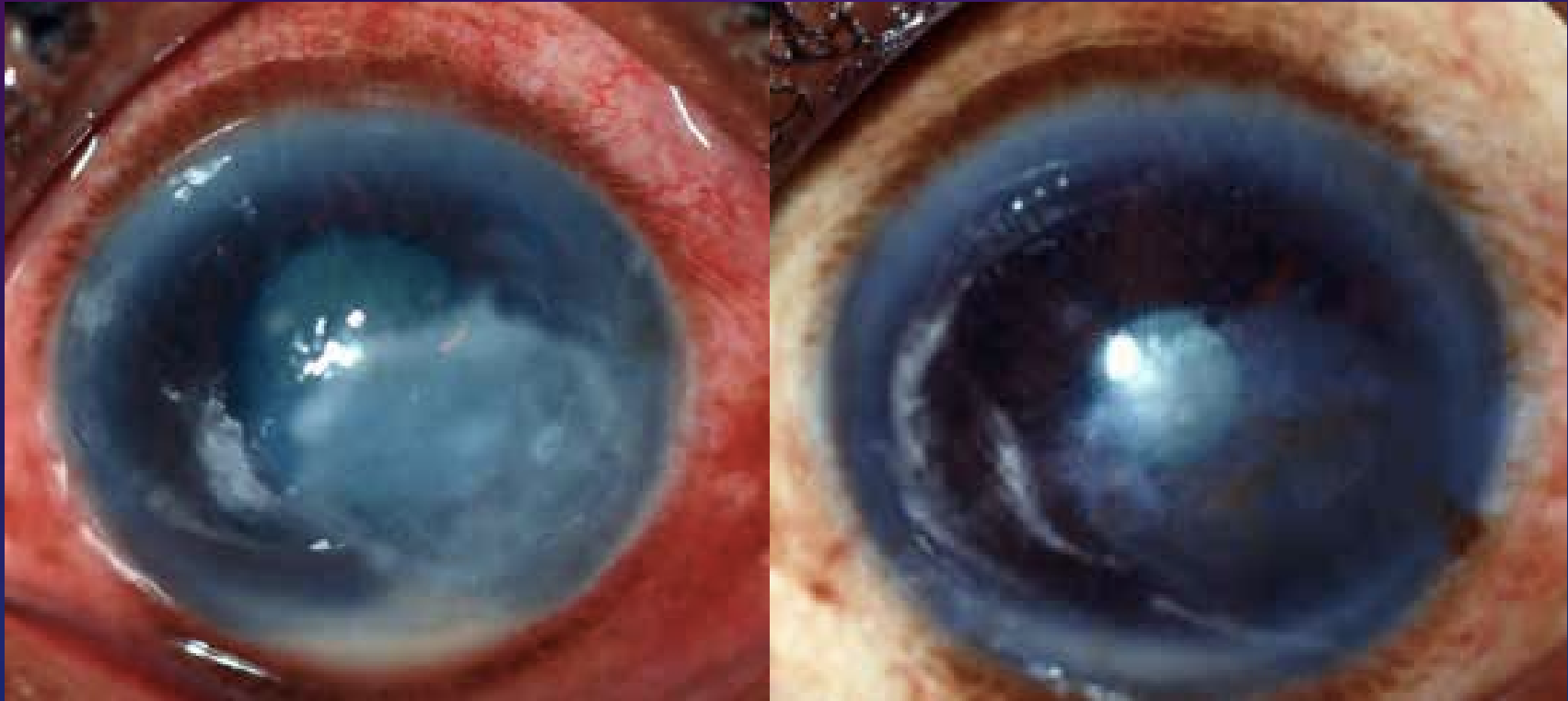
45/F
DEEP STROMAL
NO GROWTH



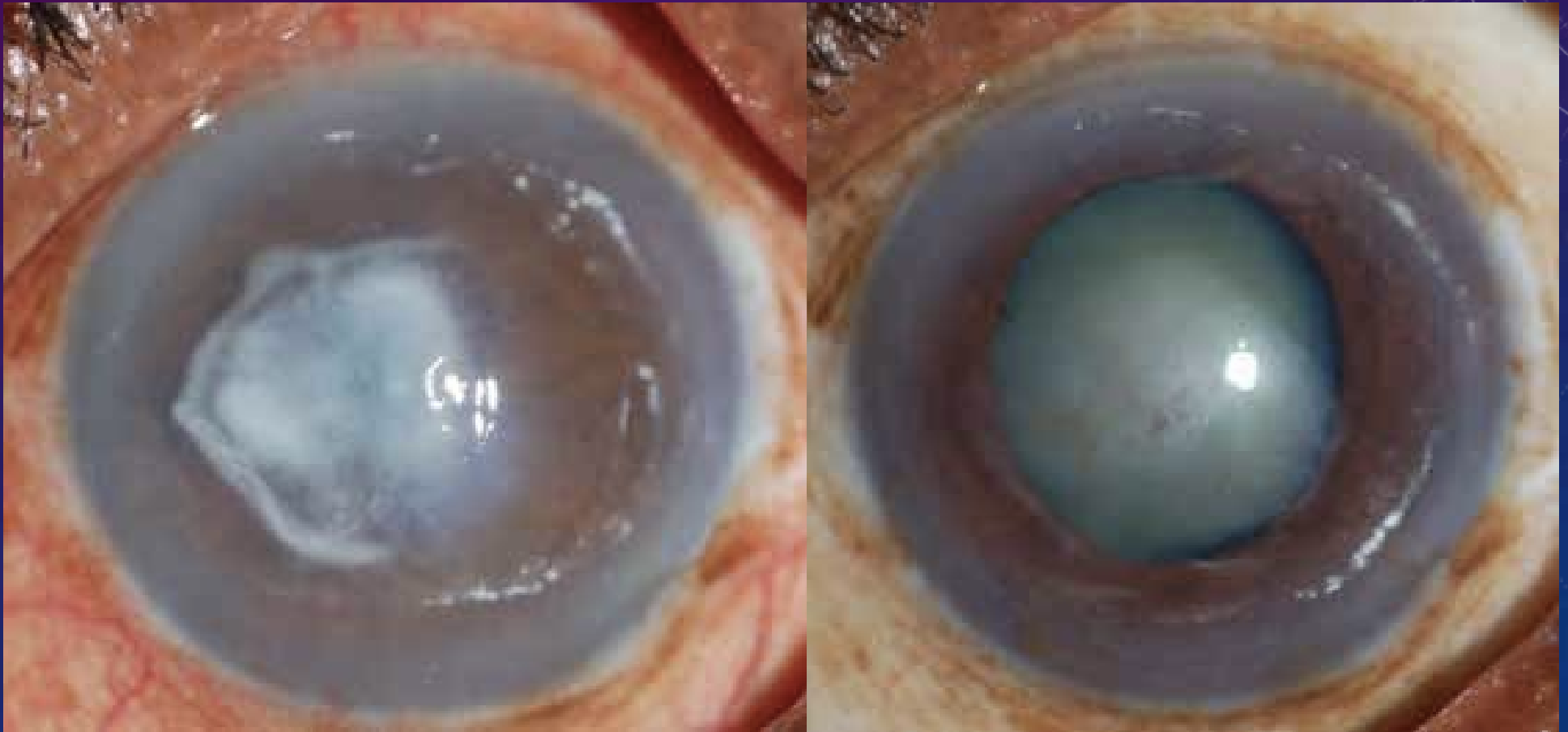
37/M
STAPH SPP



56/F
STAPH



43/M
STAPH



CONCLUSION

- PACK CXL – Could have a **beneficial effect** in the management of bacterial keratitis
- The **healing time is less** when CXL is done additionally
- Larger studies to validate the results
- **Cost** involved could be a deterrent



**WE ARE HERE TO
ADD WHAT WE CAN
TO LIFE, NOT TO
GET WHAT WE CAN
FROM IT.**
SIR WILLIAM OSLER