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Identify factors associated with excessive corneal haze noted to have increased in frequency over the last 6 months post corneal cross-linking procedure

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Identify Factors Associated with Excessive Corneal Haze Noted to Have Increased in Frequency Over the Last 6-months Post Corneal Crosslinking Procedure

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Problem Statement

- Over the past 6 months, increased post-operative corneal haze and decreased vision was noted in patients following corneal crosslinking for keratoconus.

Aim Statement

- Identify and analyze factors that may contribute to increased post-procedure haze for the total cohort of crosslinking patients since 2017.
- Whether pre-operative patient factors could be associated with increased haze or *additional external causes need to be considered?*

Methods

- Patients who underwent corneal cross-linking between **January 2017 – December 2021** were identified.
- Retrospective data was collected at **baseline** visit, at **one-month post-crosslinking** and **last follow up visits**.
- Data points included:
 - presence or absence of pre-operative and post-operative corneal scarring and haze,
 - best corrected pre- operative and post-operative visual acuity (BCVA),
 - maximal keratometry (Kmax) value,
 - thinnest corneal thickness (TCT), and
 - central corneal thickness (CCT) prior to starting the crosslinking procedure.
- A correlation between the presence of scarring/haze (1) and all other parameters (namely, 2-5) was done by independent t-test.

Results

- 80 eyes were analyzed - 5 excluded (inadequate FU).
- Post-operative haze/scarring was noted in 22 eyes.
- 19/22 eyes were in the last 2 years.
- 12/80 eyes showed 1-0.1 log MAR BCVA decline.
- In 3/12 eyes - BCVA decline was due to post operative scarring/haze.
- Rest 9/12 eyes - decline was due to patient reluctance to attempt or wear specialized contact

	With Haze	Without Haze	P value
Kmax	63.7 ± 13.5 D	54.9 ± 10.9 D	0.009
TCT	440 ± 57 mm	448 ± 46 mm	0.43

Conclusions

- Postoperative haze was noted to be of concern in eyes with **steeper pre-operative corneal** testing.
- This is a **helpful guide towards patient counselling**.
- Best corrected visual acuity was not noted to be worsened, at the last follow up, in eyes with more-than-expected haze.**