

PURPOSE

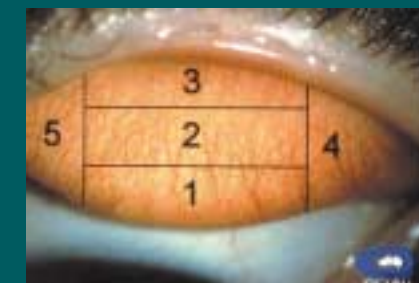
Contact Lens Papillary Conjunctivitis (CLPC), is of significance as it is a major cause for patients discontinuing from contact lens (CL) wear.¹ However, the aetiology of the condition is poorly understood. We determined if during CLPC, specific areas of the tarsal conjunctiva exhibit a papillary response. This may help provide some insights into the mechanisms leading to the condition.

METHODS

- ◆ Prospective CL clinical trials at L.V.Prasad Eye Institute, Hyderabad, India from March 1993 to September 2000.
- ◆ 1,584 eyes of 792 subjects. Low Dk disposable CL (FDA Groups Type I, II & IV) on a 6 night (N) extended wear and disposal schedule or high Dk silicone hydrogel CL on a 30N extended wear and disposal schedule.
- ◆ Events of CLPC diagnosed were considered for the study.

Upper tarsal conjunctival examination:

- ◆ The upper tarsal surface was classified into 5 areas and:



- the presence of papillae in each area recorded as yes/no. If papillae present, and scattered across the tarsus, it was 'General' and if located in specific areas, it was 'Local'.



- roughness (0-4 where 0= no roughness and 4= severe) was recorded in each area. Tarsal roughness at baseline (BL) was compared to CLPC using Grouped T-test.



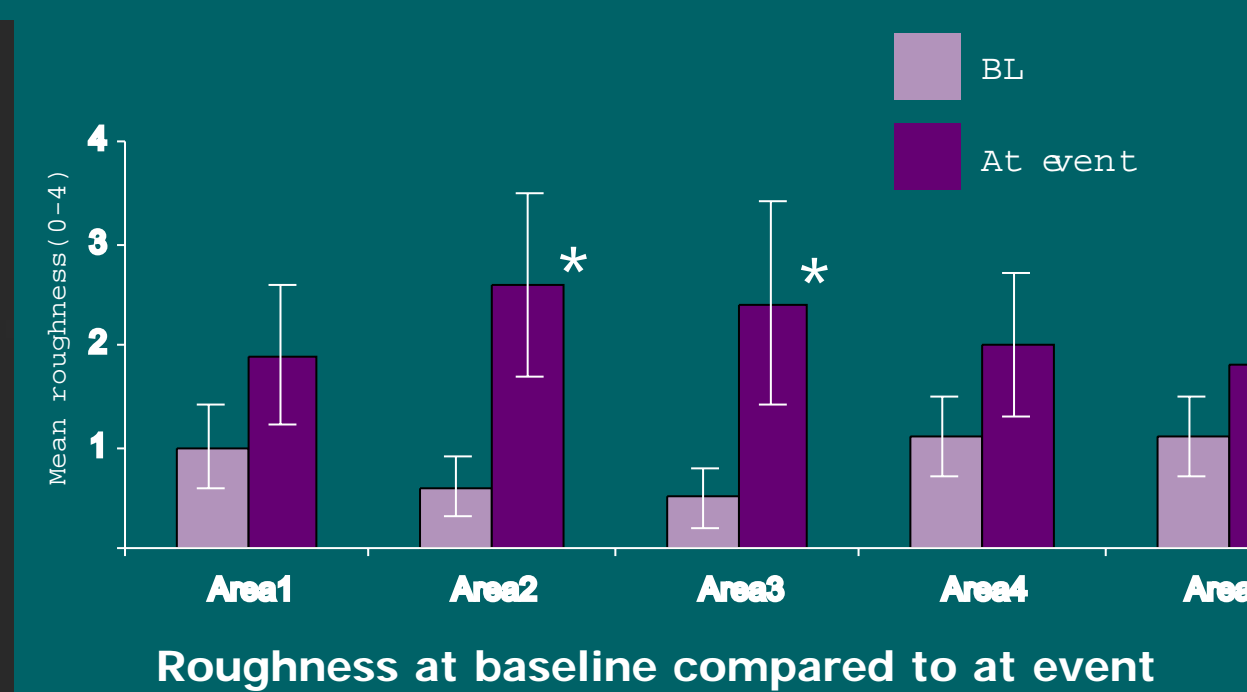
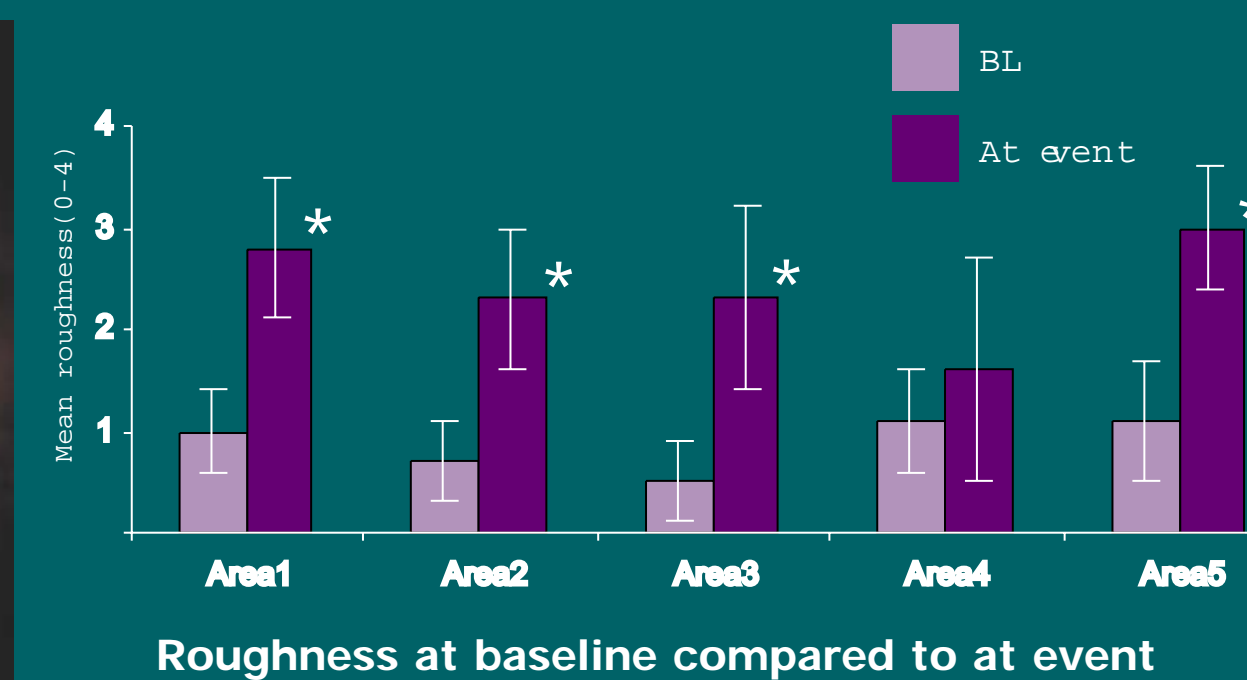
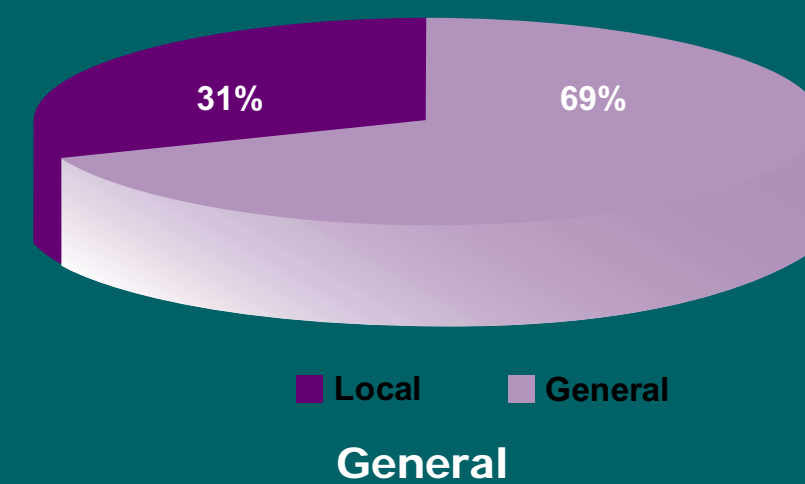
1=very slight 2=slight 3=moderate 4=severe

RESULTS

Sixty eight (68) events of CLPC were observed in 51 subjects. Of these, 64 were first events. Following the first event, 23 subjects were continued in lens wear and there were 4 recurrent events.

Age (yrs)	21 ± 2.7 (16-28)
Sex (M:F)	40 (78%): 11 (22%)
CL power (D)	-3.30 ± 1.30 (-1.00 to -6.00)
Lens type	Low Dk 76.5% High Dk 23.5%
Duration in lens wear (mnths)	9.5 ± 6.3 (1-25)

Clinical presentation of CLPC events (First events only)



* >1 grade roughness.

Roughness was slight at BL in all areas and was significant at event for all areas for both categories (p < 0.05).

DISCUSSION

- ◆ Papillae in 'General' were found all over central tarsus (Areas 1, 2 & 3) and in Area 5. However, in 'Local', the papillae were primarily in Areas 2 & 3. Interestingly, Korb *et al* reported papillae with hard CL wear to be present mainly in the zone adjacent to lid margin and the intervening central zone.² In contrast, papillae with soft CL wear were found mainly in the zone adjacent to tarsal fold and never adjacent to lid margin.³ Localised papillae were also reported in response to sutures, elevated corneal deposits etc.^{4,5}
- ◆ The association of localised papillae with rigid CL wear, sutures, elevated corneal deposits etc suggests that mechanical trauma could be responsible. It is probable that the physical interaction of the CL surface or edge with the conjunctival surface could lead to local papillae.
- ◆ The risk factors leading to 'General' response are not clear and it is possible that mechanical factors or other factors such as deposits leading to an immune reaction are responsible.

CONCLUSION

Two distinct presentations of CLPC, general and local were observed and may indicate different mechanisms underlying the response. The prevalence of general was greater than the local response. Possible risk factors include the lens type, however, these differences were not addressed in this study. The type and nature of the cellular infiltration of the tarsal conjunctival epithelium in these 2 categories may provide further insights to the mechanisms leading to these conditions.

REFERENCES

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