

INTRODUCTION

Contact Lens Papillary Conjunctivitis (CLPC), is one of the main reasons for discontinuations from contact lens (CL) wear¹.

Signs and symptoms of CLPC:

Signs: Papillae, tarsal conjunctival hyperemia, excessive lens movement, decentration and deposits.

Symptoms: Itchiness, grittiness, mucus discharge, discomfort, blurred vision.

Recently we observed that CLPC presented as:

- a) Localised, where papillae and hyperemia are seen localised on the tarsus close to the lid margin and
- b) Generalised, where the entire tarsus exhibits papillae².

Generalised CLPC is the more familiar condition, most commonly seen in low Dk CL wear.

To date no data has been published on the incidence of CLPC with extended wear (EW) of high Dk soft CL.

PURPOSE

To determine the incidence of CLPC with high Dk soft CLs used on a 6N or 30N EW schedule and to determine the prevalence of generalised versus localised CLPC.

METHODS AND MATERIALS

- Prospective 24 month clinical trial
- 93 subjects

| DEMOGRAPHICS | 6N (45) | 30N (48) |
|-------------------------------|---------------------------------------------------|---------------------------------------|
| Previous lens wear experience | Low Dk EW (6N) (24) Low Dk DW (21) | Low Dk EW (6N) (25) Low Dk DW (23) |
| Wear and replacement schedule | 6N EW followed by overnight removal; 30N disposal | 30N wear 30N disposal |
| Mean Rx Sphere (D) Cyl (D) | -3.05±1.25 -0.41±0.37 | -2.97±1.34 -0.26±0.30 |
| Sex M:F | 15:30 | 25:23 |
| Age (mean±SD,yrs) | 31±8 | 31±7 |

- Randomly assigned bilateral prototype high Dk soft CL (Lotrafilcon A, 24% H₂O, 175 Dk/t -3.00D).
- Subjects were reviewed at 1 week, 1 and 3 months EW then 3 monthly intervals until 24 months.
- At diagnosis CLPC was categorised as:
Generalised: papillae scattered over the tarsus
Localised: papillae predominantly in specific areas of the tarsus.
- Incidence of CLPC reported as number of first events per one hundred eyes.
- Differences between the two groups (6N and 30N) assessed using Student's t-tests.

RESULTS

Figure 1: Generalised CLPC

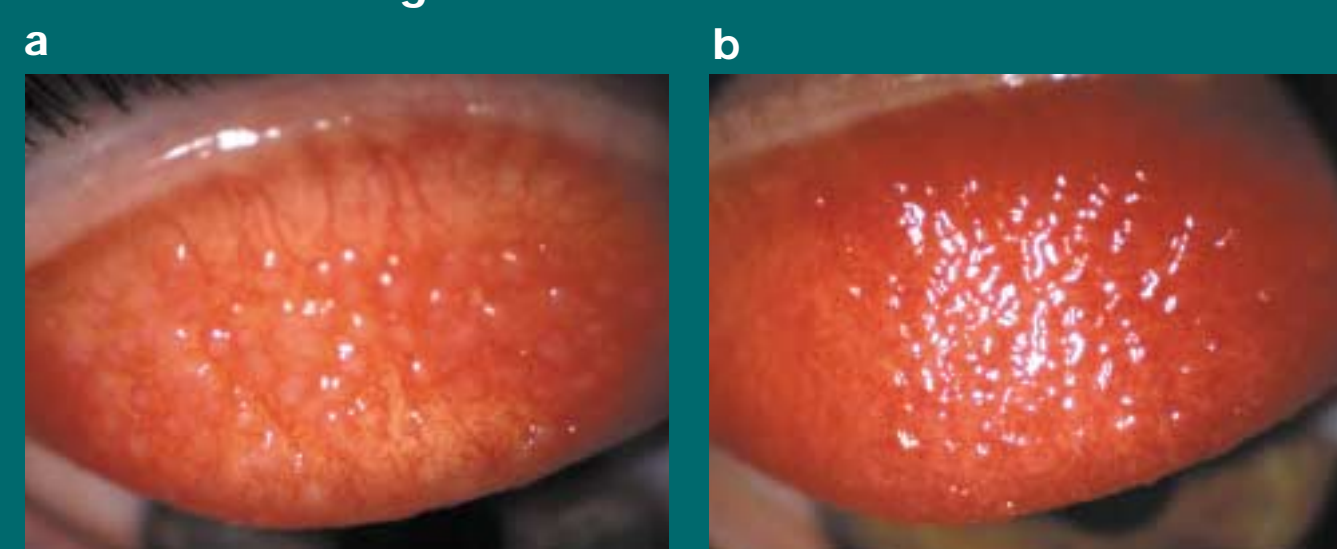


Figure 2: Localised CLPC

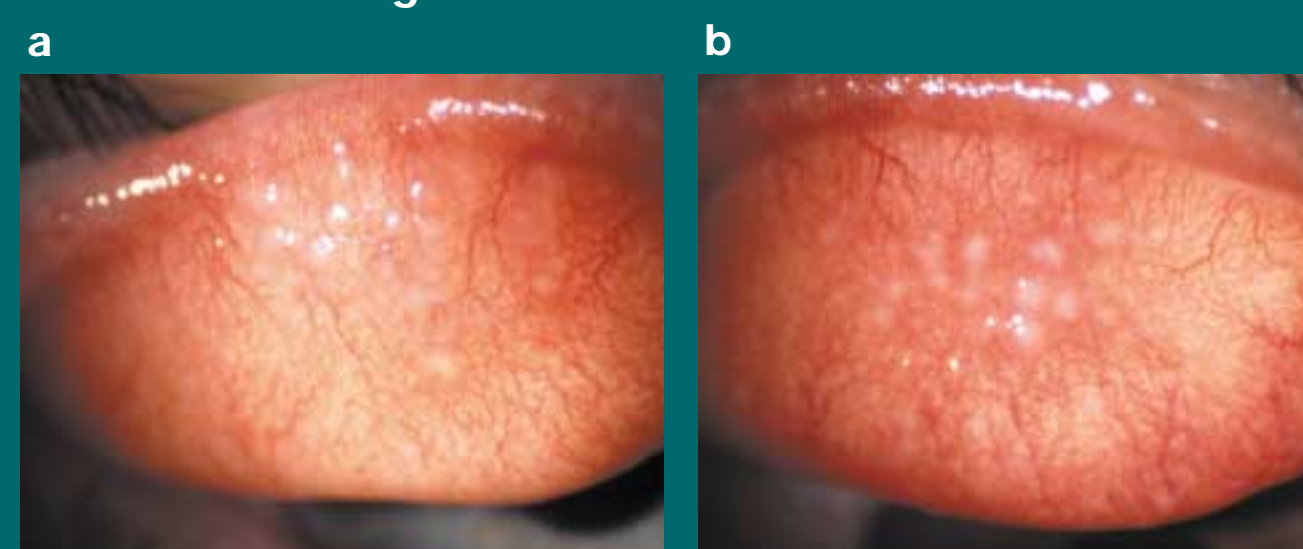


Figure 3: Incidence of CLPC - first event

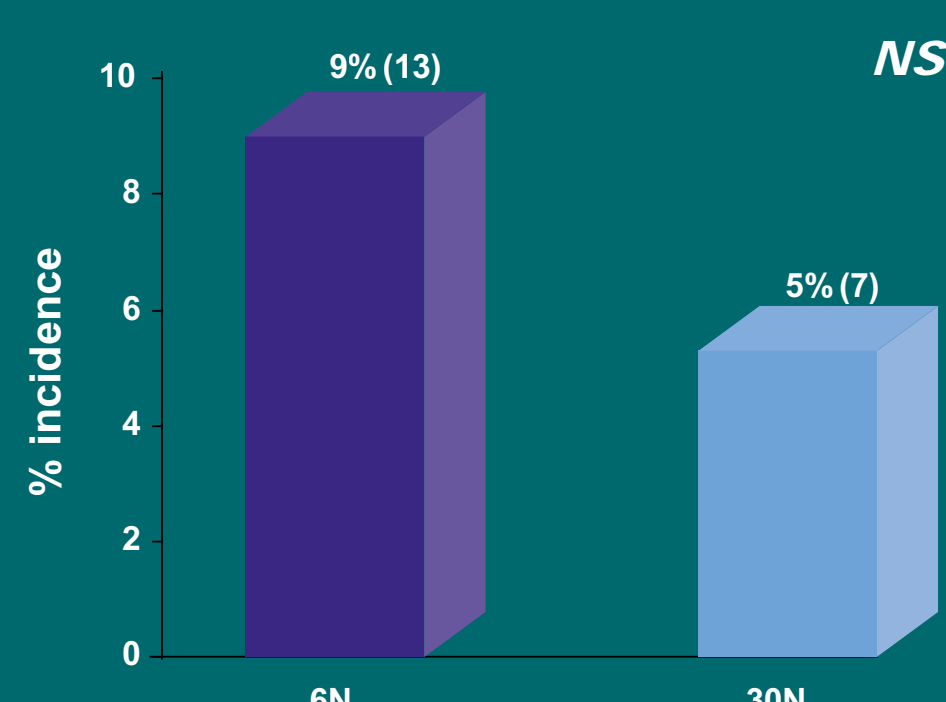


Figure 4: Incidence of generalised and localised CLPC

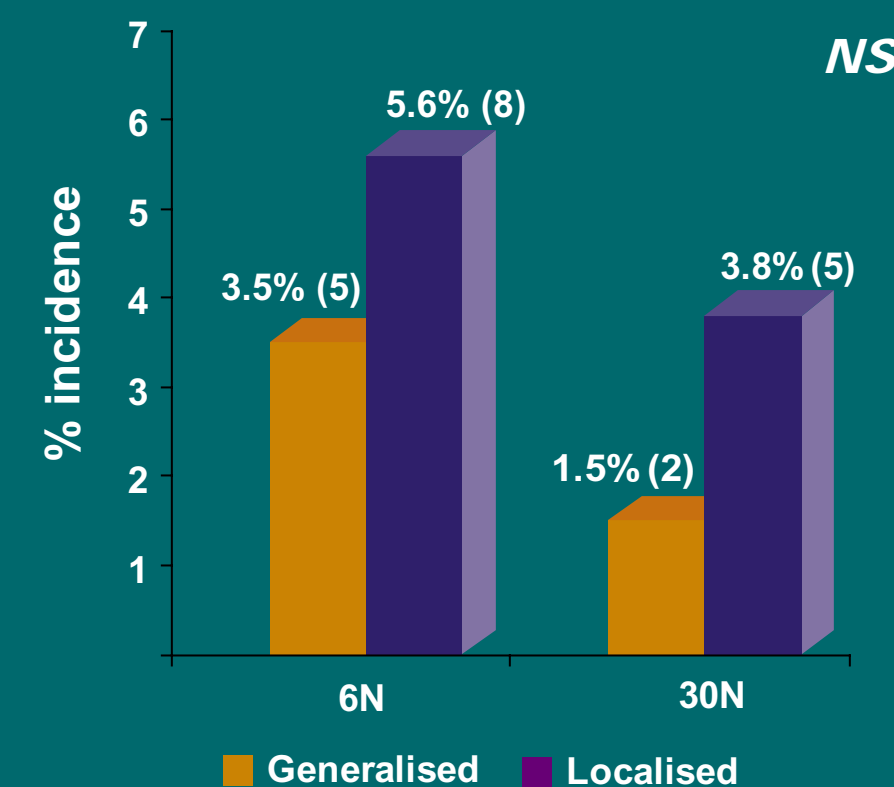


Figure 5: Percentage of localised and generalised CLPC

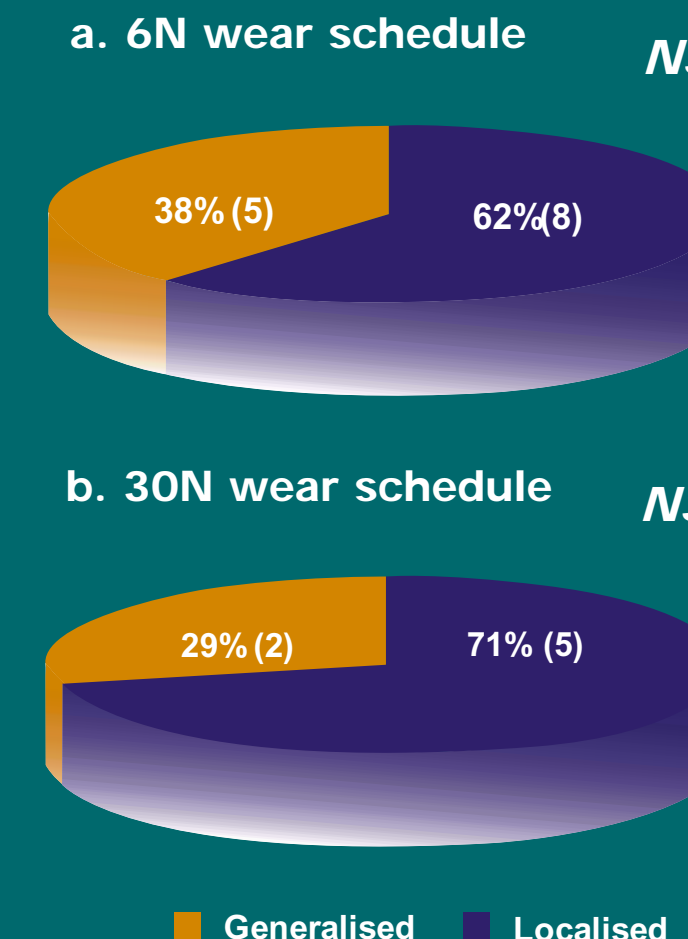
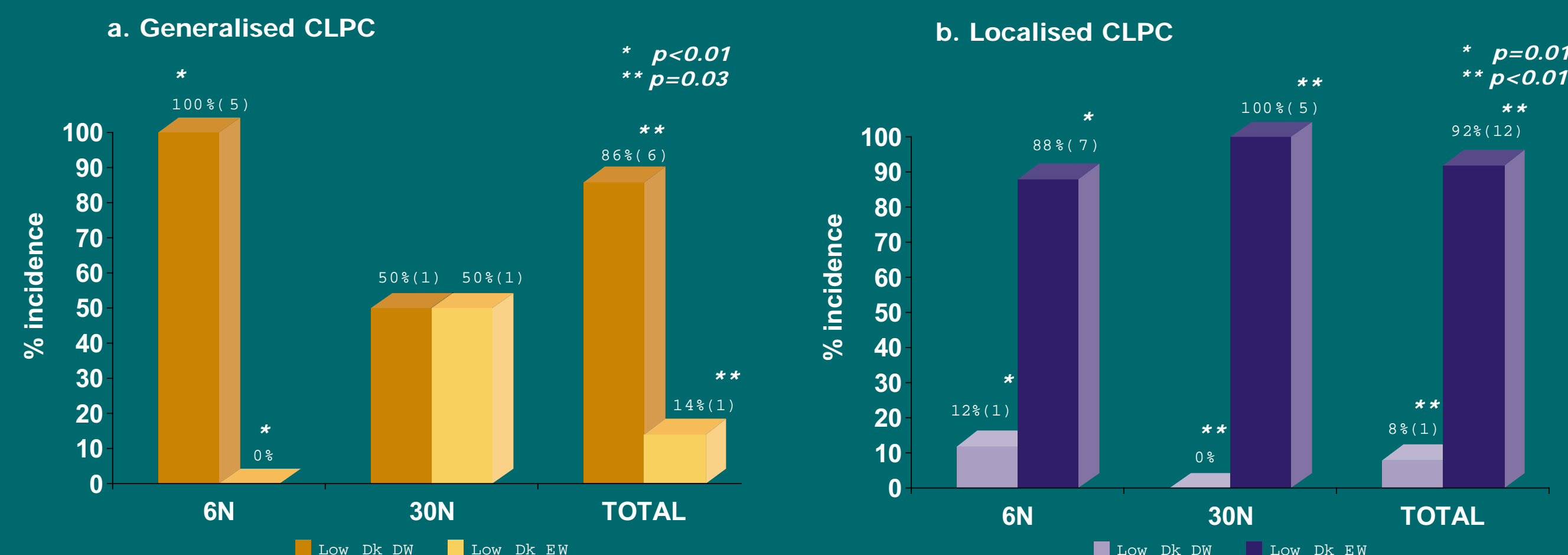


Figure 6: Incidence of CLPC by previous lens wear experience



DISCUSSION

- No difference in the incidence of CLPC between the wear schedules, therefore, removing and cleaning the lenses once a week seems to have no effect on the development of CLPC. This may change if the 6N group replaced the lenses after 6N EW.
- There was a higher incidence of localised CLPC for the group that had previous low Dk EW experience. This EW experience or length of lens wear may have sensitised the tarsus to develop localised CLPC.

CONCLUSION

- There is no difference in the incidence of CLPC between the 6N and 30N schedules.
- There is no difference in the prevalence of localised or generalised CLPC with the EW of high Dk soft CLs.

FUTURE STUDIES

- To compare the incidence of CLPC of subjects with no CL experience to experienced CL wearers.
- To determine the incidence of CLPC on a 6N replacement schedule compared to a 30N replacement schedule.

REFERENCES

- Sankaridurg P, Skotnitsky C, Pearce D et al. Contact Lens Papillary Conjunctivitis-A Review (2001). Optometry in Practice Vol 2 (2001) 19-28.
- Sankaridurg P, Sweeney D, Naduvilath T et al. Papillary Response in Contact Lens Induced Papillary Conjunctivitis is either general or localised (ARVO abstract 2001).

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