Corneal pigmentation in overnight orthokeratology: a case series.

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Abstract

BACKGROUND: Iron deposition within the basal corneal epithelium, or a Hudson-Stahli line, is a common physiological finding. Variations of this deposition can be seen after surgical refractive procedures and as a result of corneal disease. This case series provides evidence of corneal deposition of a similar nature in patients who wear reverse geometry rigid gas-permeable contact lenses for overnight orthokeratology. To date, similar findings associated with orthokeratology have not been published.

CASE REPORTS: Deposition-presumably of iron-was found in the corneal epithelium in a small sample of patients who have been undergoing treatment with overnight orthokeratology for a duration of 6 months to 2 years. Paragon CRT lenses were worn by four patients, the DreimLens was worn by one patient, and one patient initially began treatment in the FARGO 6 lens design and ultimately was refitted into Paragon CRT lenses. The finding was more prominent in patients with dark irides and in patients with higher baseline refractive errors.

CONCLUSIONS: Although this is an interesting finding, it does not appear to affect visual acuity nor does it appear to be adverse in nature. No treatment has been necessary in any of the cases presented. All six patients are still undergoing treatment with overnight orthokeratology.

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