Stabilization of refractive errors and corneal curvatures after long term Orthokeratology
Man Chi, Yee, BSc (Hons) Optom
Wan Sang, Chui, P.Dip. (Optom), M.Phil., FAAO, FBCLA
Pauline Cho, BOptom MEd PhD, FAAO, FBCLA

Abstract
Purpose:
To report stabilization of refractive errors and corneal curvatures after long term overnight Orthokeratology (OK) wear for myopic control.

This case series focus on the corneal and refractive error changes after patients who had been undergoing long term OK treatment for myopic control had ceased lens wear. Clinical files were surveyed and five cases which satisfied the recruitment criteria were identified and the patients’ data were retrieved and analysed. These patients had worn OK lenses for at least five years and pertinent data were available at five visit intervals: immediately before ceasing OK lens wear, 3-7 days, 3-6 weeks, 5-7 months, and 11-13 months after ceasing OK lens wear.
These patients started wearing OK lenses at median age of 10 yo (range: 9-12) until they were 17-20 yo. They had been wearing OK lenses for 5-9 years (median 9 years) and their initial (median) myopia was -3.75D (range: -3.00 to -4.75D) before commencing OK lens wear. Only right eye data was presented.
After ceasing OK lens wear, myopia and flat K showed some increase but plateaued after 3-6 weeks (i.e. changes between consecutive visits of ≤0.50D). The median myopia was -3.75D (range: -2.5 to -6D) at 6 weeks after ceasing lens wear and flat K was just slightly lower than baseline (i.e before commencement of OK treatment) values.

From these cases, stabilization of refractive error and corneal curvatures may be patient dependent but it appears that changes stabilized about 6 weeks after cease lens wear. No sudden, drastic increase in myopia (compared to baseline values) was observed within the first year after cessation of OK treatment.