CASE STUDY
KERATOCONUS
VS MALE 16

HISTORY

VS was diagnosed with keratoconus in 2004 and fitted with RGP contact lenses. He had a history of allergies and constantly rubbed his eyes vigorously, despite being told quite clearly this was damaging his corneas. He struggled with RGP lenses for around 2 years and then gave up on them because they were too uncomfortable. By this time, he had extensive central scarring (partly from RGP (LE) and partly from the eye rubbing) and corneal grafting was the only option given to him. Since grafts are not available in Trinidad, this would have meant going to the USA and financially, this was not possible.

He could not tolerate spectacle correction and had been reduced to Count Fingers (CF) since 2006 and had been unable to attend school. He was profoundly depressed and withdrawn when seen in the clinic.

<table>
<thead>
<tr>
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<th>R</th>
<th>L</th>
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<tbody>
<tr>
<td>Vision</td>
<td>Count Fingers</td>
<td>Count Fingers</td>
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<tr>
<td>Spectacle RX</td>
<td>-14.00 DS VA 3/60</td>
<td>-13.50 DS VA 3/60</td>
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<tr>
<td>Keratometry*</td>
<td>5.53 x 173/5.20 x 83</td>
<td>5.11 x 48/4.89 x 138</td>
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* Refraction was approximate due to central scarring and non-co-operation of patient

RE

LE
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Topography / Pachymetry

RE

LE

Lens Type Fitted
KeraSoft®3 in Contamac Definitive® Silicone Hydrogel material

R
8.00/14.50/-14.00 VA 6/24+
Binac Acuity 6/18 part

L
8.00/14.50/-12.00/-2.50 x 13 VA 6/36

Keratocopy for RE before and after insertion of KeraSoft®3

Before

After
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LE HOA [Higher Order Aberration] Maps
No lens in place
With KeraSoft®3 in situ

**DISCUSSION**

All HOAs significantly reduced

VS arrived at the clinic profoundly withdrawn, depressed and unwilling to co-operate. Refraction was virtually impossible due to his complete lack of communication and he acted as if completely blind.

However once lenses were inserted VS underwent a complete transformation, he began to co-operate and interact with staff and other patients, and by the end of the session had even made friends with another keratoconic boy. Such was the transformation that, staff allowed him to take the trial lenses home while awaiting the final lenses and within a week he was back at school. Although acuity was limited by the corneal scarring, the vast improvement from Count Fingers to 6/18 part binocularly made a massive improvement in his life and avoided the immediate need or grafting.