When and How to Use OrthoK for Myopia Control

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Disclosure

• I have received research funding from:
  - Bausch and Lomb
  - Paragon Vision Science
  - I am a consultant to Bausch and Lomb’s Specialty Vision Products Division

Various Modalities

• Efficacy
• Ideal Age
• Duration of Treatment
• Compliance
• Special Considerations

Myopia Control Modalities

• OrthoK
• Atropine
• Prescribed Outdoor Time
• Soft Multifocals
• GP Multifocals
• Spectacle Multifocals
• Vision Therapy


Survey Results

• Myopia Progression is a concern – mean = 6 (on 1-10 scoring)
• How active in Myopia Control – mean = 4
• Preferred Myopia Treatment = 50% prescribe SV spectacles
• Reasons for not doing Myopia Control
  - Not enough info
  - Not effective
  - Safety concerns


What modality do you prefer??

• Experience with previous patients
• Reported Efficacy
• What you hear from your colleagues
• Experience with GP lenses
• Office routines
• Unknown ???

OrthoK

- Getting Started
  - Learning curve for fitting: 10 patients, 2-3 months?
  - Change in office: staff training, scheduling, marketing

- Efficacy
  - Numerous studies about 45% less myopic progression
  - Some kids show no progression (100% control)


OrthoK

- Ideal Age
  - Earlier the better
  - Most 8-yr olds do well

- Duration of Treatment
  - Can be done long-term – no reason to stop
  - Limitation – regular wearing time

- Compliance
  - Excellent – kids love it
  - Patients know – clean lenses = comfortable lenses


Atropine

- Efficacy – 60-80% compared to spectacles
- Ideal Age – 4 to ??
- Duration of Treatment - unknown
- Compliance – good with low-dose, difficult with 1%
- Long-term Safety - unknown

Prescribed Outdoor Time

- Efficacy - unknown
- Ideal Age – as early as possible for delaying onset
- Duration of Treatment – as long as possible
- Compliance - unknown

Soft Multifocals

- Efficacy – 40-60% compared to spectacles
- Ideal Age – 10 or over
- Duration of Treatment – during growth years
- Compliance – good, but cant wear for every waking hour

GP Multifocals

- Efficacy – 40-60% compared to spectacles
- Ideal Age – 10 or over
- Duration of Treatment – during growth years
- Compliance – good, but cant wear for every waking hour
Spectacle Multifocals

- Efficacy – 10-20%
- Ideal Age – 5-7 to start, any age after
- Duration of Treatment - unknown
- Compliance – good but kids may look around intended spot

Vision Therapy

- Efficacy - unknown
- Ideal Age – early as possible
- Duration of Treatment - unknown
- Compliance - unknown

Summary Grid

<table>
<thead>
<tr>
<th>Method</th>
<th>Efficacy</th>
<th>Ideal Age to start</th>
<th>Duration of Treatment</th>
<th>Compliance</th>
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</thead>
<tbody>
<tr>
<td>OrthoK</td>
<td>~45%</td>
<td>8</td>
<td>forever</td>
<td>excellent</td>
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<tr>
<td>Atropine</td>
<td>~60-80%</td>
<td>5</td>
<td>Unknown</td>
<td>variable</td>
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<tr>
<td>Prescribed Outdoor Time</td>
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<td>Early as possible</td>
<td>Growth years</td>
<td>Unknown</td>
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<tr>
<td>Soft Multifocals</td>
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<td>10</td>
<td>~10</td>
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<tr>
<td>GP Multifocals</td>
<td>3%</td>
<td>10</td>
<td>~10</td>
<td>Unknown</td>
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<tr>
<td>Spectacle Multifocals</td>
<td>10-20%</td>
<td>5-7</td>
<td>Growth years</td>
<td>Unknown</td>
</tr>
<tr>
<td>Vision Therapy</td>
<td>Unknown</td>
<td>Early as possible</td>
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<td>unknown</td>
</tr>
</tbody>
</table>

OrthoK

- Plant the seed early
- Discuss OrthoK even before kids show myopia
- Discuss risk factors*
- Create handouts on myopia control strategies
- Create handouts on increased myopia prevalence
- Create handouts on complications of myopia

* http://www.myopiaprofile.com/

OrthoK - Presentation to Parents

- Not FDA-approved
- Mounting body of evidence – for safety and myopia control
  - Dispense info sheets of studies on safety and efficacy
- Risks vs. Benefits
  - For a 5D or greater myope:
    - The lifetime risk of RD is 3.5 times higher than their risk of MK with daily wear
    - No correction worn during waking hours/activities
- Compliance
  - Follow-up visits
  - Lens Care
- Kids must be motivated!!

Presentation to Children

- Commitment
  - Wearing schedule and lens care
- Compliance
  - Follow-up visits
  - Lens Care
- Communication
  - With parents and with doctor
When to Start

- Highly dependent on individual
- Motivation
- Maturity
- Attitude toward lens wear
- Communication
- Parental Attitudes/Support
- Ideal age to start is 8

Thank You

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