

Thur Sept 19

7:15-8:15 am

21L1 - Vision Heroes: Saving Sight with Contact Lenses in the Pediatric Population

Category: CL

1 Hour

Speaker

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Course Description

Children and youth remain to be one of the greatest responsibilities in eye care, as 'today's decisions affect tomorrow'. Emphasis will be placed on contact lens use for best visual outcomes in pediatrics and how to deliver high-quality eye care to pediatric patients with sensitivity and expertise. This course provides an exploration of indications for use of contact lenses such as infant aphakia, trauma, myopia control, and sports vision; appropriate ages for use and prevention of adverse events will also be covered.

Course Objectives

1. Review literature on infant aphakia and traumatic anterior eye irregularity in youth
2. Present cases to demonstrate safe and effective CL use in a vulnerable population
3. Provide participants with practical clinical tips when fitting infants and youth

Course Outline

1. Introduction to surgical and traumatic causes of ocular irregularity in infants and pediatrics
 - a. Infant aphakia
 - b. Traumatic injury
 - c. Review of natural development of visual pathway

- d. Discussion of amblyogenic risk factors and the role of contact lenses in prevention
2. Quality of life considerations for decreased vision in children
- a. Literature Review
 - i. Mental Health among Children and Young Adults with Visual Impairments: A Systematic Review
 - 1. Children with low vision have a reportedly higher incidence of mental health concerns compared to their sighted peers
 - ii. Impact of low vision rehabilitation on functional vision performance of children with visual impairment.
 - 1. Visual impairment can hinder a child's ability to read facial expressions and learn to predict people's behaviors, contributing to increased social isolation
3. Infant Aphakia
- a. Literature Review
 - i. The Infant Aphakia Treatment Study
 - ii. Parenting Stress in the Infant Aphakia Study
 - b. Fitting special needs populations
 - c. Corneal GP fitting overview
 - i. Requires experienced, skilled fitter
 - ii. Highest precision in power; can correct some corneal astigmatism
 - iii. Easy to apply and remove
 - d. SilSoft lens fitting overview
 - i. Relatively easy to fit and well tolerated
 - ii. +7D to +32 D; limited to 3D increments for powers over 20D
 - iii. Can use for some extended wear
 - e. Fitting guidelines
 - i. Refractive target for infant aphakia
 - 1. Aim for approximately 2.5-3D minus over-refraction
 - a. Ie: over plussed to favor near and intermediate world during visual pathway development
 - 2. Around age 2yo may use a lined bifocal or progressive
 - ii. Corneal GP case report
 - 1. Case presentation
 - 2. Fitting process
 - 3. Application and removal
 - iii. SilSoft case report
 - 1. Case presentation

2. Fitting process
 3. Application and removal
 - iv. Follow-up schedule for infant aphakia
 1. Track for normative growth and safety/compliance
 - a. Prescription changes on average every 3-6 months
 - b. Best to follow q3m
 - c. When to cyclo at follow-ups
 - f. Fitting in the future: empirical based on axial length model
 - i. Case example of empirical GP fit for infant aphakia based on reduced eye model, including required measurements to perform calculations
 1. Surgical report with axial length and keratometry
 2. Some occasions given power can use this in calculation
 3. Diagnostic fitting still more accurate today
4. Traumatic injury and subsequent anterior eye opacities and irregularity in pediatric patients
 - a. Literature Review
 - i. Ocular Consequences of Bottle Rocket injuries in Children and Adolescents
 - ii. Penetrating keratoplasty in young children with congenital hereditary endothelial dystrophy.
 - iii. Miniscleral Contact Lens in Pediatric Age Group: Indications, Safety, and Efficacy
 - b. Traumatic Iris Defects
 - i. Case Report
 1. Case presentation
 2. Prosthetic iris soft lens fitting process
 3. Objective and subjective outcomes
 - c. Traumatic Corneal Defects
 - i. Case Report
 1. Case presentation
 2. Corneal GP lens versus scleral lens fitting process
 3. Objective and subjective outcomes
 - d. PKP following penetrating injury
 - i. Case Report
 1. Case presentation
 2. Scleral lens fitting process
 3. Objective and subjective outcomes

5. Sports Vision Overview
 - a. Implications
 - b. Challenges
 - c. Common modalities

6. Myopia Control Overview
 - a. Current state of affairs
 - b. Update on contact lens options and efficacy

7. Safety Considerations
 - a. Literature Review
 - i. Contact Lens-Associated Infectious Keratitis: Update on Diagnosis and Therapy
 - ii. The Safety of Soft Contact Lenses in Children
 - b. Solution use and mis-use
 - c. Support for emergencies and red eyes
 - i. Red eye is a tool that we can use to show that something could be wrong
 - ii. Do not ignore a red eye; discontinue lens use and return to the clinic
 - iii. Triage for infants and kids with contact lens related red eye is same day appointment

8. Clinical integration for fitting specialty contact lenses for infants and youth
 - a. Becoming a referral site
 - b. Marketing tools
 - c. Co-management challenges and tips
 - d. Setting fee structure for services and products
 - e. Effective use of staff

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