Hydrogen Peroxide Contact Lens Care
Systems:
A Collaboration for Success

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Contact Lens Care Solutions

• Multipurpose Disinfection Solution (MPS)

• Multi-step Care System
  – Boston (Bausch + Lomb)
  – Optimum (Lobob)
  – Progent (Menicon)

• Hydrogen Peroxide Care System

• Enzymatic Cleaners
Contact Lens Care Solutions

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Keratitis Secondary to Optimum CDS

- Day 1
- Day 3
3% Hydrogen peroxide (H\textsubscript{2}O\textsubscript{2})

- Efficacious microbial disinfectant\textsuperscript{1-3}
- Essential product for many different types of contact lenses
- Mainstay on the market for 3 decades
- Over the years, the contact lens industry has simplified the use of this type of care system, increasing safety while maintaining efficacy

3% Hydrogen peroxide (H₂O₂)

- Still, the potential for noncompliance remains

- FDA has received some medical device reports directly from consumers
  - “most often because (consumers) failed to read and follow directions for use”

Potential for noncompliance:

- Existing $\text{H}_2\text{O}_2$ patient inadvertently applies solution to contact lens or eye → rare
- Multipurpose solution (MPS) patient “borrows” $\text{H}_2\text{O}_2$ from friend or family member (and uses his/her own flat case, rather than the basket-type case used with $\text{H}_2\text{O}_2$) → rare
- MPS patient inadvertently purchases $\text{H}_2\text{O}_2$ and uses it with flat case → rare
Potential for noncompliance:

- $\text{H}_2\text{O}_2$ is incompletely neutralized after 6 hour cycle with current products, rare
  - Before 1 particular product and after its recall rare
  - New case/disc with each solution purchase
  - Residual $\text{H}_2\text{O}_2$ after neutralization 15 +/- 8 ppm
  - >100 ppm: stinging response
  - Levels as high as 800 ppm do not disrupt the corneal or conjunctival epithelial surface
  - I have heard patients complain of this, but they then use a rinsing solution prior to insertion; I have never personally seen a damaging keratitis from this


Potential for noncompliance:

- Inadvertent purchase of **private label** H$_2$O$_2$ by **private label** MPS users
  - Most frequent
  - A primary weakness of the entire H$_2$O$_2$ conversation is the labeling of generic H$_2$O$_2$
  - No outside red cap on some of these products
  - Instructions regarding cases and package labeling are not clear enough
  - Generic sellers are allowed to sell products with labels that are too similar
  - Global labelling issue affects ALL generic products, not just H$_2$O$_2$
  
  • “If you like OptiFree, try me!”
Solutions:

• Practitioners (or their staff) need to completely understand the features of all care systems, prescribe the one optimal for their patient, **instruct them to not deviate from it** (i.e. no generics), and **properly communicate** product instructions

• Collaboration is essential for proper product utilization
Collaboration:

• Should include, but not be limited to:
  – More specific labelling by the contact lens industry, particularly for private label products
  – Improved practitioner and staff education on the product’s mechanism of action and how to best communicate its use (from FDA or industry)
  – FDA vigilance to ensure the proper use of H₂O₂ and all contact lens care products
  – Full patient compliance with practitioner and label instructions and guidelines
Conclusions: Hydrogen peroxide

• Safe, effective contact lens disinfectant

• The benefits of its thorough disinfection and preservative-free composition far outweigh the rare complications associated with this care system.
Thank you for your time and attention.