Silicone Hydrogel Fitting Trends in an Optometric Institution

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ABSTRACT

Purpose: To compare the saturation of silicone hydrogel contact lenses in the Indiana University School of Optometry (IUSO) clinic system from the same quarter 2005 and 2006 to determine the growth of this lens material over time.

Methods: Data of all soft contact lens supply orders in IUSO clinics from the 1st Quarter (1stQ) of both 2005 and 2006 was compiled. The total number of orders placed for all soft contact lens materials were compared with the orders for silicone hydrogel materials and those orders were then examined by lens design. Finally, the saturation of silicone hydrogel orders and their percent growth from 1stQ 2005 to 1stQ 2006 in the IUSO clinic system was compared to nationwide saturation and growth.

Results: There were 696 soft lens orders during 1stQ 2005 and 1126 soft lens orders during 1stQ 2006. Upon analysis, 102.9% growth in total soft lens orders with 30.0% growth in silicone hydrogel. Of the 309 1stQ 2005 silicone hydrogel orders, 305 (98.7%) were single vision and 5 (1.3%) were toric. To compare, of the 627 1stQ 2006 orders, 529 (84.4%) were single vision, 96 (15.3%) were toric, and 20 (3.2%) were multifocal. This relates to a 74.4% growth in the number of single vision silicone hydrogel orders and 253.6% growth in the number of toric silicone hydrogel orders. The growth is probably attributable to the release of new lens designs and to an overall increased awareness of the benefits of silicone hydrogel lenses.

Conclusion: There was a clear increase in the prescribing of silicone hydrogel materials in the IUSO clinics. Anecdotal data suggests silicone hydrogel lens materials may total approximately 40-45% for 2006, an increase from the HPR reported 23% silicone hydrogel lens materials in 2005. Academic settings, such as the IUSO clinics, may be early adopters of the emerging trend.

Why fit Silicone Hyrogels?

The most compelling reason to fit patients in silicone hydrogel contact lenses is to reduce complications related to contact lens wear. Hyogels have been established that contact lens-induced hypoxia is likely responsible for many of the detrimental corneal effects of contact lens wear. Extended wear of contact lenses made from traditional hydrogel materials is known to provide excellent comfort and vision, but can compromise corneal physiology. Consequences include compromised corneal function, hypersensitivity, impaction of lens material, infection, and dryness. Supping 300-500% greater amounts of oxygen through the contact lens (which is possible with silicone hydrogel materials), can greatly reduce or eliminate these complications. It should be noted that this is not the sole adverse event related to extended wear of contact lenses, the risk of microbial keratitis, may not be reduced significantly with soft hydrogel lens materials. Perhaps the most impressive feature of silicone hydrogels is the demonstrated reduction in the incidence of corneal edema and the ocular irritation associated with it. The increased amount of oxygen allows for a healthier cornea, with fewer hypoxic effects and fewer of the above mentioned complications. Siliceal and silicone hydrogel fits are likely the future of contact lenses, and patients are being successfully adapted to these lenses.

References