5-1-1994

An instructional video of RGP fitting modalities

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An instructional video of RGP fitting modalities

Abstract
The ultimate goal in fitting rigid gas permeable contacts is to maintain a healthy corneal-lens relationship while satisfying the patient. The fitter may choose between an interpalpebral lens, an under the lid lens, and an upper lid attachment lens modality. The interpalpebral modality is fit at least 0.50D steeper than the flattest keratometer reading and has a diameter between 7.8 and 8.3mm. The base curve chosen for an under the lid fit depends on the size of lens used. Large or small lenses can be fit with this modality depending on the palpebral fissure width. In contrast the upper lid attachment fit uses a diameter larger than 8.8mm and rests under the upper lid. The fitter must understand the relationships between lens diameter, base curves, lens edge and center thickness, and peripheral curves when designing the rigid gas permeable (RGP) lens. The use of fluorescein is an invaluable tool in assessing the fit of a RGP lens and the patient’s corneal health. This paper/video will discuss and illustrate these various effects.

Degree Type
Thesis

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An Instructional Video
of
RGP Fitting Modalities

By
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and
Diana L Whitlock

A Thesis submitted to the faculty of the
College of Optometry
Pacific University
Forest Grove, Oregon
for the degree of
Doctor of Optometry
May 1994

Advisor:
James E Peterson, O.D., F.A.A.O.
Acknowledgments

We would sincerely like to thank Dr. Cristina Schnider for all her help in accessing the Nikon FS-2/JVC slit lamp and the expert advice on how to deal with the temperamental instrument. We would also like to thank Colin Stapp of the Audio-Visual Department at Pacific University in helping with the production of the video. We would like to thank Arlynn Roper for the use of his voice in this video. Finally, we also thank Dr. James Peterson for all the extra hours he spent watching our tapes and giving us insight into contact lens fitting.
Biographies

LOIS M. MEACHAM received her B.A. in Biology from Gustavus Adolphus College, St. Peter, MN in May of 1984. She is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. Her future plans include optometric practice in Oregon.

DIANA L. WHITLOCK received her B.S. in Chemistry from University of Washington, Seattle, WA in August of 1990. She is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. Her future plans includes marriage to Lyle McFarland in July of 1994 and private practice in the Seattle area.

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Abstract:

The ultimate goal in fitting rigid gas permeable contacts is to maintain a healthy corneal-lens relationship while satisfying the patient. The fitter may choose between an interpalpebral lens, an under the lid lens, and an upper lid attachment lens modality. The interpalpebral modality is fit at least 0.50D steeper than the flattest keratometer reading and has a diameter between 7.8 and 8.3mm. The base curve chosen for an under the lid fit depends on the size of lens used. Large or small lenses can be fit with this modality depending on the palpebral fissure width. In contrast the upper lid attachment fit uses a diameter larger than 8.8mm and rests under the upper lid. The fitter must understand the relationships between lens diameter, base curves, lens edge and center thickness, and peripheral curves when designing the rigid gas permeable (RGP) lens. The use of fluorescein is an invaluable tool in assessing the fit of a RGP lens and the patient's corneal health. This paper/video will discuss and illustrate these various effects.

Key Words:

Base curves, fluorescein patterns, interpalpebral fitting modality, lens diameter, peripheral curves, under the lid modality, and upper lid attachment modality
Foreword:

Pacific University presents an instructional video for beginning and intermediate fitters. This video will illustrate the upper lid attached, the interpalpebral, and under the lid fitting modalities. These modalities will show options in designing a custom fit for the patient.
1. Pacific University presents

2. A comparison of RGP fitting modalities: the interpalpebral fit, the under the lid fit, and the upper lid attached fit

3. A good interpalpebral fit
   \[42.87/43.12@90\text{ B.C. 7.65mm Diameter 8.2mm}\]

4. A steep interpalpebral fit
   \[42.87/43.12@90\text{ B.C. 7.38mm Diameter 8.5 mm}\]

5. An under the lid fit
   \[42.87/43.12@90\text{ B.C. 7.76 mm Diameter 8.2 mm}\]

6. The "dumb-bell" shape or the "double d" fluorescein pattern
   \[42.00/43.50@90\text{ B.C. 7.71mm Diameter 9.2mm}\]

7. A flat under the lid fit
   \[44.25/43.50@70\text{ B.C. 7.68mm Diameter 8.5mm}\]

8. A good under the lid fit
   \[42.00/43.50@90\text{ B.C. 7.80mm Diameter 9.6mm}\]

9. A steep under the lid fit
   \[44.00/44.62@90\text{ B.C. 7.65mm Diameter 9.0mm}\]

10. A flat under the lid fit
    \[42.00/43.50@ 90\text{ B.C. 8.04mm Diameter 9.6mm}\]

11. An upper lid attachment fit on ATR patient
    \[43.25/42.75@90\text{ B.C. 7.95mm Diamter 9.5mm}\]

12. Our appreciation goes to
    Dr. James Peterson for technical advising
    Dr. Christina Schnider for assistance with the equipment
    Collin Stapp for audio/visual support
    Arlynn Roper for narrating

13. Presentors:
    Lois Meacham
    Diana Whitlock
    Advisor:
    Dr. James Peterson
Bibliography


