Cover tests procedures for determining phoric, tropic behavior (a video tape)

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Abstract
Cover tests procedures for determining phoric, tropic behavior (a video tape)

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COVER TEST PROCEDURES FOR
DETERMINING PHORIC, TROPIC BEHAVIOR

(A VIDEO TAPE)

A Fourth Year Optometry Project
Presented To
The Faculty of the College of Optometry
Pacific University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Optometry

Advisor: Professor H. M. Haynes, O.D.

by
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May, 1970
APPROVED

Graduate Thesis Committee

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CHAPTER I.

INTRODUCTION

This video tape presentation of the cover test was developed to aid the optometric student learn its use through an organized training film. The opportunity in the clinic to observe some postural anomalies by the student clinician may be so infrequent that his detection skills may not develop as rapidly as desired. Video tape presentation makes available another medium for observation of phoric and tropic performance with unlimited repetition.
CHAPTER II.

SPECIFIC OBJECTIVES

This film was prepared with a two-fold purpose in mind. It demonstrates the techniques of doing unilateral and alternating cover tests and it presents various eye posture responses to unilateral and alternating cover tests by subjects who have gross tropic and phoric conditions.
CHAPTER III.

USE OF EQUIPMENT

Standard and readily-available testing equipment was used by the clinician. The far fixation target was a white dot (1" diameter) placed twenty feet from the subject. The near fixation light was the standard pinlight attachment supplied with the American Optical Diagnostic Set. Either a black or white plastic paddle occluder may be used. A black occluder is used in this film to enhance contrast against the subject's face.
CHAPTER IV.

SELECTION OF SUBJECTS

Subjects used in the film were out-patients of the Optometry Clinic who were taken from the strabismic special clinic or were optometry students. They were selected because each had a gross eye posture anomaly of a magnitude sufficient to be observable under the filming conditions. The eight subjects seen in the film were selected from taped examination sequences made on thirteen subjects. These eight subjects were selected because of clarity of eye movement responses and because of redundancy or technical difficulties encountered while taping the other five subjects.
CHAPTER V.

SUGGESTIONS FOR OBSERVING FILM

The clinical techniques shown in the film were a compromise of proper procedures due to filming restrictions.

The following information may be obtained from observations of a unilateral alternating cover test:¹

1) Binocular versus strabismic fixation at various test distances.
2) Magnitude of phoric and tropic responses at varying distances (by estimate or loose prism measurements).
3) Classification of strabismic behavior by deviation.
4) Comitancy or non-concomitancy. (Cover test may be run in the nine cardinal directions.)
5) Observation of phoria-recovery response.
6) Gross estimation of the change in phoric behavior as a function of time of disassociation.

¹Haynes, Harold M., unpublished notes from Visual Training I, Pacific University.
The viewer should be able to recognize certain eye movements and relate them to specific eye posture conditions. It is important that the viewer look successively at both eyes during the testing sequence. He needs to observe the fixing eye when the other eye is occluded, and the behavior of the occluded eye when the occluder is removed. Any changes in eye posture of the non-occluded eye must be noted.

Consistent with good teaching techniques, the instructor or assistant should preview the film so he can, in pre-film discussion, alert the students as to what to look for.
CHAPTER VI.

TECHNICAL SUGGESTIONS FOR FUTURE FILMS

In the interest of eliminating the technical errors in any future films of this type, the following comments are noted regarding filming:

1) From the beginning, be thoroughly checked-out on the equipment.

2) Make several short testing sequences on each subject so that the best one can be edited intact.

3) Keep lighting conditions constant, using a light meter. Do not rely on natural lighting.

4) If more than one camera is used, rely on "fadeouts" rather than "wipes" for changing cameras. They may be edited more successfully.

5) Use clinic instruments that reflect a minimum of glare.

6) Make the audio portion from a prepared script.

7) Have equipment ready to function when subject arrives for filming. Don't make him wait on you.

8) Caution should be exercised to see that audio and video levels are maintained at proper levels.

9) Keep fixation lights as near to subject's midline as possible.

10) Keep clinicians' and subjects' personal attire acceptable for filming purposes.

11) Use a shielded fixation light to prevent a "smoke trail" from appearing on screen as light is moved.
CHAPTER VII.

LIST OF EQUIPMENT USED

**Video Tape Recorder Sets**

- **Ampex Video Recorder**  
  Model VR-5000  
  Serial No. 2502

- **Ampex Video Recorder (for filming)**  
  Model VR-7500  
  Serial No. 2814

- **Ampex Video Recorder (for editing)**  
  Model VR-7800  
  Serial No.

**Video Recorder Mounts**

- Portable Console Model VR-5000
- Portable Console Model VR-7500

**Camera Complete Units**

- **Ampex Video Camera**  
  Electric Operation  
  Model No. 6007

- **Video Camera**  
  GPL 990  
  Model No. 473

- **Video Camera**  
  GPL 990  
  Model No. 33

**Camera Lens**

- **Ampex Vidicon Lens**  
  25mm 1:1.9  
  No. 28838
Camera Lens (Continued)

Canon TV Zoom Lens
V 5x20
20-100 mm
3 to 1

Camera Mounts

(2) Samson Tripods
Model 7301

(2) Samson TV Heads
Model 7201

(2) Samson Dollies
Model 7601

Microphones

Shure Lavalier Microphone
Model 560 Dynamic

Monitors

Sony Monitors 9"
Camera I
Camera II
Program
Console Mounted
Sony Monitors (2)
Camera Mounted
Viewfinders 5"

Setchell Carlson
Instructional Unitized Television
Maple Finished
Model No. 2100
Serial No. 566175

Monitors Mounted

Admiral TV Cart 230
Adjustable

(4) Tapes

(1) Low Vision Aid Lamp

Footcandle 90-100
CHAPTER VIII.

SUMMARY

The examination of eight clinical subjects by unilateral and alternating cover test procedures demonstrating phoric and tropic response was recorded on video tape.

The material presented in this video tape has been geared to the pre-clinic student of optometry. The language is relevant and does not introduce any vocabulary that is not already at his command. The film was designed as a teaching aid. It may supplement a lecture or lab session, or it may be made available as additional material when clinic experiences are deficient.