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Anterior segment diseases presented in an interactive videotape format

Mark A. Plumb
Pacific University

Robert M. Paluska
Pacific University

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Anterior segment diseases presented in an interactive videotape format

Abstract
With the overwhelming amount of information provided in ocular disease courses, it is often useful to have a convenient method for supplementing course material. With this in mind, a videotape has been produced which will serve as a convenient and effective teaching aid for second year students. Rather than a simple presentation of facts, this tape is formatted in a manner that encourages participative learning. The student extracts the relevant facts from the case history, forms her/his own diagnosis, observes the recorded eye condition, makes a differential diagnosis and develops a treatment plan. All of this information is available within the tape itself.

Degree Type
Thesis

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ANTERIOR SEGMENT DISEASES PRESENTED IN AN
INTERACTIVE VIDEOTAPE FORMAT
Spring 1994
Monday, January 17, 1994

Advisor: Diane P. Yolton, O.D.

Submitted by: Robert M. Paluska

Mark A. Plumb
BIOGRAPHIES

MARK A. PLUMB received his B.A. in Business Administration with an emphasis in Marketing from Washington State University, Pullman, Washington in May 1988. He is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. His future plans involve completing a Veterans Administration Residency in Chicago, Illinois, and acting upon opportunities that arise during that year. Prior to this he was a no good bum and will admit this upon questioning.

ROBERT M. PALUSKA received his B.S. in Animal Sciences from Oregon State University, Corvallis, Oregon in June of 1988. He is a candidate for an O.D. degree at Pacific University College of Optometry in May of 1994. His future plans involve the sales of optometric practices that he has no ownership in and enjoy the future at various golf courses.

DIANE P. YOLTON, O.D., is an associate professor of optometry at Pacific University College of Optometry in Forest Grove, Oregon. She graduated from Pacific University with a an O.D. degree. Prior to this she graduated from the University of Texas with a Ph.D. in microbiology. A big guns advocate, she instructs in Ocular disease and is an advisor for Pacific's Ocular Disease and Special Testing Center.
ABSTRACT

With the overwhelming amount of information provided in ocular disease courses, it is often useful to have a convenient method for supplementing course material. With this in mind, a videotape has been produced which will serve as a convenient and effective teaching aid for second year students.

Rather than a simple presentation of facts, this tape is formatted in a manner that encourages participative learning. The student extracts the relevant facts from the case history, forms her/his own diagnosis, observes the recorded eye condition, makes a differential diagnosis and develops a treatment plan. All of this information is available within the tape itself.
ACKNOWLEDGMENTS

It gives us great pleasure to acknowledge the help of Dr. Diane P. Yolton for her advisement and review of this project. Also special thanks goes to Colin W. Stapp (Audio-Visual technician at Pacific University) for his assistance with the video production.

Other contributors deserve special mention for their participation in the actual recordings of the anterior segment conditions: Dr. Cristina M. Schnider, Dr. Mark A. Williams, and Dr. Carol A. Timpone. To all, our sincere thanks.

We would be remiss if we failed to acknowledge our families. For their tolerance of our absence, for their freely offered encouragement, for their unfailing support well beyond their marital obligations, and for their faith in us and our task, our grateful thanks.

Finally, we wish to publicly acknowledge our pets Tiffany, Bo, and Sammi who came aboard as friends willing to lend emotional support whenever needed. Their dedication was unsurpassed so they naturally became welcomed members to the team of thesis project contributors, many, many thanks.
Design

This tape presents nine patients seen in Pacific University's Ocular Disease and Special Testing center located in Portland, Oregon. For each patient, subjective and objective findings taken from the patient's file are presented along with approximately 30 seconds of slit lamp recording delineating the most important feature(s) of the patient's problem. The diagnosis and plan which are presented next were formulated not only from patient files, but also from referencing various texts and class notes as listed in the bibliography.

Students can take the tape home and view it at their leisure allowing for learning to occur in an individualized manner and at their own pace.

Instructions for use of interactive videotape and the findings that are on the video are located in Appendix 1.
Welcome to the Anterior segment videotape.

The tape contains 9 separate anterior segment cases. The subjective and objective findings are presented in each case. Your job is to try to formulate an initial diagnosis, differential diagnosis and plan of action.

Instructions to help you through each case.

1. Put videotape in machine and start with patient #1. Patient one will be located at the beginning of the tape.

2. You will be presented with the age, gender and chief complaint.

3. After viewing this brief information, pause the videotape and review the more detailed objective findings presented in this supplement.

4. Next you are instructed to formulate a tentative diagnosis from the information provided. After doing so, confirm your suspicions by viewing the recording of the actual disease. The correct diagnosis is given 5 seconds following the anterior segment presentation.

5. Now that a correct diagnosis has been confirmed, you will be instructed to pause the videotape and try to come up with a differential diagnoses.

6. Continue the videotape to view the differential diagnoses.

7. At this point you will pause the videotape and develop a plan of treatment.

8. Continue the videotape to have the correct plan of action revealed.

9. Congratulations. You are now done with the first case. Continue the videotape to view subsequent cases and repeat steps 2 - 8.

10. As a courtesy for other students, please rewind the tape when finished.
Patient #1

SUBJECTIVE:

NAME: Steven A. Martin  AGE: 53  SEX: Male

CHIEF COMPLAINT: Acute onset for past two weeks. Stinging/ Burning/ Photophobia associated with RGP contact lenses. Must turn head right or left to achieve clear vision. Lens is uncomfortable after 12 hours of wear.

OCULAR HISTORY: Diplopia and flair when looking at lights with contact lenses on. Also notices halos around lights. Negative flashes/ floaters. Removed lenses for one week due to discomfort. "feels like contact lenses are stuck on my eye." Good VA in morning worse at night. Has worn RGP's for one year. (Previous 30 year PMMA wearer).

MEDICAL HISTORY: Unremarkable

MEDICATIONS: None

ALLERGIES: None

OBJECTIVE:

ENTRANCE TESTING:

UNAIDED DISTANCE VA:

OD: 20/300  
OS: 20/300  
OU: 20/200

NEAR VA:

OD: 20/20  
OS: 20/20  
OU: 20/20

COVER TEST: Distance: Ortho  
Near: Ortho

PUPILS: OU: Round and brisk reactions; Negative M. Gunn.

OCULAR MOTILITIES: Smooth, accurate, full and extensive

CONFRONTATIONAL VISUAL FIELDS: Full with no restrictions

REFRACTION:

Best Visual Acuity (Distance)OD: 20/25-  OS: 20/30-  
Best Visual Acuity (Near): OD: 20/20  OS: 20/20

ANTERIOR SEGMENT EVALUATION:

<table>
<thead>
<tr>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear</td>
<td>Clear</td>
</tr>
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</table>

CONJUNCTIVA

<table>
<thead>
<tr>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>+1 injection</td>
<td>+1 injection</td>
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</table>

SCLERA

<table>
<thead>
<tr>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear</td>
<td>Clear</td>
</tr>
</tbody>
</table>

CORNEA*

<table>
<thead>
<tr>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>+2 Central punctate staining with Fluorescein</td>
<td>+1 Limbal neovascularization</td>
</tr>
</tbody>
</table>

* PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.
ANT. CHAMBER

ANGLES
OU: Grade 4

AQUEOUS
OU: No cells and/or flare

IRIS
OU: Brown and clear

LENS
OU: Clear

ADDITIONAL TESTS:
Fluorescein stain

IOP: METHOD: GOLDMAN
OD: 13 mm.
OS: 13 mm.

Time: 2:15 PM

POSTERIOR SEGMENT:

POSTERIOR POLE

OPTIC NERVE
OD: .3/.3
OS: .3/.3

C/D:

DEPTH:
OD: 3 D.
OS: 3 D.

MARGINS:
OD: Clear and distinct
OS: Scleral crescent

HUE:
OD: Orange
OS: Clear

MACULAR AREA:
OD: +1
OS: +1

FLR:
OD: 3/4 A-V ratio
OS: neg. hypertensive or arteriosclerotic changes

VASCULAR:

PERIPHERAL RETINA:
OD: Lattice degeneration, Snail tracking, Chorioretinal scar, located 5 DD. at 10 o'clock
OS: Clear.

ADDITIONAL TESTS:
N/A

VITREOUS:
OD: Clear

VISUAL FIELDS:
N/A

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
**Diagnosis for Patient #1**

1. Central Corneal Clouding due to contact lens wear. ie. low oxygen permeability, tight lens.

************What are the Differential Dx's.***************

**DDx.**

1. None

*************** How would you treat this patient?***************

**Plan:**

1. Remove current contact lenses, give loaner spectacles and RTC in one week to assess corneal health for new lens fitting 1 week.
2. Refit with a thin, High Dk value RGP lens.
3. Build up wear time
4. Assess lens fit with fluorescein
5. Re educate patient on cleaning regiment and have patient demonstrate their understanding.
SUBJECTIVE:

NAME: Sue Lynn Chowmein AGE: 47 SEX: Female

CHIEF COMPLAINT: Patient referred to ODST to evaluate flashes of lights. Starts in OD and goes to OS. Lasts 25 minutes and has been happening for past 20 years. Patient happened to poke herself 4 ½ hours prior to eye exam in right eye. Now is concerned with bright red “bloody look” on nasal side of eye. She's never had anything like this before. OD feels scratchy and pulsating like. Feels best when she keeps her eyes shut all the time.

OCULAR HISTORY: Last visual exam 1986. Glasses used for distance. OD -2.25 SPH and OS -2.00 - .25 X 085. Ocular migraines not associated with cluster type HA's. HA mostly on right side accompanied by nausea and vomiting has them in clusters. Previous O.D. told her she had aniseikonia.

MEDICAL HISTORY: Unremarkable

MEDICATIONS: Allergies to Penicillin and Sulfa drugs.

ALLERGIES: Peanuts, Soap, cat fur and dust.

OBJECTIVE:

ENTRANCE TESTING:

HABITUAL DISTANCE VA:

OD: 20/40 +2 Pinhole: OD: 20/25 +2
OS: 20/25 -2 OS: 20/20 -2

NEAR VA:

OD: 20/40
OS: 20/30
OU: 20/25

COVER TEST: Distance: xo phoric Near: xo phoric

PUPILS: OU: Round and brisk reactions 3 mm. Negative M. Gunn.

OCULAR MOTILITIES: Smooth, accurate, full and extensive

REFRACTION:

Best Visual Acuity (Distance) OD: 20/20 -2 OS: 20/20 -1

ANTERIOR SEGMENT EVALUATION:

LID / LASHES OU: Clear

*CONJUNCTIVA +4 injection* +1 INJECTION

* PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.
SCLERA
CORNEA

\(\odot\)
*not visible 2-7 o'clock
Punctate staining
\(\oslash\)
Clear
Clear

ANT. CHAMBER

ANGLES
OU: GRADE 3

AQUEOUS
OU: No cells and/ or flare

IRIS
OU: Blue and clear; no holes

LENS
OU: Clear

IOP: METHOD: GOLDMAN
16 mm.

TIME: 2:16 PM
16 mm.

POSTERIOR SEGMENT:

POSTERIOR POLE

OPTIC NERVE:
\(\odot\)
\(\oslash\)
.3/.4
.3/.4

DEPTH:
3 D.
3 D.

MARGINS:
OU: clear and distinct
OU: Scleral crescent

HUE:
OU: Orange

MACULAR AREA:
OU: Clear

FLR:
OU: +3

VASCULAR:
OU: 2/3 A-V ratio
OU: Neg. hypertensive or arteriosclerotic changes

PERIPHERAL RETINA:
OU: Clear

ADDITIONAL TESTS:
N/A

VITREOUS:
OU: Clear

VISUAL FIELDS:
N/A

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
**Diagnosis for Patient #2**

1. Subconjunctival hemorrhage

**********What are the Differential Dx's.**********

**DDx.**

1. Kaposi's sarcoma (red or purple lesion beneath the conjunctiva, usually elevated slightly. These patients should be evaluated for AIDS)
2. Other conjunctival neoplasms (e.g., lymphoma) with secondary hemorrhage.
3. Valsalva like maneuvers (coughing, sneezing, vomiting, strangulation, constipation, seizure)
4. Systemic Causes (e.g., vascular disease, high blood pressure, leukemia)
5. Rule out conjunctival lesion.
6. In traumatic cases; rule out ruptured globe
7. If recurrent subconjunctival hemorrhages (more than 2 within 1 year, obtain blood work-up and medical consult.)
8. Acute Hemorrhagic conjunctivitis due to bacterial conjunctivides (Pneumococcus and Haemophilus), Adenoviral conjunctivitis
9. Idiopathic most common

********** How would you treat this patient?**********

**Plan:**

1. Explain slow resolution (by color: Bright red, orange, blackish then clear) over 1 to 3 weeks, dense blood may take longer 3-6 weeks.
2. Artificial tears Q 2h or PRN until redness clears
3. Alternating hot/cold compresses may aid in re absorption QID.
4. RTC 1 week if patient is concerned. Otherwise RTC PRN and/or in one year for complete visual exam
**SUBJECTIVE:**

**NAME:** Bruce Lee

**AGE:** 73  
**SEX:** Male

**CHIEF COMPLAINT:**

"Three days ago my left eye started itching but doesn't hurt and I also think that my left eyelid is a little swollen. When I get up in the morning my left eye feels sticky like syrup and I wash it out with water."

**OCULAR HISTORY:**

Bought bifocals from department store three years ago.

**MEDICAL HISTORY:**

Growth removed from left ear three years ago. Last medical exam was 8 years ago. Good results.

**MEDICATIONS:**

None

**ALLERGIES:**

None

**OBJECTIVE:**

**ENTRANCE TESTING:**

**UNAIDED**

**DISTANCE VA:**

OD: 20/60  
OS: 20/50  
OU: 20/40

**NEAR VA:**

OD: 20/200  
OS: 20/120  
OU: 20/160  
OU: 20/40

**PINHOLE:**

Distance: xo phoric  
Near: xo phoric

**COVER TEST:**

OU: Round and brisk reactions  
OU: 3 mm. round. Negative M. Gunn.

**PUPILS:**

OU: Round and brisk reactions  
OU: 3 mm. round. Negative M. Gunn.

**OCULAR MOTILITIES:**

Smooth, accurate, full and extensive

**CONFRONTATIONAL FIELDS:**

Not performed

**REFRACTION:**

Best Visual Acuity (Distance)  
OD: -1.00D sph  20/30  
OS: -1.00D sph  20/30

Best Visual Acuity (Near):  
+3.00D add  
OD: 20/25  OS: 20/25

**ANTERIOR SEGMENT EVALUATION:**

**LID / LASHES**

OD: White flakes, yellow crust mucus secretions +2  
OU: Plugged Meibomian glands.

**LOWER LID**

OS: Bump tender to touch inside lid  
OU: Palpebral lid edema and inferior lid hyperemia.
Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
Diagnosis for Patient #3

1. Acne Rosacea
2. Staph Blepharitis OS > OD
3. Plugged Meibomian Glands OU
4. Internal Hordeolum OS lower lid

*********** What are the Differential Dx's. ***********

DDx.

1. Staph Blepharitis
2. Chalazion - non painful sterile inflammation of the Meibomian gland
3. External Hordeolum - points outward from the lid.
4. Neoplasia

*********** How would you treat this patient? ***********

Plan:

1. Photo Document
2. Hot compresses TID for 2 weeks. RTC 1 week
3. Express Meibomian glands BID to QID. Educate patient
4. Educate patient
5. Bacitracin UNG OS AM and HS
6. Ophthalmic lubricants
7. Systemic Tetracycline 250 mg. QID
SUBJECTIVE

NAME: Greg Nicholas

AGE: 43  SEX: Male

CHIEF COMPLAINT: 
"I went to a New Years Party and my friend opened up a bottle of Champagne. The cork flew across the room and hit me in my right eye." Patient complains of ocular pain and had noticed a "growth" over his right eye almost immediately.

OCULAR HISTORY: Last visual exam 2 years ago. Doesn't wear glasses.

MEDICAL HISTORY: Unremarkable

MEDICATIONS: No medication allergies

ALLERGIES: Shellfish

OBJECTIVE:

ENTRANCE TESTING:

HABITUAL

DISTANCE VA:
OD: 20/20
OS: 20/20
OU: 20/15

NEAR VA:
OD: 20/20
OS: 20/20
OU: 20/20

COVER TEST: Distance: Ortho  Near: xo phoric
PUPILS: OU: 3 mm. round and brisk reactions. Negative M. Gunn.

OCULAR MOTILITIES: OU: Smooth, accurate, full and extensive

CONFRONTATIONAL FIELDS: OU: No scotomas

REFRACTION:
Best Visual Acuity (Distance)-0.25 D Sph OU
OD 20/15 OS 20/15
Best Visual Acuity (Near)
OD 20/20 OS 20/20

ANTERIOR SEGMENT
EVALUATION:
OD
LID / LASHES: OU: Clear
*CONJUNCTIVA: +2 injection*

SCLERA
CORNEA
OD
*injection of scleral vessels
Sub epithelial corneal infiltrates
OS
Clear

* PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.
ANT. CHAMBER
ANGLES
AQUEOUS
IRIS
LENS

ADDICTIONAL TESTS: Instable tear film. OD: TBUT less than 10 sec
OS: TBUT greater 15 sec

IOP: METHOD: GOLDMAN
18 mm. 17 mm.

Time: 4:36 PM

POSTERIOR SEGMENT:
POSTERIOR POLE

OPTIC NERVE
C/D: .1/.1 .1/.1
DEPT: 2 D. 2 D.

MARGINS:
OU: Clear and distinct

HUE:
OU: Red/orange

MACULAR AREA:
OU: Clear

FLR:
OU: + 3

VASCULAR:
OU: 3/4 A-V ratio
Neg. hypertensive or arteriosclerotic changes

PERIPHERAL RETINA:
OU: Clear

ADDITIONAL TESTS N/A

VITREOUS:
OU: Clear

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
Diagnosis for Patient #4

1. Symblepharon

**********What are the Differential Dx's.**********

DDx.
1. Chemical Burns
2. Steven Johnson's Syndrome lips are typically swollen and crusted
3. Trauma
4. Chronic topical drugs example: epinephrine, pilocarpine, antiviral agents
5. Long standing inflammation
6. Ocular Pemphigoid.

********** How would you treat this patient?**********

Plan:
1. Artificial tears, refresh PM, drops 4-10 x / day. UNG Hs.
2. Refer to Ophthalmologist for surgical excision and cosmetic consult if bothers patient's field of view or visual acuity.
Patient #5

SUBJECTIVE:

NAME: Brian Delgato
AGE: 48
SEX: Male

CHIEF COMPLAINT: I got a stick poked in my eye 28 years ago and I had a couple of operations but those doctors didn't tell me anything. I want to know now if I will be able to have my eye fixed now.

OCULAR HISTORY: 28 years ago patient treated for penetrating foreign object (tree limb). Severe pain, photophobia, red eye tearing. Corneal stromal opacity. +4 corneal edema. Previous history of treatment for corneal and lens trauma (aphake, vitrectomy, retinal detachment).

MEDICAL HISTORY: Unremarkable
MEDICATIONS: Aspirin
ALLERGIES: Ragweed, pollen, dust and dog hair.

OBJECTIVE:

ENTRANCE TESTING:
UNAIDED DISTANCE VA: OD: no light perception
OS: 20/20-
OU: 20/20-

NEAR VA: OD: no light perception
OS: 20/20
OU: 20/20

COVER TEST: Distance: n/a Near: n/a
PUPILS: OD: no light perception.
OS: Round and brisk reactions.

OCULAR MOTILITIES: Smooth, accurate, full and extensive OS

CONFRONTATIONAL VISUAL FIELDS: Full with no restrictions OS

REFRACTION:
Best Visual Acuity (Distance)OD: no light perception OS: 20/15

ANTERIOR SEGMENT EVALUATION:
OD OS
LID / LASHES Clear Clear
CONJUNCTIVA +2 injection +1 injection
SCLERA* Clear Clear
CORNEA* OS: Clear
OD: +4 neovascularization, complete opacification of cornea
**PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.**

**ANT. CHAMBER**

<table>
<thead>
<tr>
<th>ANGLES</th>
<th>OD: no view possible</th>
<th>OS: Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUEOUS</td>
<td>OD: no view possible</td>
<td>OS: No cells and/or flare</td>
</tr>
<tr>
<td>IRIS</td>
<td>OD: no view possible</td>
<td>OS: Brown and clear</td>
</tr>
<tr>
<td>LENS</td>
<td>OD: aphakic</td>
<td>OS: Clear</td>
</tr>
</tbody>
</table>

**ADDITIONAL TESTS:**

B-scan confirmed retinal complete detachment

<table>
<thead>
<tr>
<th>IOP: METHOD: GOLDMAN</th>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mm.</td>
<td></td>
<td>15 mm.</td>
</tr>
<tr>
<td>Time: 2:28 PM</td>
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<td></td>
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</table>

**POSTERIOR SEGMENT:**

**POSTERIOR POLE**

<table>
<thead>
<tr>
<th>OPTIC NERVE</th>
<th>OD</th>
<th>OS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C/D: no view</td>
<td></td>
<td>.3/.3</td>
</tr>
<tr>
<td>DEPTH: no view</td>
<td></td>
<td>3 D.</td>
</tr>
</tbody>
</table>

**MARGINS:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: Clear and distinct</th>
</tr>
</thead>
</table>

**HUE:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: Orange</th>
</tr>
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</table>

**MACULAR AREA:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: Clear</th>
</tr>
</thead>
</table>

**FLR:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: + 1</th>
</tr>
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**VASCULAR:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: 3/4 A-V ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS: neg. hypertensive or arteriosclerotic changes</td>
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**PERIPHERAL RETINA:**

<table>
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<tr>
<th>OD: no view</th>
<th>OS: Clear</th>
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</table>

**VITREOUS:**

<table>
<thead>
<tr>
<th>OD: no view</th>
<th>OS: Clear</th>
</tr>
</thead>
</table>

**VISUAL FIELDS:**

| OS: Humphrey's 30-2, no scotomas or depressions. |

---

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
Diagnosis for Patient #5

1. Secondary fungal infection OD.
2. No functional vision remaining OD.

*********** What are the Differential Dx's. ***********

DDx.

1. None

*********** How would you treat this patient? ***********

Plan:

1. Prosthetic contact lens shell OD, for cosmetics.
2. Polycarbonate lenses for prophylactic protection of remaining vision.
3. No antibiotic therapy necessary. Fungal infection sequeled years ago.
Subjective:

NAME: Thomas Young
AGE: 45
SEX: Female

CHIEF COMPLAINT: She complains that vision is blurry near and far. Letters seem to be pushed together. Feels like she needs some backup glasses and just wants to have her eyes checked. "I also feel like I have sand in my eyes all the time."

OCULAR HISTORY: New glasses two years ago for distance. Doesn't like the glasses because they hurt her ears.

MEDICAL HISTORY: Two random blood sugar tests were completed a year ago. All tests were within normal limits

FAMILY HISTORY: Diabetes Grandmother; Hypertension, mother.

MEDICATIONS: Allerest™ taken for allergies, Topical Hydrocortisone UNG for rash on arm.

ALLERGIES: Dust and pollen

OBJECTIVE:

ENTRANCE TESTING:

HABITUAL DISTANCE VA:
OD: -375-2.50x175 OS -4.50-3.00x175
OD: 20/25
OS: 20/30
OU: 20/25

NEAR VA:
OD: 20/25 Add of + 1.50 D
OS: 20/25
OU: 20/25

COVER TEST: Far: .5 xo phoric Near: 6 xo phoric
PUPILS: OU: Round and brisk reactions, Negative M. Gunn.

OCULAR MOTILITIES: Smooth, accurate, full and extensive

VISUAL FIELDS: OU: Overall scattered depressions. Fields are unreliable due to high number of false negative errors.

ANTERIOR SEGMENT EVALUATION:
CD OS
LID / LASHES: CLEAR CLEAR
+1 injection +2 INJECTION
CONJUNCTIVA: OU: Positive rose bengal staining +2
OU: Fluorescein staining +1

SCLERA: OU: Clear
CORNEA: OU: Clear
ANT. CHAMBER:

ANGLES: 
OU: GRADE 4

AQUEOUS: 
OU: No cells and / or flare

IRIS: 
OU: Blue and clear, no holes

LENS: 
OU: Clear

ADDITIONAL TESTS: 
Amsler Grid, Color testing both tested normal.

**See videotape for part of therapy,

<table>
<thead>
<tr>
<th></th>
<th>OD</th>
<th>OS</th>
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<tbody>
<tr>
<td>IOP:</td>
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<td>METHOD:</td>
<td>Goldman</td>
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<td>10 mm.</td>
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<td>10 mm.</td>
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<td>Time:</td>
<td>3:20 PM</td>
<td>March 1990</td>
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<td>20 mm.</td>
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POSTERIOR SEGMENT:

POSTERIOR POLE

<table>
<thead>
<tr>
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<th>OD</th>
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<tbody>
<tr>
<td>OPTIC NERVE</td>
<td></td>
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<tr>
<td>C/D:</td>
<td>.3/.4</td>
<td>.2/.3</td>
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<tr>
<td>DEPTH:</td>
<td>3 D.</td>
<td>3 D.</td>
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<tr>
<td>MARGINS:</td>
<td></td>
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<tr>
<td>OU:</td>
<td>Clear and distinct</td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Scleral crescent</td>
<td></td>
</tr>
<tr>
<td>HUE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Orange</td>
<td></td>
</tr>
<tr>
<td>MACULAR AREA:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>FLR:</td>
<td>2/3 A-V ratio</td>
<td></td>
</tr>
<tr>
<td>+3</td>
<td></td>
<td>+3</td>
</tr>
<tr>
<td>VASCULAR:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Neg. hypertensive or arteriosclerotic changes</td>
<td></td>
</tr>
<tr>
<td>PERIPHERAL RETINA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>VITREOUS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OU:</td>
<td>Clear</td>
<td></td>
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</tbody>
</table>

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
Diagnosis for Patient #6

1. Keratoconjunctivitis Sicca

****************What are the Differential Dx's.***************

DDx.

1. Bacterial
2. Viral
3. Drug or immunological hypersensitivity
4. Mechanical or irritation
5. Systemic manifestations ie. Ocular Pemphigoid, Steven Johnson's syndrome
6. Geographical patterns of corneal staining ie. Herpes simplex
7. Toxic Staph reaction
8. Entropion
9. Exposure Keratitis
10. Allergic ie. Vernal Keratitis.

**************** How would you treat this patient?**************

Plan:

1. Repeat visual fields with emphasis on good patient instruction. Run a demo if needed.
2. Diurnal IOP analysis needed.
3. Reevaluate Optic nerve head cup disk ratios with 78 or 90D lens
4. Dilation and DFE.
5. Tear break up evaluation with Fluorescein.
6. Insert collagen Punctal plugs lower lids first. RTC 1 week for assessment of therapy.
7. Ocular lubricants. Artificial tears Q 1-2h or PRN, Refresh PM UNG. HS OU.
SUBJECTIVE:

NAME: Paul Heavy

CHIEF COMPLAINT: Complaint of left eye RGP. Had to take it off for the past two days because the eye felt dry. Complains of not ever having contact lenses that work well for his visual acuities. He also complains of a maximum wearing schedule for 6 hours per day and has associated photophobia. Has also noticed that some days the VA's are better in one eye then the other. (Alternating)

OCULAR HISTORY: Has worn glasses since 8 year old
RGP contact lens wearer. 8 years.
Previous Hx. of chronic Blepharitis
given Naphcon A for allergies by Ophthalmologist.
KCS

MEDICAL HISTORY: Mild Asthma, family history of arthritis, diabetes Mother controlled with meds., father has hypertension. on controlled meds

MEDICATIONS: 200 mg. of Theophaline HS, inhaler, Provendil

ALLERGIES: Drug allergy to tetracycline, , ragweed molds and dust.

OBJECTIVE: ENTRANCE TESTING: Habitual

DISTANCE VA: OD. -13.00 -6.00 x 1 OS -13.00-6.00 x 050
OD: 20/40
OS: 20/40
OU: 20/30

NEAR VA: OD: 20/30
OS: 20/30
OU: 20/30

COVER TEST: Far: xo phoric Near: xo phoric

PUPILS: OD: Round and brisk reactions 3 mm.
Negative M. Gunn.

OCULAR MOTILITIES: OU: Smooth, accurate, full and extensive

CONFRONTATIONAL FIELDS: Not performed

ANTERIOR SEGMENT EVALUATION: OD
OS

LID / LASHES OU: Clear
**CONJUNCTIVA**

OU: +1 injection
OU: Concretions in inferior palpebral
OU: +2 hyperemia
OU: +3 tear debris
OU: +2 marginal edema 360°
OU: Bulbar conj. Vessels dilated

*PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.*

**SCLERA**

**CORNEA**

OU: Clear
OD: Central corneal scarOS:
OD: Slight corneal staining central
OS: Inferior Fl staining
OU: Corneal Fleischer's ring
+1 striae OU

**ANT. CHAMBER**

**ANGLES**

OU: Grade 3

**AQUEOUS**

OU: No cells and/ or flare.

**IRIS**

OU: Brown and clear no holes

**LENS**

OU: Clear

**ADDITIONAL TESTS:**

Apical touch on contact lens evaluation.
Bubble noted inferior.

IOP: METHOD: AO NCT
TIME: 3:20 PM

OD: 14 mm.
OS: 15 mm.

**POSTERIOR SEGMENT:**

**POSTERIOR POLE**

**OPTIC NERVE:**

C/D: .3/.3
DEPTH: 2 D.

**MARGINS:**

OU: Clear and distinct, scleral crescent

**HUE:**

OU: Orange
Macular Area: OU: Clear

**FLR:**

OU: +3

**VASCULAR:**

OU: 2/3 A-V ratio
OU: Neg. hypertensive or arteriosclerotic changes

**PERIPHERAL RETINA:**

OU: Clear

**ADDITIONAL TESTS:** N/A
Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

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Diagnosis for Patient #7

1. Keratoconus

************What are the Differential Dx's.************

DDx.
1. Munson's sign.
2. Pellucid marginal degeneration- the cornea protrudes above the band of thinning
3. Keratoglobus - Rare uniform circular thinning of the cornea with maximum corneal thinning in mid periphery.

************ How would you treat this patient?************

Plan:
1. Patients are instructed not to rub their eyes
2. Refit with a specific RGP consider Piggy back contact lenses
3. Corneal transplant surgery when CL's no longer produce satisfactory vision due to scarring. (Thermal Keratoplasty, Epikeratophakia or Lamellar keratoplasty)
4. Hypertonic Saline
5. RTC 1 week or PRN to assess the contact lens fit and patient education.
SUBJECTIVE:

NAME: Tuwanda Simmer

AGE: 23

SEX: Female

CHIEF COMPLAINT:

"I have scratchy and sore eyes. They have also been tearing a lot more. My left eye is worse than my right. Also my eyes are red but my left eye is always redder. My vision isn't as clear as it used to be. Bright lights bother me a lot too."

OCULAR HISTORY:

Unremarkable

MEDICAL HISTORY:

Unremarkable

MEDICATIONS:

None

ALLERGIES:

None

OBJECTIVE:

ENTRANCE TESTING:

Habitual

DISTANCE VA:

OD: 20/30
OS: 20/25
OU: 20/25

NEAR VA:

OD: 20/20
OS: 20/20
OU: 20/20

PUPILS:

OU: Round and brisk reactions; 3 mm, Negative M. Gunn.
OS: Marked Photophobia

OCULAR MOTILITIES:

OU: Smooth, accurate, full and extensive

CONFRONTATIONAL FIELDS:

OU: Full to finger counting

ANTERIOR SEGMENT EVALUATION:

LID / LASHES:

OD: Clear
OS: Follicles, crusty
Skin lesions inferior lid
Serous discharge

SCLERA:

OU: Clear
OD: Clear
OS: Epithelial lesions noticed *

*CONJUNCTIVA:

+1 injection

+2 injection

CORNEA:

OD: Clear

ANAT. CHAMBER:

ANGLES:

OU: Grade 3

AQUEOUS:

OU: No cells and/or flare

IRIS:

OU: Blue and clear; no holes

LENS:

OU: Clear

* PRESENTATION FURTHER DEMONSTRATED ON VIDEO TAPE.
ADDITIONAL TESTS:  OS: Whisp demonstrated hypoesthesia
Lymphadenopathy of the left side of the face.

IOP: METHOD: GOLDMAN 13 mm.  13 mm.
Time: 4:44 PM

POSTERIOR SEGMENT:
POSTERIOR POLE:

OPTIC NERVE:
C/D: .3/.3
DEPTH: 2 D.

MARGINS: OU: Clear and distinct

HUE: OU: Orange/red
MACULAR AREA: OU: Clear
FLR: OU: +3
VASCULAR: OU: 2/3 A-V ratio
OU: Neg. hypertensive or arteriosclerotic changes

PERIPHERAL RETINA: OU: Clear
ADDITIONAL TESTS: N/A

VITREOUS: OU: Clear

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

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**Diagnosis for Patient #8**

1. Primary Ocular herpes simplex with follicular conjunctivitis, Epithelial Keratitis, and Lid vesicles OS with recent history of genital lesions.

**********What are the Differential Dx's.**********

**DDx.**

1. Herpes Zoster virus- vesicles along a dermatomal distribution of the face, not crossing the midline. Pain is usually present.
2. Recurrent Corneal Erosion - Often the history of corneal abrasion or Map dot fingerprint Dystrophy. Pain usually upon awakening.
3. Contact lens related pseudodendrites- No skin involvement and the dendrites don't branch.

********** How would you treat this patient?**********

**Plan:**

1. Topical Acyclovir UNG for the skin lesions qid.
2. Warm compresses to skin lesions TID
3. Viroptic 1% drops QID
4. Possible oral Acyclovir 200 mg. 5 x/day for 1 to 2 weeks.
5. Patient Education. Discuss possibility of ocular recurrence 20-30% chance which is most likely to reoccur within one year.
Patient #9

SUBJECTIVE:

NAME: Mark O Polo
AGE: 37
SEX: Male

CHIEF COMPLAINT: Gradual vision decrease in my left eye beginning 5 years ago. In the past 3 years, it got so bad that all I could see is light. “Now I don’t see #$@#@ out of that bum eye.”

OCULAR HISTORY: Negative pain or trauma to eye.

MEDICAL HISTORY: Broken left toe.
MEDICATIONS: None
ALLERGIES: None

OBJECTIVE:

ENTRANCE TESTING:
Habitual
DISTANCE VA:
OD: 20/20
OS: no light perception

NEAR VA:
OD: 20/20
OS: no light perception
OU: 20/20

PUPILS: OD 4.5 mm. round and brisk
* OS 3 mm. distorted/irregular pupil. Slow response to light and accommodation.

Positive Afferent Pupillary defect.

OCULAR MOTILITIES: Smooth, accurate, full and extensive

VISUAL FIELDS: OD is unremarkable OS no light perception

ANTERIOR SEGMENT EVALUATION:

LID / LASHES
OU: Clear

CONJUNCTIVA
OU: +2 injection
OU: Pinguecula +.5
OU: Lymphangectasia (swelling of lymph vessels of bulbar conjunctiva).

SCLERA OU: Clear
CORNEA OU: Clear
### ANTERIOR CHAMBER

| ANGLES | OU: | Grade 2 |
| AQUEOUS | OU: | No cells and/or flare. |
| IRIS | OU: | Blue and clear; no holes |

### ADDITIONAL TESTS:

| IOP: METHOD | GOLDMAN 20 mm. |
| Time | 3:05 PM |

### POSTERIOR SEGMENT:

#### POSTERIOR POLE

| OPTIC NERVE | OD | OS |
| C/D | OD: .4/.4 | OS: No view |
| DEPTH | OD: 3 D. | OS: No view |
| MARGINS | OD: Clear and distinct |
| HUE | OD: Orange | OS: No view |
| MACULAR AREA | OD: Clear |
| FLR | OD: +3 |
| VASCULAR | OD: 2/3 A-V ratio, neg. hypertensive or arteriosclerotic changes |

#### PERIPHERAL RETINA

| OD: Small Operculated Hole 9 o'clock, anterior to equator. Hole is surrounded by 1 DD. cuff of edema. |
| OS: Lattice degeneration: 10 o'clock and 6 o'clock positions OD |

### ADDITIONAL TESTS:

| OS: B scan showed long-standing rhegmatogonous Retinal detachment |

### VITREOUS

| OD: Clear |

---

Try to formulate diagnosis by history alone. After doing so, confirm your suspicions by viewing video tape.

Note: Correct diagnosis (the answer) is given 5 seconds following anterior segment presentation.
Diagnosis for Patient #9

1. Posterior synchia with retinal detachment and severe cataract OS.
2. Retinal Hole in OD.

************What are the Differential Dx's.************

DDx:

1. Trauma

********** How would you treat this patient?**********

Plan:

1. Refer to Ophthalmologist. OD: plan prophylactic laser treatment or laser and cryotherapy for retinal hole. OS: assess VA potential and patient consult.
2. Recommend safety lenses.
Bibliography


3 Friedberg MA, Rapuana CJ, eds. Wills Eye Hospital Office and Emergency Room Diagnosis and Treatment of Eye Disease. J.B. Lippincott, 1990.
