FLASHES AND FLOATERS
The Optometrists Role in Prevention of Blindness From Retinal Detachment
Floaters

- 168 patients per optometrist per year
- Risk

Diagnosing Floaters

- Mydesopsia
- Muscae Volitantes
- Mouches Volantes
Diagnosing Floaters

- THEY FLOAT
- Unaffected by blinking
FLOATERS:
OVERSHOOTING
DRIFT

QuickTime™ and a decompressor are needed to see this picture.
“MOVING FILM” = POSTERIOR HYALOID
Vitreous opacities

- Vitreous degeneration
- PVD
- No PVD
- Vitreous haemorrhage
- Vitreous inflammation / infection
- Vitreous Cancer (lymphoma)
- Vitreous injury (surgery)
Vitreous is a ‘gel’

- 98% water
- 2% solids
Vitreous is a ‘gel’

‘Mostly liquid, but with the structural coherence of a solid’

Gel = evenly dispersed solid elements in liquid
QuickTime™ and a Animation decompressor are needed to see this picture.
Gel degeneration
Gel degeneration
Gel degeneration

\[ \varphi = 5 \times 10^{-4}, \text{ spun, age} = 1 \text{ week} \]

\[ \varphi = 2 \times 10^{-4} (?, \text{ spun, age} = 1 \text{ year} \]
Syneresis

Extraction of liquid from a gel
Vitreous detachment

- Culmination of syneresis
- Usually starts posteriorly
QuickTime™ and a Animation decompressor are needed to see this picture.
What causes vitreous detachment?

- Age
- Myopia
What causes PVD?

- Age
- Myopia
- Any vitreous disease
Consequences of posterior vitreous detachment
Vitreous base
Retinal tears
Retinal tears
Eye movement causes traction

- Present while sleeping.
- No rationale for avoiding exercise, movement, pushing during labor
PVD from behind

Foos RY. Vitreous base, retinal tufts and retinal tears: pathogenetic relationships. Retina Congress Ch 20 p 259
Lattice Degeneration

Robinson MR and Streiten BW. The surface morphology of retinal breaks and lattice retinal degeneration. A scanning electron microscopic study. OPthalmology 93:237-246, 1986
QuickTime™ and a Animation decompressor are needed to see this picture.
QuickTime™ and a DV-PAL decompressor are needed to see this picture.
How do we diagnose PVD?
Is there a PVD?
Is there a PVD?
Is there a PVD?

QuickTime™ and a Apple Pixel Video decompressor are needed to see this picture.
PVD  no PVD
QuickTime™ and a DV-PAL decompressor are needed to see this picture.
QuickTime™ and a DV-PAL decompressor are needed to see this picture.
Do we still need to indent?

- No PVD - NO!
- PVD - NO!
- The tears are behind the ora serrata
Tips for seeing the peripheral retina

- Well dilated pupil
- Superfield lens
Tips for seeing the peripheral retina

- Move the lens towards the cornea
Referral same day

- Retinal detachment
- Retinal Tear
- Vitreous haemorrhage (unknown cause)
Vitreous pigment
Referral of PVD

- No tear found -
  - thorough examination
  - retinal detachment warning
  - document thorough dilated exam, good view, retinal detachment warning
- Discharge
The Retinal Detachment Warning

- Scotoma
- Floaters
- Flashing lights
Regular review?
Remember other causes of floaters!!

- Vitreous degeneration
- PVD
- No PVD
- Vitreous haemorrhage
- Vitreous inflammation / infection
- Vitreous Cancer (lymphoma)
- Vitreous injury (surgery)
Case 1.

- 30 year old female
- Not myope
- 2 weeks floaters
QuickTime™ and a decompressor are needed to see this picture.
Examine the anterior segment
What can be done about floaters?
Case History

- 45 year old myope
- PVD
- Troublesome floaters
- Taxi Driver
Is vitrectomy ever justified?
Iatrogenic retinal detachment
Iatrogenic retinal detachment
Laser for floaters

- Beneficial in 1/3 of cases
- Breaks up rather than removes floaters


Video c/o Scott Geller MD
Vitrectomy for young patients with floaters?

- Full vitrectomy risks greater (no PVD)
- Young adherent vitreous
Vitrectomy for young patients with floaters?

- Full vitrectomy relatively safe in PVD
- Young adherent vitreous
- ‘Floater only vitrectomy’
Complications?

“Our search of the world literature through the local hospital library, Med-Line source, and the National Library of Medicine revealed reports of 57 eyes that were treated for floaters with a laser. There were no serious immediate or long-term complication in any case”. *

* statement on eyefloaters web site
Complications?

[Cataract caused by laser Yag photosection of a vitreous floater]

Menerath JM, Bacin F, d'Azy AB, Rigal D, Kantelip B.

PMID: 3228947 [PubMed - indexed for MEDLINE]
Syneresis

- Floaters in a young myope
- No other ocular disease
- No PVD

Syneresis symptoms

∝

∝
Some floaters are visible etheric matter

Floaters are transparent or grey strands or specks that float in the visual field. For most people this condition may be harmless. General feeling among ophthalmologists is that they may be caused by floating cell debris in the back chamber of the eye (vitreous body).

I see floaters all the time and have been seeing them for many years. As an esoterist and a follower of Ageless Wisdom I am of the opinion that floaters are a type of electromagnetic field around us called aura. It is not generally visible to most people. There is etheric energy or bio-energy circulating in our aura. This energy prana. This energy circulates in our subtle body known as etheric body. The main seven energy centres or chakras in our body are a type of electromagnetic field. This energy some people see as floaters. If there is a doubt please consult an eye doctor.

I have included an artist's impression of the strands or threads of etheric matter or floaters as they are called so that those who are seeing them may be able to see the etheric matter. But we do not recognise it as such and therefore tend to ignore it. Because the etheric strands of transparent matter we are only able to see what is directly in front of our eyes. Also what we are seeing as strands or beads may not be a solid form but a gaseous or a liquid form of the same matter.

An Artist Impression of the Etheric Matter or Floaters
Okay I've stayed up late for 5 nights in a row now and I'm a tad worried.

Every now and then I get these black specs flash in my vision. I had it yesterday too. Is it bad? Am I going to die?

I've had floaters before these are like dots that flash and then disappear real quick.

Could it mean I have a tumor?!?!??! Oh god now I'm panicking.
‘SHOW US YOUR FLOATERS’

left eye

right eye

lightest gray: seen through squinting. darkest gray=darker spots without squinting (not entirely opaque, but indeed darker) blue Xs: = points of attachment, rest is free flowing.
HOW TO DRAW FLOATERS

Just take 10 little minutes to send your drawings. Here are some advice to help you make realistic floaters.

I did my drawings on Claris Works for Macintosh. You may not be able to proceed the same way as explained below, depending on the software you're using. Sorry for that...

Use the brush to draw strands on your bitmap drawing software (I did mine with Claris Works on a Mac). On the brush option, there may be a way to change the brush size:

Change it so to make it look like:

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or
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Just make 4 dots (4 pixels)

You should get this kind of thread:

In the brushes options, there should be a window in which you can choose the effect of the brush. Use the option "darker" (or something like that). After this, the brushes' threads should look like this:

By clicking on your mouse, you will be able to make the thread more or less dark.

To make dots, you can also use the brush:

Just make the shape look like [5 pixels max.]. Then you will just have to change the color to make it clearer (light greys).

These are just a few examples of what you can do with a basic drawing software. It doesn't prevent you from making your drawings with a paper and a pencil and scan it later.
Floaters and Somatisation

‘Symptoms as a metaphor for psychological distress’

Sims' Symptoms in the Mind: An Introduction to Descriptive Psychopathology By Femi Oyebod p 259


Unconventional treatments

http://www.naturaleyecare.com/store

PHOSPHORUS
Reassurance: address fears

- Nature of floaters
- Likely non progression
COPING STRATEGIES FOR FLOATERS
Reassurance: address fears

- Nature of floaters
- Likely non progression
Understand how ‘symptoms work’
Balanced discussion about risks and benefits

- 1:1 cataract
- 1:100 retinal detachment
- 1:1000 endophthalmitis
Photopsia

- Retina (entoptic phenomenon)
- Cerebral cortex
PVD photopsia

- Floaters
- Temporal periphery (never central)
- More apparent in the dark
- (Provoked by ocular movement)
Entoptic phenomenon (non PVD)

‘MEWDS’

- Constant photopsia (cf migraine)
- Central/paracentral (cf PVD)
Classical Migraine

1. Blood vessel spasm (neurological symptoms) (minutes)
2. Blood vessel dilatation (headache) (hours)
Acephalic Migraine

- No headache
- Photopsia
  - Central
  - Episodic
- Scintillations
- Fortification Spectra
Scintillations

Scintilla = sparkle
Unilateral or bilateral?

- Meaningless
- No change with occlusion so patients distinguish between a ‘hemifield’ and uniocular problem
Fortification Spectra
Migraine
QuickTime™ and a decompressor are needed to see this picture.
Asymptomatic retinal lesions - does optometric screening have a role?
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Interventions for asymptomatic retinal breaks and lattice degeneration for preventing retinal detachment Updated

Have your say!
'Your views on The Cochrane Library: survey'

Wilkinson CP

Published Online: March 14, 2012

A rhegmatogenous retinal detachment develops when a break (tear, hole) occurs in the sensory retina and allows fluid from the vitreous cavity to separate the sensory retina from the underlying retinal pigment epithelium. When retinal breaks occur they may be associated with symptoms such as dark floaters or flashing lights or they may develop without symptoms, in which case they are termed "asymptomatic". Because asymptomatic retinal breaks and lattice degeneration are associated statistically with retinal detachment at variable periods later on, treatment of the lesions with laser or cryotherapy has been proposed to prevent the latter problem. This review discovered no prospective and/or randomized trials comparing treatment and control, and there is therefore insufficient evidence to demonstrate any benefit of prophylactic therapy for the problems that were studied.
Asymptomatic retinal lesions - does optometric screening have a role?
Floaters

- Exclude inflammation
- Is there a PVD? - check retinal periphery
- Retinal tear - same day referral
- Is it syneresis? - reassure
- Vitrectomy still an option (especially if PVD).
Photopsia

- Not all photopsia are PVD
- Careful history
Asymptomatic retinal lesions

- Lattice
- Retinal Holes
- No treatment required
Same Day Referral

- Retinal Detachment
- Retinal Tear
- Vitreous haemorrhage IN A NON DIABETIC