Wide Field Angiography Utilizing the Staurenghi 150° Contact Lens

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The Staurenghi 150° Lens

Helpful situations/Advantages

- Of course this lens is used to visualize the far periphery.
- PDR, uveitis, CRVO, peripheral tumors, ROP, are a few of the pathologies I have imaged.
- The lens can be manipulated to get even further into the periphery.
- Because the Heidelberg HRA is utilized, full motion video can be obtained during the transit phase of the exam.

Disadvantages

- It is not easily switched from eye to eye.
- It is a contact lens which raises the chance of corneal abrasion.
- A contact lens is difficult for some patient to tolerate.

Background information

- The lens is only compatible with the Heidelberg HRA unit. Believe me I’ve tried it for other things.
- Just like any other contact lens, the patient must be anesthetized.
- This lens is a whopper, it gets hard to hold after a very short while, but one’s patience will be rewarded. I use a stack of Ellex laser arm rests, four if I am imaging the right eye and five if I am imaging the left eye.
Modification

- A few modifications that I have performed which I think give me the results that I want.
  - Dr. Staurenghi – 5 cc 20% fluorescein
  - Me- 4 cc 25% fluorescein
  - Dr. Staurenghi – Tomography mode
  - Me – ART
  - Me – ICG dilute ICG with 8 cc sterile water and use 4cc of resulting solution.

Technique

- Uses the Heidelberg HRA with the 30 degree lens and Eye Explorer.
- Prepare materials – whether fluorescein or ICG
- Anesthetize patient – I like two sets of drops, both eyes
- “Goop up” the lens
  - Methycellulose
  - Genteal Gel
- Place or have the needle placed
- Place the lens on the patient’s eye paying special attention to alignment of both lenses
- Start the injection and the timer
- I always do full motion video for dye transit.

Lens Placement

Image courtesy Amanda Bye, CRA

Technique (Continued)

- For the rest of the frames use ART mode for all frames.
- Shift focus slightly to get the edges of the lens in focus.
- The lens can be moved slightly and focus again shifted to get further out in the periphery.
- If necessary to image the other eye, preferable to wait till all images are acquired for the transit eye. Clean the lens cup and fill will more gonio gel.
- Irrigate images eyes with sterile saline and explain to patient there might be some irritation for the rest of the day.
After Image Acquisition

• When evaluating the images, remember that the images are inverted and reversed just like an indirect ophthalmoscope image.
• HEYEX has a button to invert and reverse the image to match the “normal” way that images are displayed.

Image courtesy Amanda Bye, CRA

More PDR

CRVO

Progression of vascular dropout with CRVO

Coat’s Disease