



Distorted Vision

Seeing a dark or missing spot in your central vision can be caused by macular holes

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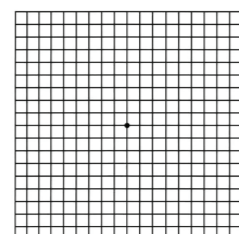
There are many reasons why our central vision can become distorted or even go missing. The more common causes are age-related or myopic macular degeneration, epiretinal membranes and macular holes. I have previously covered age-related macula degeneration, and will now focus on epiretinal membranes and macular holes here.

What is an epiretinal membrane?

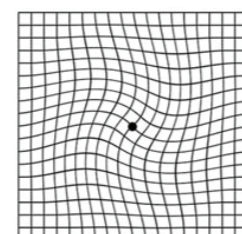
This is an abnormal growth of an extra layer of tissue over the central part of our retina called the macula. This tissue is not cancerous but as it grows, it can cause puckering and folds of the macula, leading to distorted central vision.

Some reasons for its development include retina tears, previous retina detachment, part of ageing changes in the eye, recurrent eye inflammations, previous retina blood vessel obstruction or previous significant eye trauma.

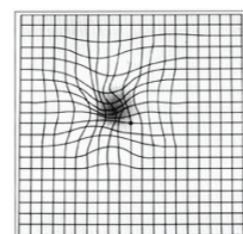
This is an Amsler grid that is used for testing central vision.



A patient with a mild epiretinal membrane may see the straight lines appearing curved.



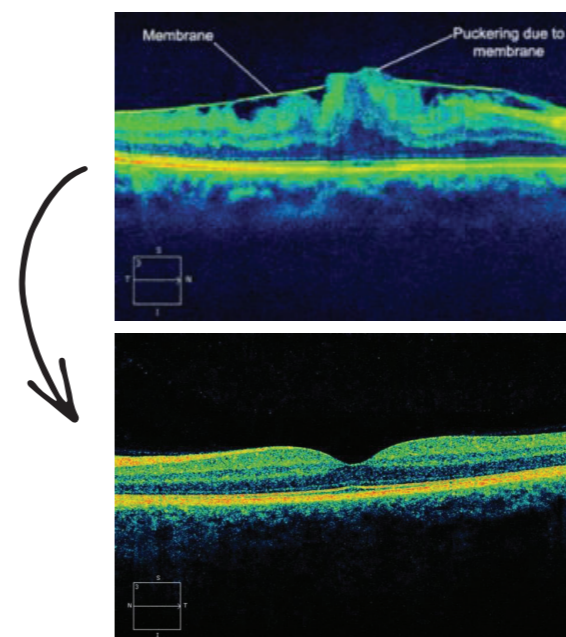
A patient with a severe epiretinal membrane will see severe distortion of the straight lines.



This is what we see when we examine the eye of a patient with an epiretinal membrane, as compared to an eye of a patient with a normal macula.



A scan of the macula (optical coherence tomography or OCT) will show the extra layer of tissue above the retina causing it to pucker under the mechanical effect of the contraction of the membrane, as compared to what an OCT of a normal macula would look like.

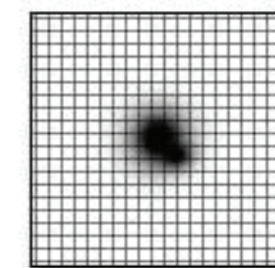


What is a macular hole?

A macular hole is when a tear forms in your macula due to the mechanical forces of contraction and pulling on the macula, causing it to stretch and a hole to form. This causes a dark or blind spot to appear in your central vision.

A macular hole can be partial thickness or full thickness. Some reasons for its development include high myopia, part of ageing changes in the eye, other co-existent peripheral retina tears or retina detachment and eye trauma.

A patient with a macular hole will notice a dark or blind spot in the central vision.

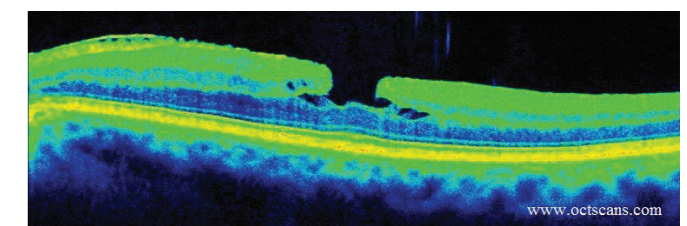


Central dark or missing spots

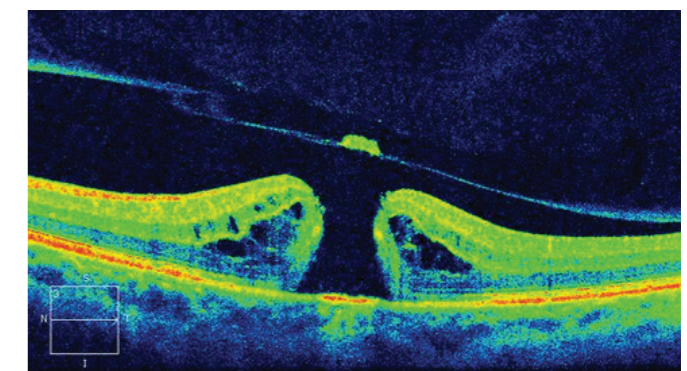
This is what we see in the eye of a patient with a macular hole.



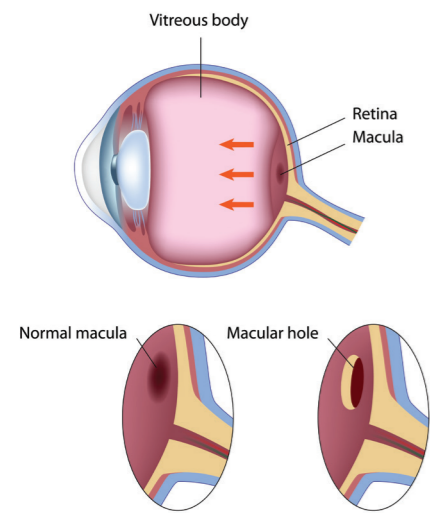
This is the OCT of a patient with a partial thickness macular hole.



And this of a patient with a full thickness macular hole.



What is the treatment of epiretinal membranes and macula holes?



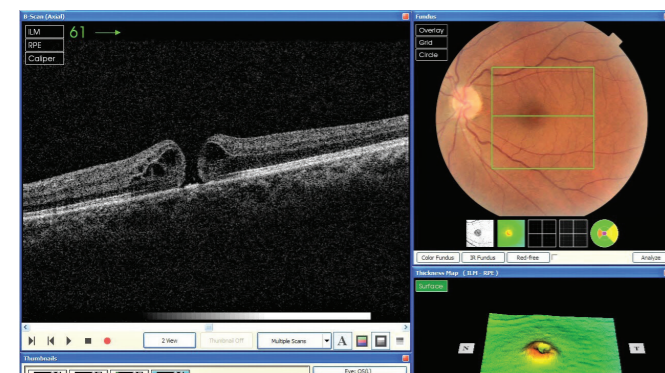
For epiretinal membranes and partial thickness macular holes, there is the option of observing if the vision is still reasonably good and the central vision distortion is not severe and acceptable to the patient.

For full thickness macular holes, we advise the option of surgery to close the macular hole to prevent the development of retinal detachment as well as to prevent a permanent central blind spot.

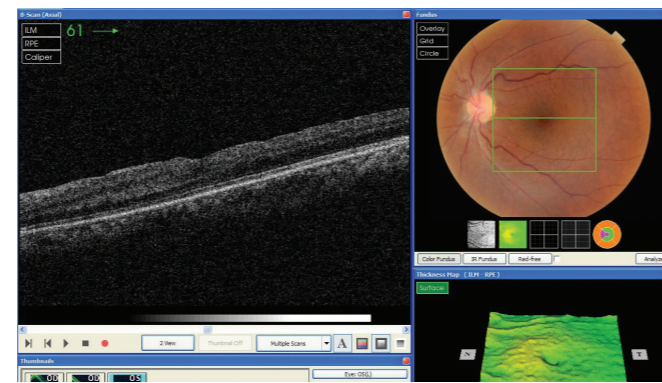
What is involved in the surgery?

For patients with full thickness macular holes and patients with epiretinal membranes or partial thickness macular holes who are symptomatic – ie. their vision is significantly affected, we perform vitrectomy and peeling of the epiretinal and internal limiting membrane on the surface of the retina. We then put in gas to fill the eye in all patients with macular holes, and in some patients with severe epiretinal membranes. The gas applies pressure to the edges of the macular hole and facilitates closure of the hole. The gas will get absorbed within four to six weeks. Patients with gas injected have to posture face down for two weeks after the surgery to allow the gas to press directly on the macular hole.

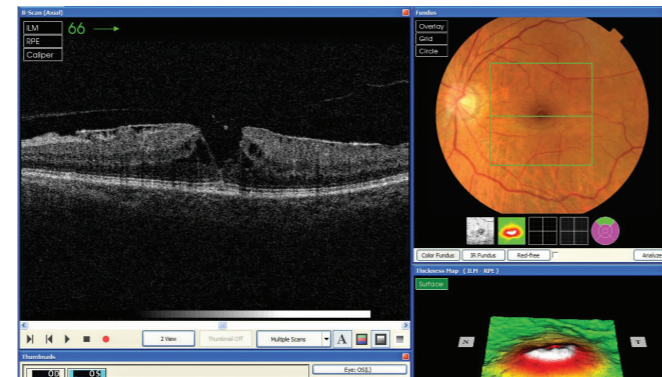
This is a pre-operative OCT of a patient with a full thickness macular hole and resultant poor vision of counting fingers,



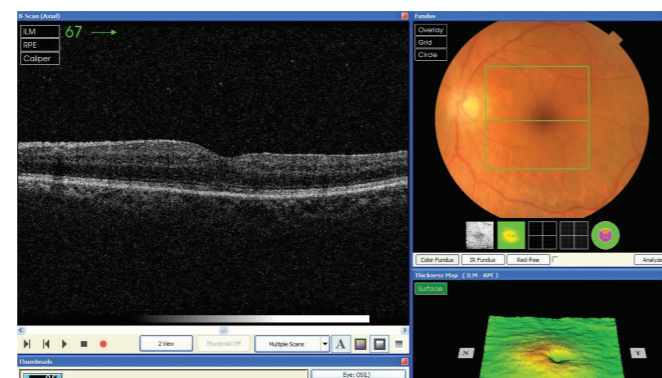
and her post-operative OCT showing the successfully closed macular hole and return of her vision to 6/6.



This is a pre-operative OCT of a patient with an epiretinal membrane and partial thickness macular hole,



and her post-operative OCT showing a normalized macular architecture with closure of the partial thickness hole.



Conclusion

Epiretinal membranes and macular holes cause distortion of the most important central part of our vision. If the distortion is mild, epiretinal membranes and partial thickness lamellar holes can be observed and some may never require surgery. For full thickness macular holes and for symptomatic patients with epiretinal membranes and partial thickness lamellar holes, surgery can offer restoration of anatomical and visual satisfaction. **PRIME**