Optic Nerve Drusen

This leaflet is designed to provide you with information about your child’s condition.

What is the optic nerve?
The optic nerve connects the eye to the brain. All visual information that is taken in by the eye is transported to the brain by the optic nerve.

A cross section of the eye:

What is optic nerve drusen?
- This is the build-up of abnormal collections of protein and calcium in the optic nerve.
- This build-up occurs over time.
- Usually becomes visible after the age of 10 years but can be seen before the age of 10 in some children.
- Can affect one eye (unilateral) or both eyes (bilateral).

How common is optic nerve drusen?
- Estimated to occur in about 1 to 2 people per 100 of the population.
- Many cases are never diagnosed because most people with the condition have no problems with their vision.
- Can be inherited.
Presenting symptoms

Many children do not have any symptoms and do not notice any problems with their vision. A routine eye examination at the opticians can detect changes in the eye which leads to a referral to a paediatric ophthalmologist.

Optic nerve drusen does not usually affect central vision or colour vision but can affect peripheral vision in some children. This change tends to happen very gradually.

Tests to aid with diagnosis

Vision

If your child is over the age of five and knows their letters well then they will be asked to read the eye chart. If your child is under the age of five years they are likely to see an orthoptist to assess their vision.

Humphrey visual field test

This is to measure your child’s peripheral vision. The head is placed in a set position. A mixture of bright and dim lights is flashed on and off and a button needs to be pressed by your child whenever he/she sees a light appear. Each eye is tested separately.

Examination by paediatric ophthalmologist

The ophthalmologist will review your child’s eyes. Eye drops will then be placed into your child’s eyes to dilate the pupils.

Once your child’s pupils are dilated, pictures of the optic nerve will be taken. This will include a standard retinal photograph, and auto-fluorescence photograph and optical coherence tomography (OCT). This enables the structures inside the eye to be seen. Sometimes the doctor will perform an ultrasound of the eye to look for the calcium within the optic nerve drusen.

The ophthalmologist will then discuss all the results with you and your child.

On-going support

- Optic nerve drusen is not a treatable condition.
- Sometimes eye drops are prescribed if the pressure inside the eye is raised
- Optic nerve drusen will not usually be followed-up in the eye clinic at Addenbrooke’s Hospital and therefore your child may be discharged to the care of the optician.
- The prognosis for central vision is good. Patients as a rule will maintain their central vision and colour vision. Some patients will have loss of peripheral vision over time and this is usually not noticed by the patient but picked up on formal testing.
Hospital Contacts:

**Consultant paediatric ophthalmologist**

Department of Ophthalmology  
Clinic 3, Box 41, Addenbrooke’s Hospital  
Cambridge University Hospitals NHS Foundation Trust  
Hills Road, Cambridge, CB2 0QQ  
Secretary: 01223 216700

**Paediatric ophthalmology nurses**

Department of Ophthalmology  
Clinic 3, Box 41, Addenbrooke’s Hospital  
Cambridge University Hospitals NHS Foundation Trust  
Hills Road, Cambridge, CB2 0QQ  
Telephone 01223 596414 Monday – Friday 08:00 – 17:00hrs, 24 hour answerphone.

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.  
For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.  
Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

Authors  Consultant  
Pharmacist  N/A  
Department  Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ  [www.cuh.org.uk](http://www.cuh.org.uk)  
Contact number  01223 596414  
Publish/Review date  January 2018/January 2021  
File name  Optic_nerve_drusen.doc  
Version number/Ref  1/100627