

Non-arteritic Anterior Ischaemic Optic Neuropathy (NA-AION)

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What is NA-AION?

NA-AION is a condition which affects the optic nerve. The optic nerve is essentially a cable which transmits images generated in the retina to the brain for processing. In NA-AION the blood vessels which supply oxygen to the optic nerve become blocked. This causes damage and swelling to the optic nerve resulting in visual symptoms.

How common is NA-AION?

NA-AION is a major cause of vision loss in middle-aged and elderly people. It is the second most common cause of visual loss due to optic nerve disease in patients over 50.

What causes NA-AION?

The causes of NA-AION remain incompletely understood. We do know that NA-AION occurs when there is a blockage in the blood vessels (arteries) which supply the optic nerve. The resulting lack of oxygen (ischaemia) damages the optic nerve.

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Risk factors

- NA-AION is more likely to occur in those who are born with a small or “crowded” optic disc. A small optic nerve is more vulnerable to any problems with blood supply.
- Hypertension (raised blood pressure)
- Diabetes
- High cholesterol
- Smoking
- Sleep apnoea
- Significant drops in your blood pressure whilst asleep or due to blood loss following an accident or surgery may also be a precipitating factor.
- Those with cardiovascular disease (heart attacks and strokes) are also at higher risk.
- Raised intraocular pressure
- Uses of some erectile dysfunction medicines eg sildenafil, tadalafil and vardenafil (Viagra, Cialis and Levitra).

What are the symptoms?

The visual loss in NA-AION is typically:

- Painless
- Sudden onset
- Affects one eye
- Central: vision loss varies in severity from mild to severe
- Peripheral vision loss: there may be blurring in a particular region of your vision. Usually your vision may become blurred, dimmer or darker below or above what is being looked at. Most commonly this occurs below.
- Noted on awakening: 70% of cases notice their symptoms when they wake up

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- Stable – vision loss can progress over 6-12 weeks after the onset before stabilisation
- Some people experience altered colour vision

Investigations

Another cause of optic nerve swelling is a condition called giant cell arteritis or temporal arteritis. This is associated with scalp tenderness, headache, pain in your jaw when chewing food as well as feeling generally unwell with loss of appetite and weight loss. This is an inflammatory condition and is treated differently. You will have blood tests to check for this condition.

Treatment

Even though numerous experimental treatment options have been proposed, no proven effective medical or surgical therapy or preventative treatment for NA-AION exists. You should have a review of your cardiovascular risk factors (hypertension, diabetes and cholesterol) with your GP. Patients suffering high or low blood pressure should ensure they receive regular checks at their GP surgery as good control of the condition is important. If you do smoke, stopping smoking is highly recommended. If you snore or have breathing pauses overnight you may be referred for a sleep study.

Aspirin has been prescribed historically but there is no evidence this is effective in treating the affected eye nor reducing risk of recurrence or involvement of the other eye.

What is the prognosis?

The clinical course of NA-AION stabilises within a few weeks, at most in 2-3 months in almost all cases. In a recent study, central vision worsened in 20%, showed some spontaneous recovery in 30% and remained stable in 50%. The visual field defect (difficulty seeing above or below) is unlikely

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to improve. However, it may become less noticeable with time as the fellow eye can compensate to a degree.

The risk of the condition recurring in the same eye is 10%. The risk of your healthy fellow eye being affected is between 15-30% over a 5-year period. Treatment to ensure your risk factors are managed reduces these risks.

How do I contact the hospital?

If you require advice please telephone the Ophthalmic Outpatient Department between 9am – 5pm Monday to Friday on 01423 542217.

Further Information

Other sources of useful information can be found at:
NHS www.nhs.co.uk

Harrogate and District NHS Foundation Trust website www.hdft.nhs.uk

National Eye Institute <http://www.nei.nih.gov/health/>

Feedback

If you have a concern, complaint or compliment, or would like to provide feedback regarding your experience of the Ophthalmology Service / clinic, please contact the Patient Experience Team via the following:

Patient Experience helpline 01423 555499 (Monday – Friday 9.30am – 4pm)

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