ANTERIOR ISCHAEMIC OPTIC NEUROPATHY

UNDERSTAND MORE ABOUT ANTERIOR ISCHAEMIC OPTIC NEUROPATHY

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Singapore National Eye Centre

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What is Anterior Ischaemic Optic Neuropathy (AION)?

Anterior ischaemic optic neuropathy (AION) is a condition involving sudden loss of vision in one eye caused by damage to the optic nerve as a result of **insufficient blood supply**

(ischaemia). It is also known as "stroke of the optic nerve".



The role of the **optic nerve** (vision nerve) is to carry visual information from the eye to the brain. About 1.2 million tiny fibres in the optic nerve rely on oxygen supplied by surrounding blood vessels.





What are the different types of AION, and how are they treated?

There are two types of anterior ischaemic optic neuropathy (AION), each with their own set of symptoms.

1) Non-arteritic AION (NA-AION)

This is the more common form of AION. You may wake up one day and feel as though something is covering part of your vision in one eye. The lower half of your field of vision is more commonly affected. This is usually painless. Risk factors include:

- Small optic discs (usually in both eyes and present from birth)
- Hypertension
- Diabetes mellitus
- High cholesterol
- Smoking
- Obstructive sleep apnoea
- Anaemia or sudden blood loss
- Sudden drop in blood pressure
- Erectile dysfunction medications



Normal optic disc



Optic disc in patient with NA-AION

Treatment of NA-AION

The focus of treatment is on **managing underlying medical problems** that cause atherosclerosis of your blood vessels. You should visit your primary healthcare physician to ensure that your hypertension, diabetes or hypercholesterolemia are well controlled. Smoking should be stopped.

This will minimise your risk of further vascular events such as stroke and heart attack.

Inform your doctor if you have any of the following symptoms suggestive of **obstructive sleep apnoea** so you may be referred to the sleep specialist for management:

- Loud snoring
- Excessive daytime sleepiness
- Morning headache
- Waking up gasping or choking
- Observed episodes of stopped breathing during sleep

There is **no known treatment** to improve your vision after AION. Your doctor may prescribe aspirin but this has not been proven to be useful to protect the other eye.

Prognosis

It is possible that your vision may worsen in the first week, but it should stabilise after that. Over time, your vision and field of vision may remain the same or improve very slightly.

2) Arteritic AION (A-AION)

A-AION is an uncommon but potentially life-threatening cause of AION. It is caused by **inflammation of the arteries** supplying blood to the optic nerve. This inflammation causes the arteries to be blocked.

Giant cell arteritis (GCA) is one such cause, which results in inflammation of medium- and large-sized arteries. Besides visual loss, patients with GCA may experience the following:

- Headache
- Pain in the temples
- Scalp pain or tingling
- Jaw pain when chewing
- Neck pain
- Pain in the shoulders and hips
- General fatigue
- Loss of appetite



- Unexplained loss of weight
- Fever

Your doctor will order blood tests and a biopsy of the blood vessel on your temple to make the diagnosis.

Treatment of A-AION

A-AION must be treated immediately with oral or intravenous high dose steroids to prevent vision loss in the other eye or stroke. This condition is usually co-managed with the physician (rheumatologist).

LOCATION MAP



This patient information leaflet is a general guide to help patients understand specific eye conditions, treatment or tests. The information does not replace the need for individual advice from an ophthalmologist. Please consult with your ophthalmologist about your specific eye condition and/or concerns.

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