Endophthalmitis

Patient information leaflet

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What is endophthalmitis?

Endophthalmitis is severe inflammation of the tissues inside the eye. Sometimes, the inflammation can affect the entire eyeball and may result in severe visual loss or blindness in that eye.

What causes endophthalmitis?

The most common cause of endophthalmitis is an infection by a bug or microbe (virus, bacteria or fungus) that reaches the inside of the eye after a penetrating eye trauma or after an injection or surgery on the eye.
Less commonly, the microbes reach the eye by spreading from an infected tissue elsewhere in the body e.g. kidney or joint.

What are the symptoms of endophthalmitis?

The symptoms are: eye pain, redness, sensitivity to light, or sudden reduced vision. This commonly occurs 48 to 72 hours following an eye trauma, injection or operation.
If this occurs, you should seek immediate medical attention at the closest eye casualty. Please see below for contact details.

Why is endophthalmitis a medical emergency?

Endophthalmitis can cause permanent loss of vision or even blindness if it is not treated early and appropriately. Timely treatment can lead to recovery and improvement of vision in the majority of patients.

What does the treatment involve?

Before the treatment is started you may need to have a scan of the eye and have some blood tests done as a baseline and to make sure you do not have other health issues e.g. diabetes.

The treatment itself involves two steps:

1. Anterior chamber and vitreous tap

This is where a small sample of fluid is removed from the front (anterior chamber) and back portion (vitreous gel) of the eye. This sample will be examined to try to identify the infective cause, which in turn will help us ensure you are given the correct treatment.

2. Injection of antimicrobial medications (anti-viral, antibiotics or antifungal) into the vitreous

The vitreous is a transparent gel-like structure that lies at the back of the eye, and is often the main site of inflammation in endophthalmitis. Injecting the medication directly in the vitreous gel allows the medications to work more quickly and more effectively.

What should I expect during the procedure?

The injection is performed in a clean room or in the operating theatre at the Royal Eye Unit.

You will be lying down on a special chair. Prior to the injection, you will have local anaesthetic drops put in to numb the front surface of your eye. You may also get an anaesthetic injection to numb the eyeball.

The skin around the eye is cleaned with an antiseptic solution (usually iodine or chlorhexidine). Your face is then covered with a small plastic sheet to keep the area sterile. A small clip (eye speculum) is used to help you keep the eye open.

The sample from the front and back chambers of the eye is then taken and sent to the lab for examination. Following this, antimicrobial medications are injected into the vitreous through the white part of the eye (the sclera).

What will happen after the sample is taken & injection is performed?
You will be started on antimicrobial and anti-inflammatory eye drops and tablets. Sometimes we also give you steroid tablets to help reduce the inflammation in the eye.

You will need to attend the eye unit every 1 to 2 days initially, so we can keep a close watch on the eye.

What happens if the inflammation does not improve?

We may sometimes repeat the procedure above (vitreous sampling and injection of antibiotics into the vitreous gel). In some circumstances you may need the vitreous gel removed to get rid of the inflammation, aid healing and help diagnosis. This involves an operation called vitrectomy. More information can be obtained from the 'vitrectomy' leaflet.

Will endophthalmitis have any long term effects on my vision?

The majority of patients (almost 60%) recover nicely. There is often some loss of vision, but complete blindness (where one cannot see any light) is rare.

Contact details

Royal Eye Unit

Mon-Fri 8.30am to 5pm

0208 934 6404

Moorfields at St Georges' Hospital (Duke Elder Ward)

Mon-Fri 5pm to 8.30am, weekends and Bank Holidays

020 8672 1255 ext 2064/0638