



CMV RETINITIS

Summary

CMV retinitis is a sight-threatening condition caused by a virus. People with HIV whose CD4+ counts are below 50 are thought to be most at risk for developing this condition. Several treatment options are available.

What is CMV retinitis?

CMV retinitis is a serious eye infection that can lead to blindness. It is caused by a virus called cytomegalovirus (CMV). About one-half of all Canadian adults have been infected with CMV. When people with healthy immune systems are infected, they may have no symptoms at all or they may have a short flu-like illness. In people with severely weakened immune systems, such as people who have received organ transplants or people with AIDS, CMV can cause serious disease.

Who is at risk for CMV retinitis?

CMV retinitis is an AIDS-defining condition. Like most of the conditions associated with AIDS, CMV retinitis has become rare, thanks to effective combination antiretroviral therapy (drug cocktails). The HIV positive people who may be at risk for CMV retinitis are those whose CD4+ count is below 50 and those who are not taking anti-HIV drugs.

Symptoms

CMV retinitis can cause blurred vision, blind spots and “floaters” — dark specks that seem to move around in the field of vision.

Diagnosis

CMV retinitis usually affects people whose CD4+ counts are below 50. However, any HIV positive person who experiences changes in vision should contact a doctor as soon as possible. Although primary care doctors usually do eye exams, they will most likely refer their patients to an ophthalmologist (eye specialist) if they suspect CMV retinitis.

The eye specialist uses an instrument called a fundoscope to look in and see the back of the eye. Large yellowish or white grainy areas with damage to the tiny blood vessels indicate CMV retinitis.

Prevention

The HIV positive people who are thought to be most at risk for developing CMV retinitis are those who

- have been infected with CMV, and
- whose CD4+ counts are below 50, and
- who are not taking anti-HIV drugs.

The best way to reduce the risk of CMV retinitis is to keep your CD4+ count well above 50 cells. An effective cocktail of anti-HIV drugs can keep the virus under control and keep the CD4+ count above 100.



Treatment

The treatments for CMV retinitis can be divided into two groups:

- **systemic treatments**, where the drug is given by injection into a vein so that it circulates throughout the body in the blood, and
- **local treatments**, where the drug is put directly into the infected eye.

Systemic treatment

Systemic treatment for CMV retinitis is usually given in two stages. The first stage is called **induction therapy**. High doses of intravenous (IV) drugs are given frequently, to stabilize the damage that has occurred. In the second stage of treatment, called **maintenance therapy**, lower, less frequent doses are used to keep the infection under control and prevent a new flare-up.

- The best-known systemic treatments are IV ganciclovir or foscarnet. As induction therapy, one of these drugs would be given twice a day for two to three weeks. As maintenance therapy, the drug would be given once a day until your doctor decides that you no longer need it. If IV foscarnet or ganciclovir is used for maintenance therapy, an in-dwelling catheter is required. These are small devices surgically inserted into a large vein in the upper chest wall or arm. Catheters make the daily IV treatment much easier.
- IV cidofovir is another treatment option. Induction therapy with this drug requires one infusion once a week for two weeks. Maintenance therapy is given every two weeks. An in-dwelling catheter is not necessary for cidofovir treatments. Because cidofovir can cause kidney damage, probenecid tablets are taken to protect the kidneys.
- For some people, oral ganciclovir may be an option as maintenance therapy. It is taken at a dose of 1,000 mg three times a day.

Local treatment

- Ganciclovir, foscarnet or cidofovir can be injected directly into the eye. A local anaesthetic is injected into the area around the eye and sprayed lightly on the eyeball itself. Once the area is “frozen,” the drug is injected directly into the eye.
- A tiny gel pouch containing ganciclovir can be surgically implanted into the eye. The ganciclovir is slowly released from the pouch directly into the eye. The implants are expensive and they must be replaced about every eight months.

Stopping treatment

Maintenance therapy for CMV retinitis used to be prescribed for life. However, since effective drug cocktails can control HIV and raise CD4+ counts, recent studies suggest that it may be safe for some patients to stop maintenance therapy after six months if they are using a new combination of anti-HIV drugs.

Credits

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Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV-related illness and the treatments in question.

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