

Lucentis and Macular Degeneration

On March 13th, 2008 the Ministry of Health and Long-Term Care announced that patients suffering from wet macular degeneration would be eligible for insured treatment with Lucentis (ranibizumab) through the Ontario Public Drug Program. This makes Ontario only the second province, after Quebec, where this innovative treatment is insured. Previously, Ontario patients would have to pay nearly \$2000 per injection which limited the access to this medication and potentially put their vision at risk.

Macular degeneration (AMD) is a disease of the eye that affects the macula, which is the part of the eye that permits 20/20 central vision. This damage can come in one of two forms: dry or wet. The dry form of AMD is more common and accounts for roughly 80% to 85% of all cases. The wet form, while less common, accounts for nearly 90% of all cases of severe vision loss. The defining difference between wet and dry AMD is that wet AMD involves the growth of abnormal blood vessels which have a higher tendency to leak blood and fluid into the back of the eye. Extra fluid and blood in the macula can cause distortion and “greyed out” areas of vision and is the hallmark symptoms of macular degeneration. As the body attempts to heal the blood vessel leaks, scarring may then form which can cause permanent vision loss.

Dry AMD has no specific treatment currently available. However, vitamin supplementation was studied and recommended following the Age Related Eye Disease Study in 2001 for certain stages of this condition. Other treatments have been studied, including rheophoresis, but they have not had any scientific benefit in managing this disease.

Lifestyle modification can also make a difference. Maintaining a healthy diet high in green leafy vegetables and fish, watching your weight, exercising and maintaining a normal blood pressure have been shown to reduce the risk of developing AMD. The single largest preventative lifestyle change is related to smoking. Smoking can increase your risk roughly 8 times over that of someone who doesn't smoke. Even previous smokers that have quit for 10 years have a similar risk for AMD progression as non-smokers.

The treatment for wet AMD has been varied over the last five years from no treatment to LASER therapy (Visudyne) and now to anti-neovascular medications. Visudyne is insured in Ontario for certain types of wet AMD and was a standard treatment which is being slowly replaced by anti-neovascular medications. The first anti-neovascular medication used for AMD was Avastin which was initially developed for colorectal cancer and was used off-label for the treatment of wet macular degeneration.

Based on the success of Avastin, Novartis and Genentech started researching ways to improve the effectiveness by reducing the size of the antibodies, accelerating the half-life and studying the effects of the medication in a large study population. The result was Lucentis. There have been 10 clinical trials including 2 phase III studies (MARINA and ANCHOR) which have proven the effectiveness of Lucentis over Visudyne. It has been shown to actually improve vision for wet AMD patients in about 40% of those studied, which may allow some patients to regain the ability to drive. But there are no specific studies comparing the treatment results of Avastin to Lucentis.

The availability of Lucentis for all wet AMD patients is a huge step forward in the treatment of AMD but the problem is the shear cost of this initiative. The provincial government has earmarked \$100 million over three years for the Lucentis treatment. The previous cost charged to patients for Lucentis was \$2000 per injection with a general expectation of 7 to 8 injections in the first year. I did the quick math and realized that these numbers would permit 6250 fully treated patients over the three years. The government suggests that 10,000 patients are treated yearly with wet AMD... this means to me that the funding for Lucentis severely deficient. The alternative medication, Avastin, is approximately \$250 per injection but lacks the scientific evidence of Lucentis.

If you have macular degeneration or notice a loss of central vision, contact your optometrist for a prompt retinal evaluation since the earlier the treatments are started the better

An Eye On Health

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