OCULAR MG

MYASTHENIA GRAVIS FOUNDATION OF AMERICA

Answers to questions you may have about Ocular MG

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What is ocular myasthenia gravis?

Ocular myasthenia gravis is a form of myasthenia gravis (MG) in which the muscles that move the eyes and control the eyelids are easily fatigued and weakened.

What are the common symptoms of ocular myasthenia gravis?

People with ocular MG have trouble with sight due to double vision and/or drooping eyelids. Their eyes do not move together in balanced alignment, causing them to see "double" images. One or both eyelids may droop to cover all or part of the pupil of the eye, blocking vision.

These symptoms may be mild to severe. Eye weakness often changes from day to day and over the course of a day. Eye problems often worsen at the end of the day or after a prolonged period of use. If you have ocular MG, you may find that eye problems temporarily improve after several minutes of rest.

People with ocular MG do not have difficulty swallowing, speaking or breathing, nor do they have weakness of the arms or legs. Descriptions of the symptoms that people with ocular MG may have include:

- **Double vision** – Seeing two images rather than one. This results from weakness of the muscles that move the eyes together in alignment. The medical term for double vision is diplopia. If you have diplopia, you may experience blurred vision rather than double vision.
- **Drooping eyelids** – The eyes do not appear to be opened fully. If the eyelid covers the pupil of the eye, then the vision of that eye will be obstructed. The medical term for drooping eyelids is ptosis (pronounced "toe-sis").

Who gets ocular myasthenia gravis?

Problems with double vision and drooping eyelids are often the first symptoms of MG. Although most people have eye problems at the onset of MG, they may have other muscle weakness or develop other muscle weakness in the first two years after MG symptoms begin. About 15% of people with MG will have only ocular problems (ocular MG). If weakness of other muscles develops over time, the MG changes from ocular MG to generalized MG. About half of all people with ocular issues related to MG in the first year will develop generalized MG. People that have had only ocular MG symptoms for five years or more will most likely not develop generalized MG.

People with ocular MG are slightly more likely to have seronegative MG (no measurable autoantibodies like AChR and MuSK) compared with people with generalized MG.

Why are the eye muscles frequently involved in myasthenia gravis?

There may be several reasons why eye muscles are more frequently involved. However, this is not completely understood.

One hypothesis is that people with MG may simply notice eye weakness more often than mild weakness in other muscle groups in the body. Another hypothesis is that the eye and eyelid muscles are structurally different from muscles in the

trunk and limbs. For example, these parts of the body have fewer acetylcholine (AChR) receptors, which is where the defect occurs in autoimmune MG. Eye muscles contract much more rapidly than other muscles and may be more likely to fatigue.

Perhaps the most important difference between eye and eyelid muscles compared with other muscles of the body is that eye muscles respond differently to immune attack. The differences in the response of eye muscles to immune attack may explain why eye muscles are also targeted in other autoimmune conditions, such as autoimmune thyroid disease.

How is ocular myasthenia gravis treated?

It is important to talk with your physician about the best treatment regimen for you— balancing the severity of the symptoms and impact on quality of life with the risks and benefits of treatment. People who have primarily cosmetic problems due to ptosis or diplopia may consider nonpharmacological treatment, such as:

- Wearing dark glasses in bright light, which some people find helpful.
- Using eyelid tape (a special type of tape used to hold the eyelids open without injuring the eyelids). This can be used for ptosis and may be preferable to drug therapy that alters the immune system: using agents such as glucocorticoids (prednisone or similar agents), azathioprine (Imuran®), cyclosporine or mycophenolate mofetil (CellCept®).
- Applying a patch to one eye. This permits people with double vision to see one image. If the same eye is consistently patched, vision in that eye might decrease. Therefore, it is important to alternate the patch from one eye to the other to avoid permanent vision loss.
- Using eyelid crutches (clever devices attached to glasses to hold the eyelids open) for ptosis.
- Using eyeglass prisms for diplopia.

The last two treatments are uncommon, older treatment methods for ocular MG.

When ocular symptoms are severe or disabling, treatment with immune system modulating therapy may be considered.

Agents that improve neuromuscular transmission, such as Mestinon®, may be helpful for ptosis, but are generally not very useful for diplopia.

Thymectomy is usually not considered for people with ocular MG unless the manifestations are severe or disabling.

Eyelid or eye muscle surgery is generally not recommended for people with MG.

Your Notes

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Our Vision: A World Without MG

Our Mission: Create Connections, Enhance Lives, Improve Care, Cure MG

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