New Research: Emotional Support and Physician Communication Must Accompany Medical Treatment for Age-Related Macular Degeneration

Although the advent of anti-VEGF therapy (explained below), administered via eye injection with Lucentis, Eylea, or Avastin, has revolutionized the treatment (but not cure) of wet age-related macular degeneration (AMD), there remain a number of challenges associated with treatment, including the need for appropriate emotional support and development of effective coping strategies.

A new study from the United Kingdom of 300 patients with wet AMD and 100 of their caregivers concurs with this pressing need for emotional support, revealing that "as many as 89% of patients who showed anxiety and 91% who showed depression were not receiving appropriate emotional and psychological treatment." The primary sources of anxiety that patients reported were "fear of going blind owing to … eye injections and concerns about treatment effectiveness, rather than pain [associated with injections]."

Says study co-author Dr. Tariq Aslam, "There have been amazing scientific achievements in diagnosing and treating serious eye diseases, such as wet AMD, which have revolutionized our ability to reverse life-changing vision loss. However, we must not forget the human element when applying all this to ensure all our patients can reap the full benefits of this cutting-edge science."

About the Research
This new study addressing the need for emotional support, titled *Experience of Anti-VEGF Treatment and Clinical Levels of Depression and Anxiety in Patients with Wet Age-Related Macular Degeneration* (explained below), has been published online ahead of print in the *American Journal of Ophthalmology*, a peer-reviewed, scientific journal published monthly since 1884. The Journal specializes in original research directed to ophthalmologists and visual science specialists that "describes clinical investigations, observations, and laboratory investigations."

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About the Macular Degeneration and Emotional Support Research

Excerpted from [Effective communication from doctors could reduce anxiety for wet age-related macular degeneration patients](https://www.sciencedaily.com/releases/2022/07/220721100131.htm), via *ScienceDaily*:

> Wet macular degeneration (wAMD) is the commonest cause of vision loss in the western world, but modern treatments have dramatically improved the level of vision patients can expect to retain. These treatments involve regular injection of vascular endothelial growth factor inhibitors (anti-VEGF) into the eye.

> **However, a new study conducted at Manchester Royal Eye Hospital ... demonstrates high levels of undiagnosed anxiety and depression persisting in patients receiving treatment, despite their improved visual outcomes.**

The researchers say that the study findings demonstrate the value of human interaction between clinician and patient in offering reassurance around the efficacy and safety associated with anti-VEGF injections.

> [Study co-author] Dr. Tariq Aslam said, "There have been amazing scientific achievements in diagnosing and treating serious eye diseases, such as wAMD, which have revolutionized our ability to reverse life-changing vision loss. **However, we must not forget the human element when applying all this to ensure all our patients can reap the full benefits of this cutting-edge science.**

The report suggests that patients may benefit from additional assurances from clinical staff regarding success rates in halting disease progression with anti-VEGF therapy; how it can reduce the risk of becoming blind in the future; and the low likelihood of serious problems occurring following the injections.
The research found as many as 89% of patients who showed anxiety, and 91% who showed depression were not receiving appropriate psychological and psychiatric treatment.

More about Wet Age-Related Macular Degeneration

Age-related macular degeneration (AMD) is a gradual, progressive, painless deterioration of the macula, the small sensitive area in the center of the retina that provides clear central vision. Damage to the macula impairs the central (or "detail") vision that helps with essential everyday activities, such as reading and writing, preparing meals, watching television, and personal self-care.

AMD is the leading cause of vision loss for people aged 60 and older in the United States. According to the American Academy of Ophthalmology, 10-15 million individuals have AMD and about 10% of people who are affected have the "wet" type of AMD.

Wet (Neovascular) Macular Degeneration

In wet macular degeneration, the choroid (a part of the eye containing blood vessels that nourish the retina) begins to sprout abnormal blood vessels that develop into a cluster under the macula, called choroidal neovascularization (neo = new; vascular = blood vessels).

The macula is the part of the retina that provides the clearest central vision. Because these new blood vessels are abnormal, they tend to break, bleed, and leak fluid under the macula, causing it to lift up and pull away from its base. This damages the fragile photoreceptor cells, which sense and receive light, resulting in a rapid and severe loss of central vision.

Eylea, Lucentis, Avastin, and Anti-Angiogenic Drugs

Angiogenesis is a term used to describe the growth of new blood vessels and plays a crucial role in the normal development of body organs and tissue.

Sometimes, however, excessive and abnormal blood vessel development can occur in diseases such as cancer (tumor growth) and AMD (retinal and macular bleeding).

Substances that stop the growth of these excessive blood vessels are called anti-angiogenic (anti=against; angio=vessel; genic=development), and anti-neovascular (anti=against; neo=new; vascular=blood vessels).
The focus of current anti-angiogenic drug treatments for wet AMD is to reduce the level of a particular protein (vascular endothelial growth factor, or VEGF) that stimulates abnormal blood vessel growth in the retina and macula; thus, these drugs, including *Lucentis*, *Avastin*, and *Eylea*, are classified as *anti-VEGF treatments*. These drugs are administered by injection with a very small needle directly into the eye after the surface has been numbed.

**More from the *American Journal of Ophthalmology***

Here is more information about the study, excerpted from the article abstract:

**Purpose:** To investigate detailed patient experiences specific to receiving vascular endothelial growth factor inhibitors (anti-VEGF) for wet age-related macular degeneration (wAMD), and to acquire a snapshot of the frequency of clinically significant levels of depression, anxiety, and post-traumatic stress among patients and levels of burden in patients' [caregivers].

**Methods:** Three hundred patients with wAMD receiving anti-VEGF treatment and 100 patient [caregivers] were recruited. Qualitative data on patients' experience of treatment were collected using a structured survey. Standardized validated questionnaires were used to quantify clinically significant levels of anxiety, depression, and post-traumatic stress, as well as cognitive function and [caregivers'] burden.

**Results:** Qualitative data showed that 56% of patients (n = 132) reported anxiety related to anti-VEGF treatment. The main sources of anxiety were fear of going blind owing to intravitreal injections and concerns about treatment effectiveness, rather than around pain. From validated questionnaires, 17% of patients (n = 52) showed clinical levels of anxiety and 12% (n = 36) showed clinical levels of depression. Depression levels, but not anxiety, were significantly higher in patients who received up to 3 injections compared with patients who received from 4 to 12 injections and compared with patients who received more than 12 injections.

**Conclusion:** Anti-VEGF treatment is often experienced with some anxiety related to treatment, regardless of the number of injections received. Clinical levels of depression seem to be more frequent in patients at early stages of anti-VEGF treatment. Strategies to improve patient experience of treatment and minimize morbidity are suggested.

**Resources for Emotional Support and Macular Degeneration**

- **Coping with Vision Loss**
- **Support Groups and Other Resources**
- **What Kinds of Services Will You Need to Maintain Independence After Vision Loss?**
- **Vision Rehabilitation Services**