

# Chronic Eye Floaters: An Opportunity for Progress

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Medical education places a strong emphasis on discussing barriers to care and underserved patient populations. As a new matriculant to medical school, I did not fully appreciate how this could manifest, and I never imagined that I would soon face these challenges myself. During my first year of medical school, I developed what are commonly known as eye floaters. While my case was not severe, it led me to discover a unique subset of patients who not only suffer from a very real and potentially debilitating disease, but also from a general lack of knowledge about how to objectively diagnose and treat their condition.

Eye floaters, also known more technically as myodesopsia, have been associated with many conditions ranging from benign age-related changes of the eye like posterior vitreous detachments to acute processes like uveitis and trauma to idiopathic causes. The pathophysiology of myodesopsia involves an aggregation of collagen fibers within the vitreous of the eye, which casts visible shadows on the retina and is best seen when contrasted against a bright surface. Though floaters may be a warning sign of serious pathologies like retinal detachment, especially floaters with an acute onset, often no such pathology is present and, once ruled out, patients are sent on their way. However, the long-term impact on quality of life must not be discounted, particularly for patients with numerous floaters or floaters of large size. This can manifest as patients choosing not to venture outside due to visual disturbances that are worse in more brightly lit or higher-

contrast settings; socially isolating themselves; experiencing difficulties performing tasks that require quick saccadic eye movement, such as reading or driving; and experiencing higher rates of mental health issues as a result of their condition (1).

Unfortunately, both patients with chronic floaters and physicians treating chronic floaters are put in an unenviable position. Because it is difficult to objectively quantify how badly someone's floaters are affecting their vision, physicians must rely on subjective reports from these patients. This problem exists even in light of emerging data regarding vitreous echodensity as obtained by quantitative ultrasound and measures like contrast sensitivity function, both of which have been shown to correlate with subjective symptoms (2). Additionally, the only curative treatment for eye floaters is with vitrectomy, which is an invasive procedure that many physicians are not keen on performing when a patient's eye is otherwise healthy, even when these patients report a high subjective degree of suffering (3-4). This even further limits treatment options and may lead this patient population to feel that their struggles are not being appreciated or taken seriously. A well-documented outgrowth of this is "doctor-shopping behavior," which has been studied by Tseng. Patients' experiences of receiving an inadequate explanation of the disease, as well as a high degree of concern about their condition, were correlated with this behavior (5). This raises questions about whether our current patient interactions around this condition could

be modified in some way to either better equip patients with evidence-based understanding, or at the very least, help to better align goals of care between the patient and physician.

Another complicating factor is the paucity of data on myodesopsia. While there is research demonstrating the negative impact that it can have on quality of life, there is little work exploring how many patients are affected and to what degree they are affected (6). This leads to a lack of corporate or governmental incentives to research treatments for the condition. There is also a general sense among physicians that floaters are common and that since most people can adapt to life with them, then so can the patients who are severely afflicted (7,8). This is likely not the case, and more study of this specific patient population could be of immense benefit. This begins by obtaining better data on prevalence and the fraction of patients with significant visual impairment, and by intensifying efforts to provide physicians with better diagnostic and therapeutic tools.

Patients suffering from chronic eye floaters face many hurdles. They often struggle to help their physicians understand the severity of their condition, they grapple with visual changes that can potentially impact them for the rest of their life, and they face a reality of few treatment options and little prospect of large-scale research to develop new therapeutic strategies. As a medical community we must do more to avoid letting this population slip through the cracks.

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