Letter to the Editors

Floaters: A potential confound in the assessment of perceptual abnormalities

Dear Editors,

Over the past several years working in a milieu of schizophrenia-oriented research and medical venues, we have witnessed a number of incidents in which a commonly occurring medical phenomenon known as myodesopsia (i.e., floaters), leads to considerable confusion when rating perceptual abnormalities, even among the most seasoned of diagnosticians.

Floaters occur when the vitreous, a gel-like substance that fills the eye, slowly shrinks and becomes stringy; the resulting strands can cast tiny shadows on the retina (Cline et al., 1997). The resulting subjective experience is a perception of shadow-like shapes that appear as spots, threads, or fragments of cobwebs, which float slowly before one's eyes. It is important to note that this phenomenon is the result of normative maturational changes in the eye and can be common to younger people, especially if they are myopic (Cline et al., 1997).

Floaters generally follow the rapid motions of the eye, while drifting slowly within the fluid. Many times they trick the sufferer into thinking they see something out of the corner of their eye that really is not there. It is this subjective experience that is responsible for the noted confusion during assessment for perceptual abnormalities. For example, a staple tool for the assessment of individuals at high-risk for schizophrenia, the Structured Interview for Prodromal Symptoms (SIPS; Miller et al., 2002) gauges visual distortions, illusions, and hallucinations with questions such as, “Do you ever feel your eyes are playing tricks on you?”, and “Have you ever seen unusual things like flashes, flames, vague figures or shadows out of the corner of your eye?”.

Over the years, we have seen many cases in which adolescents or young adults have responded to these questions by describing floaters. Because of the nature of this perceptual experience, (1) a series dots or clusters that move across the field of vision, (2) which can be puzzling or disturbing to the individual (who very often, may not have any idea that what they are experiencing is a common medical phenomenon) and, (3) are an experience that others cannot or do not seem to see, it is not surprising that patient endorsements of myodesopsic experiences can often lead to diagnostic confusion. To a clinician who is not aware of floaters, or to assessment group that has not discussed what to do when this phenomena occurs, the resulting diagnostic confusion can serve as a serious confound.

However, there are the consistencies in the nature of a floater, which we have found to be very useful when distinguishing it from a genuine perceptual abnormality. First, floaters are primarily noticeable when looking at a blank surface or an open monochromal space, such as blue sky; a query designed to determine where these perceptions predominantly occur will help to elucidate confusion. Second, despite the name “floaters”, many of these specks have a tendency to sink slowly toward the outside of the field of visions, in whichever way the eyeball is oriented. A query to determine if there is a characteristic pattern of movement that fits this description will be helpful to clarify whether the patient is describing a myodesopic experience or a genuine perceptual abnormality. Finally, the consideration of other clinical evidence when making an ultimate assessment decision will be very useful (e.g., are these descriptions which might be “floaters” the only abnormal experience the patient is describing?) The reliable and valid assessment of schizophrenia and psychotic disorders is a challenging and continuously evolving process; open communication between and among researchers and clinicians with phenomena such as floaters improve the reliability of research into visual illusions or perceptual distortions.

References

Miller, T.J., McGlashan, T.H., Rosen, J.L., Somjee, L., Markovich, P.J., Stein, K., Woods, S.W., 2002. Prospective diagnosis of the initial prodrome for schizophrenia based on the structured
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