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WIDE-ANGLE VITREOUS IMAGING IN FAMILIAL EXUDATIVE VITREORETINOPATHY

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Abstract

Background
Familial exudative vitreoretinopathy (FEVR) is a rare inherited disease that can cause permanent blindness in childhood. In FEVR, two processes contribute to vision loss: 1) abnormalities of retinal vasculature and 2) traction from the vitreous gel on the retina. The latter process, vitreous traction, is known to be associated with in causing another ocular event, posterior vitreous detachment (PVD). Posterior vitreous detachment is a natural process in which the vitreous gel of the eye pulls and detaches itself from the retina. While it was once thought that such process does not occur until the age of 60, studies that have utilized newer imaging technology have shown that partial PVD can begin as early as age 9 and may occur even earlier in pediatric retinal diseases. By better understanding the association between PVD and FEVR, new methods for early detection can be developed to identify, treat, and prevent further FEVR progression in children.

Methods
Both FEVR and healthy pediatric individuals are recruited from several University of Utah clinics. These subjects undergo a single study visit where visual acuity, intraocular pressure, refractive error, and axial length will be measured. In addition, wide-angle optical coherence tomography (OCT) scans will be obtained to determine the PVD stage.

Results
Research and analysis are currently ongoing. No findings can be reported now.

Conclusions
The research highlights the importance of recognizing methods that can identify early markers of FEVR, and other eye diseases related to vitreous abnormalities. If wide-angle OCT is found to be an effective diagnostic tool for FEVR in children, it would be a safer examination method compared to current methods.