A 7-year-old boy with neurofibromatosis type 1 (NF1), lost to follow-up for 2 years, was referred for right leukocoria. Slight ipsilateral proptosis, hypotropia, and a complete loss of light perception were observed; the right pupil was unreactive to light. Slitlamp examination showed bilateral Lisch nodules (iris hamartomas) and moderate right vitreous Tyndall (light scatter from the presence of vitreous cells). Fundus examination revealed a white telangiectatic papillary mass growing into the vitreous cavity (Figure, A). Orbital magnetic resonance imaging showed a mass oriented against the globe of the eye (Figure, B, arrowhead).