

Pancreatitis Related Purtscher’s retinopathy presenting with visual hallucinations

Niel Dave, M.D, Jacklyn Mahgerefteh, D.O, Ana Martinez-Nunez, M.D. Austin Bach, D.O., MPH, Franklin E. Kasmin, M.D.

Introduction

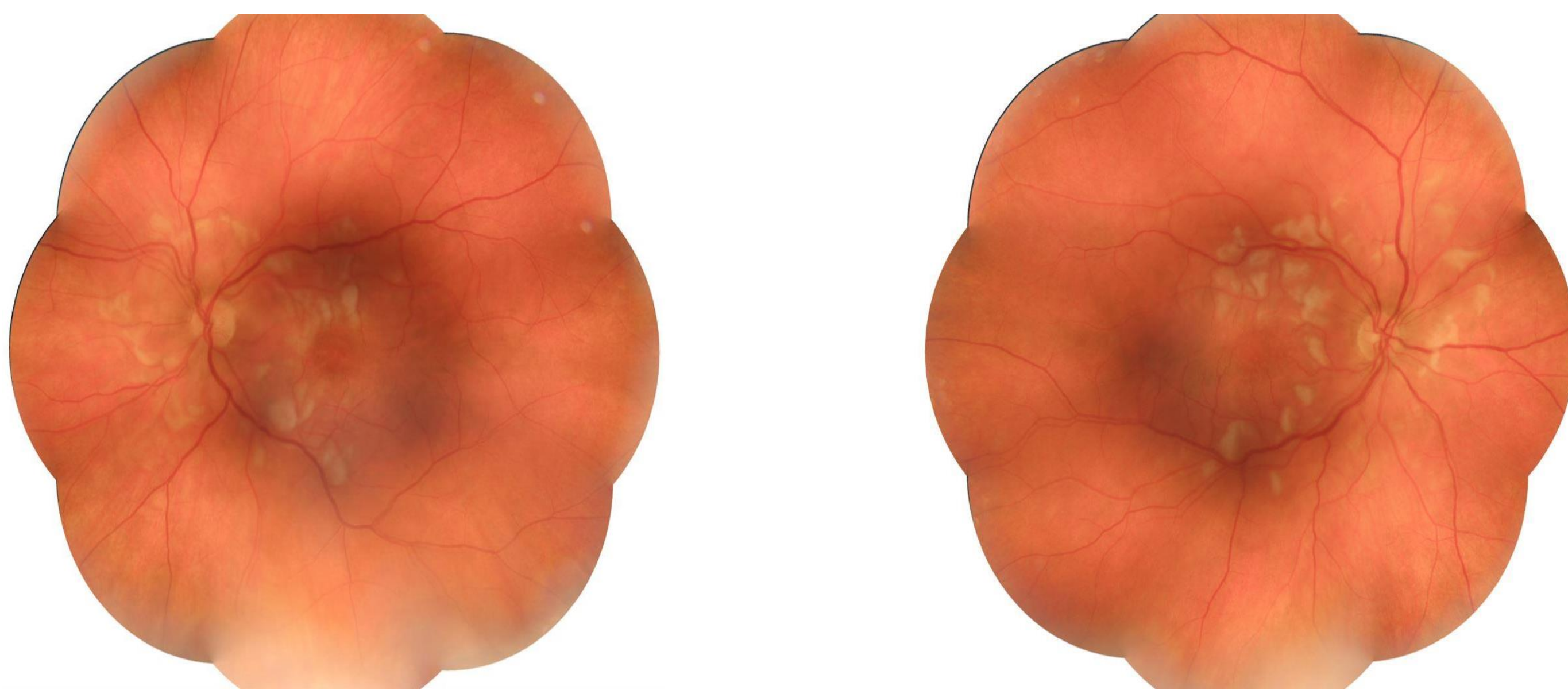
One of the most undiagnosed complications of pancreatitis is the development of Purtscher's like retinopathy. As a result of diffuse complement activation and leuko-embolization patients will experience blurry vision which can oftentimes be permanent. This usually manifests with sudden onset painless vision loss however, in rare instances, visual hallucinations may be the initial sign. We present a case of a young woman with Purtscher’s like retinopathy from pancreatitis who presented with visual hallucinations. Recognizing the symptoms, causes and the overall course of this disease are integral in preventing permanent vision loss.

Case Description

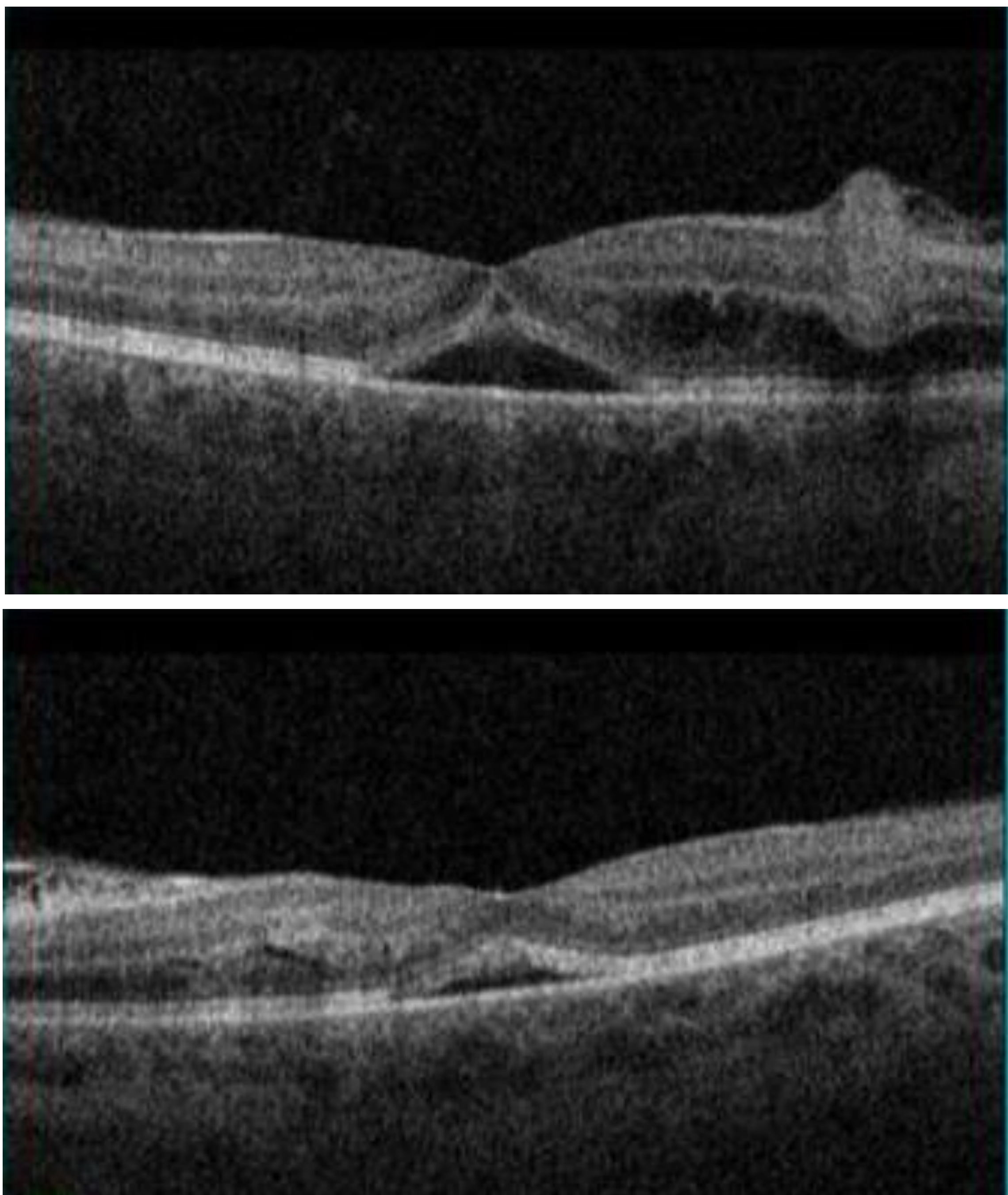
A 38-year-old female with a PMH of alcoholic pancreatitis presented with 2 days of severe persistent epigastric pain and vomiting. Vital signs and laboratory tests were normal excluding a lipase of 5000. CT scan of the abdomen and pelvis showed acute interstitial pancreatitis and non-organized peripancreatic fluid. Supportive care with intravenous fluids and diet de-escalation was employed. The abdominal pain resolved on the second day of admission. On the 3rd day, the patient experienced acute onset visual hallucinations. She reported seeing “imaginary people”, that the “garbage seemed to be melting”, that “chairs moved across the room”, and that “1 person would appear as 3 separate people”. Vitals, physical examination and labs all appeared normal. There was no evidence of alcohol withdrawal. Later that evening, the patient reported bilateral blurry vision. CT scan of the head was unremarkable. Ophthalmology evaluation showed severely diminished visual acuity. Dilated fundoscopic exam revealed bilateral multiple peripapillary cotton wool spots (CWS) and polygonal shaped areas of retinal whitening (Purtscher flecken), making a diagnosis of Purtscher’s like retinopathy. (Figure 1a, 1b). No treatment was given. The visual hallucinations and blurry vision gradually improved over 1 month. Optical coherence tomography (OCT) scan was performed revealing CWS (Figure A, top) and bilateral macular edema (Figure A, bottom). In outpatient follow up 2 months after the diagnosis, her visual acuity had returned to baseline.

This research was supported (in whole or in part) by HCA Healthcare and/or an HCA Healthcare affiliated entity. The views expressed in this publication represent those of the author(s) and do not necessarily represent the official views of HCA Healthcare or any of its affiliated entities.

Findings



•Figure A (1a): Optical coherence tomography showing bilateral cotton wool spots



•Figure A (1b): Bilateral macular edema (top: left; bottom: right)

Discussion

Purtscher retinopathy is a vaso-occlusive vasculopathy that typically occurs after compression injuries, usually to the thorax or head. It is thought that this injury triggers complement activation, producing granulocyte aggregation, leukocyte embolization and eventually small arteriolar occlusions in the retina. Other conditions that cause complement activation, but without trauma, can cause a similar vasculopathy and identical fundoscopic appearance. This entity is called Purtscher-like retinopathy and has been seen in numerous gastrointestinal related illnesses such as: acute pancreatitis, pancreatic adenocarcinoma, cryoglobulinemia, and hemolytic uremic syndrome (1,2,3,4,5). It is imperative to be aware of the symptoms and to treat the underlying condition in Purtscher and Purtscher-like retinopathy to prevent further damage to the retina. Corticosteroids have been suggested to have a role in the management of Purtscher-like retinopathy to decrease the complement activation, however studies have not shown any statistical improvement with their initiation (6). At this time, no ocular treatment is recommended, and observation is advised.

Conclusion

Purtscher-like retinopathy has been seen in numerous GI related conditions such as: acute pancreatitis, pancreatic adenocarcinoma, cryoglobulinemia, and hemolytic uremic syndrome (1,2,3,4,5). Being aware of this condition and treating the underlying pathology that drives it, is imperative to prevent further damage to the retina. The prognosis of recovery is variable and further investigation is warranted.

References

1. Carrera CRL, Pierre LM, Medina FMC, Pierre-Filho PDTP. Purtscher-like retinopathy associated with acute pancreatitis. Sao Paulo Med J. 2005;123(6):289–91. doi/S1516-31802005000600008.
2. Tabandeh H, Rosenfeld PJ, Alexandrakis G, Kronish JP CN. Purtscher-like retinopathy.associated with pancreatic adenocarcinoma. Am J Ophthalmol. 1999;128:650–2.
3. Lauer AK, Klein ML, Kovarik WD et al. Hemolytic uremic syndrome associated with Purtscher-like retinopathy. Arch Ophthalmol. 1998;116:1119–20.
4. Patel MR, Bains AK, O'Hara JP et al. Purtscher's retinopathy as the initial sign of thrombotic thrombocytopenic purpura/ hemolytic uremic syndrome. Arch Ophthalmol. 2001;119:1388–9.
5. Myers JP, Di Bisceglie AM ME. Cryoglobulinemia associated with Purtscher-like retinopathy. Am J Ophthalmol. 2001;131:802–4.
6. Miguel AI, Henriques F, Azevedo LF, Loureiro AJ, Maberley DA. Systematic review of Purtscher's and Purtscher-like retinopathies. Eye (Lond). 2013 Jan;27(1):1-13.
7. Agrawal A, McKibbin M. Purtscher's retinopathy: epidemiology, clinical features and outcome. Br J Ophthalmol. 2007 Nov;91(11):1456-9.