

# Sudden visual loss following abdominal surgery

Gladys Reshma Rodrigues, Nooji Sathyanarayan, Teena Mendonca,<sup>1</sup> Tina Anne John

Kasturba Medical College,  
Mangalore (Manipal Academy  
Of Higher Education),  
Mangalore, India

## Correspondence to

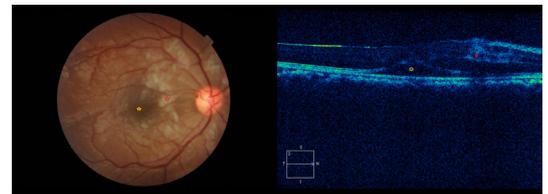
Dr Gladys Reshma Rodrigues,  
gladysdoc@rediffmail.com

Accepted 29 January 2019

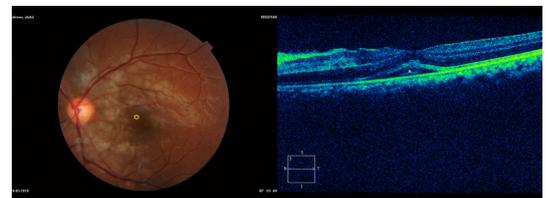
## DESCRIPTION

An 18-year-old man underwent hemicolectomy for carcinoma of the transverse colon. On the third postoperative day, the patient reported decreased vision in both eyes. The patient was a hypermetrope of +5.0DS. On examination, his best corrected visual acuity was 1/60 in both eyes. Amslers grid showed metamorphopsia in both eyes. Anterior segment and pupillary reactions were normal. Fundus examination revealed multiple patches of retinal whitening resembling soft exudates over posterior pole with predominant peripapillary distribution (figure 1). Foveal reflex was dull. Based on the classical fundus picture he was diagnosed to have Purtscher's like retinopathy. Optical Coherence Tomography (OCT) showed intraretinal oedema and mild subretinal fluid in macula of both eyes (figure 2 and figure 3). Intravenous steroids were advised but deferred after discussion with gastroenterologist due to risk of post hemicolectomy wound infection and poor systemic condition. Fundus fluorescein angiography (FFA) could not be done as patient was too debilitated. Patient was observed with periodic review. His vision gradually improved to 6/18 in both eyes.

Various causes of vision loss following non ophthalmic surgeries have been reported in literature. Postoperative vision loss can occur following cardiac and spine surgeries mainly due to ischaemic optic neuropathy.<sup>1</sup> In this case the vision loss was due to Purtscher's retinopathy following hemicolectomy for carcinoma colon which has not been reported. Purtscher's retinopathy is a distinct clinical entity seen secondary to trauma specifically blunt thoracic and chest compression injuries. Similar fundus picture presenting due to non-traumatic aetiology is called Purtscher's like retinopathy.<sup>2</sup> Bilaterality is seen in 60% of cases. Purtscher like retinopathy is used to describe similar clinical picture in the absence of any trauma. It occurs secondary to various causes such as fat embolism, pancreatitis or following childbirth. Various theories are postulated regarding the pathogenesis of Purtscher's retinopathy but it is typically a microangiopathy caused



**Figure 2** Optical Coherence Tomography image of right eye showing intraretinal hyper-reflective areas corresponding to flecken with intraretinal oedema (red asterix). Serous neurosensory detachment is present in subfoveal area (yellow asterix).



**Figure 3** Optical Coherence Tomography image of left eye showing intraretinal hyper-reflective areas corresponding to flecken with intraretinal oedema (red asterix). Serous neurosensory detachment is present in subfoveal area (yellow asterix).

by aggregates of fat, leucocytes, complement activation or other mechanisms.<sup>3</sup>

Diagnosis is mainly clinical. FFA can be supportive and shows leakage from blood vessels in mild stages and occlusion of precapillary arterioles in late stages. We were unable to do an FFA due to his poor systemic profile.

OCT showed intraretinal hyper-reflectivity in areas corresponding to the flecken. Subretinal oedema and serous neurosensory detachment was present at the fovea.

Purtscher's retinopathy occurring after hemicolectomy has not been reported to the best of our knowledge. The probable mechanism may be due to fat emboli leading to precapillary arteriolar occlusion.



© BMJ Publishing Group Limited 2019. No commercial re-use. See rights and permissions. Published by BMJ.

**To cite:** Rodrigues GR, Sathyanarayan N, Mendonca T, et al. *BMJ Case Rep* 2019;**12**:e227266. doi:10.1136/bcr-2018-227266



**Figure 1** Shows fundus photograph of right and left eye with white retinal lesions with periarteriolar clearing characteristic of purtschers flecken (black arrow).

## Learning points

- ▶ Physicians need to be aware of postoperative visual loss and its occurrence after non-ophthalmic surgeries.
- ▶ Prompt referral to ophthalmologist and treatment may salvage vision.
- ▶ Purtscher's like retinopathy can occur after hemicolectomy.

Prognosis of purtscher's retinopathy is variable. Purtscher's flecken has no prognostic value. Purtscher's secondary to trauma and pancreatitis have a better visual prognosis. Treatment is variable. Some physicians just observe while others resort to intravenous steroids though not of proven benefit. Fortunately, our patient improved without steroids. Purtscher's like retinopathy following non ophthalmic surgeries is not uncommon. High index of suspicion with prompt retinal evaluation will help in the diagnosis.

**Contributors** GRR: Manuscript writing, patient management. NS: Gastrosurgeon, Treating Physician. TM: Intellectual contribution. TAJ: Collection of Images.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

- 1 Kendrick H. Post-Operative Vision Loss (POVL) following surgical procedures. *J Anesth Clin Res* 2012;03:184.
- 2 Narendran S, Saravanan VR, Pereira M. Purtscher-like retinopathy: A rare complication of peribulbar anesthesia. *Indian J Ophthalmol* 2016;64:464–6.
- 3 Miguel AIM, Henriques F. Systematic review of purtscher's and purtscher-like revised. *Retinopathies Eye* 2013;27:1–13.

Copyright 2019 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/>  
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact [consortiasales@bmjgroup.com](mailto:consortiasales@bmjgroup.com)

Visit [casereports.bmj.com](http://casereports.bmj.com) for more articles like this and to become a Fellow