

A Rare Case of Bilateral Purtscher's Retinopathy

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Abstract: *Purtscher's Retinopathy is a rare post traumatic, haemorrhagic and occlusive vasculopathy. It is also known as angiopathia retinae traumatica. It was first described in 1910 by Dr.OthmarPurtscher as a syndrome of sudden blindness with severe head trauma. It can also occur in cases of chest trauma, acute pancreatitis, cardiac aneurysm and renal failure. The hypothesis is micro-embolic infarction of the retina, usually involving the peripapillary region leading to unilateral or bilateral loss of vision. The frequent signs are white ischemic infarcts and retinal hemorrhages. Till now there are no definitive guidelines for treatment. The typical. Course of purtscher's retinopathy is an initial severe loss of vision followed by a gradual and nearly complete improvement. By reporting this case we would also like to highlight the need for fundus examination post severe compression injury.*

Keywords: purtscher's retinopathy, trauma, white ischemic infarcts

1. Case

A 21 year old male presented with decreased vision in both eyes 1 week post road traffic accident. He gave history of head and chest trauma 1 week back after falling from the moving vehicle. He also sustained fracture of right humerus for which a sling was applied. But he did not suffer any ocular or peri-orbital trauma. His best corrected visual acuity (BCVA) was hand movements in right eye(R/E) and Finger Counting at 3m in left eye (L/E). Anterior segment was normal in both the eyes. Both the pupils showed normal pupillary reflexes. Intraocular pressure (IOP) was 16 mmHg in R/E and 14mmHg in L/E. Dilated fundus examination revealed multiple white retinal areas in the peripapillary area with a large pre-retinal hemorrhage at macula in OD and multiple white retinal areas in the peripapillary area and in the macular area in OS (Figure 1). There was no injury to optic nerve on CT scan. The baseline investigations were normal. Based on history and clinical findings, the patient was diagnosed as a case of bilateral Purtscher's Retinopathy. He was managed with intravenous methylprednisolone 1gm daily for three days followed by oral methylprednisolone starting at 60mg (1mg/kg body weight) daily with gradual tapering. 1 week, his BCVA improved to finger counting at 3m in R/E and 6/24 in L/E. One month later, it showed further improvement to 6/24 in R/E and 6/12 in L/E. Fundus examination revealed resolving hemorrhages and cotton wool spots in both eyes.(Figure 2)

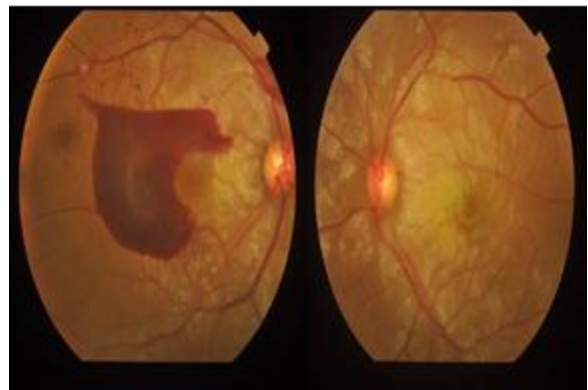


Figure 1: Multiple white retinal areas in the peripapillary area with a large pre-retinal hemorrhage at macula in OD and multiple white retinal areas in the peripapillary area and in the macular area in OS

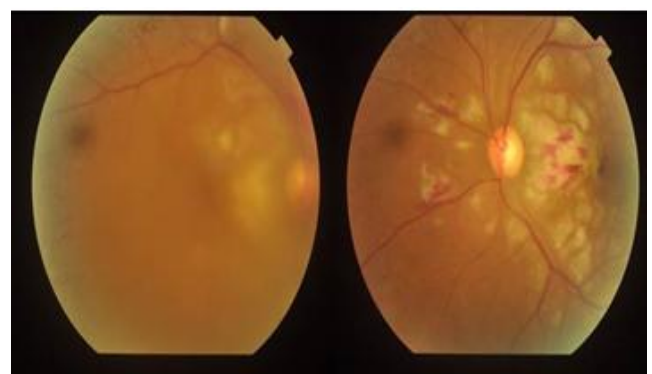


Figure 2: Resolution of pre retinal haemorrhage and white retinal areas in OD and resolving white retinal areas in OS

2. Discussion

Dr. Othmar Purtscher first described purtscher's retinopathy as a disturbance of fundus discovered after head injury which consisted of superficial round white woolly patches

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closely related to veins, small linear hemorrhages and a watery oedema of perimacular area. [1] True Purtscher's retinopathy is associated with head trauma. Other traumatic and non-traumatic causes for the condition are known as "Purtscher's-like retinopathy". [2] It results from occlusion of small arterioles by intravascular micro-particles generated by underlying systemic conditions. Subsequent endothelial damage can cause incompetency of the microvascular circulation, resulting in occlusion and ischemia. [3] The diagnosis depends on patient's history and clinical findings. Patient experiences decreased vision and blurred central vision. Symptoms are usually bilateral but can be unilateral.[4] Ophthalmoscopy reveals multiple cotton wool spots of variable sizes and intra retinal hemorrhages mostly in peripapillary area. Occasionally it may present with disc edema and afferent pupillary defect. Vision may be completely lost from infarction and optic atrophy may ensue. Visual prognosis is guarded, although initially decreased vision may improve over a period of months. [5]

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