



TRANSIENT UNILATERAL MYOPIC SHIFT AND SUBCONJUNCTIVAL HAEMORRHAGE AS OCULAR MANIFESTATIONS OF HYPERTENSIVE EMERGENCY- A CASE REPORT

Ophthalmology

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ABSTRACT

Purpose: Typically, hypertensive emergencies manifest as hypertensive retinopathy when presenting to ophthalmologists. This report highlights a unique case where hypertensive emergency caused unilateral transient myopic shift due to ciliary body detachment, along with hypertensive retinopathy, aiming to broaden the understanding of ocular symptoms associated with hypertensive crises. **Observations:** A 30-year-old male arrived at our hospital opd with pain, redness, sudden blurry vision in left eye, exhibiting a blood pressure of 190/140mmHg. His visual acuity was 5/60 in the left eye and 6/6 in the right eye, but improved dramatically with -5D spherical lens to 6/6 for left eye. Intraocular pressures were normal. Examination revealed shallow anterior chamber, sub conjunctival haemorrhage and retinopathy changes in left eye- macular star and disc edema. Ultrasound biomicroscopy (UBM) showed complete ciliary body detachment with angle closure. Following blood pressure management, his vision, retinal changes and ciliary body rotation normalized. **Conclusions & Importance:** Hypertensive emergencies can result in choroidal thickening and anterior ciliary body rotation with detachment. Medications should be reviewed as such presentations can also stem from rare side effects of sulfonamide drugs. In cases of hypertensive emergencies with retinopathy, UBM and EDI-OCT imaging are critical for hypertensive patients with sudden myopic shifts.

KEYWORDS

Hypertensive emergency, Ciliary body rotation, Myopic shift.

INTRODUCTION:

Hypertensive emergency is characterized by a considerable increase in systemic blood pressure that leads to end organ damage; hypertensive urgency is a similar increase in blood pressure but does not result in end organ damage. Traditionally, hypertensive retinopathy and optic disc edema are the ocular signs of hypertensive crises. In the context of hypertensive emergency, we report a case of temporary unilateral myopic shift caused by ciliary body separation with retinopathy.(1)

Making the distinction between hypertensive urgency and emergency using the previously mentioned history, physical examination, and additional work-up options is essential because it establishes the treatment goals, such as whether the patient needs to be transferred to the emergency department as soon as possible.(2)

Case Report:

The patient, a 30-year-old male, was urgently assessed for sudden visual acuity changes amidst a hypertensive crisis (blood pressure 190/140). Initially, his vision was very poor in left eye but improved with significant corrective lenses, revealing a much stronger myopic shift than his baseline. His intraocular pressures were within normal limits. Detailed examination showed shallow anterior chamber, signs of hypertensive retinopathy- macular star and disc edema only in left eye and no abnormal findings in right eye. Imaging confirmed increased choroidal thickness and full ciliary body detachment with angle closure in left eye.

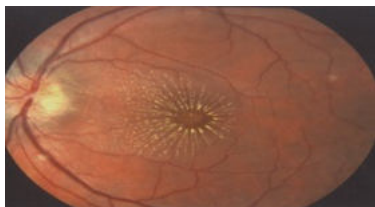


Fig 1 : Initial fundus photo of left eye showing macular star and disc edema.

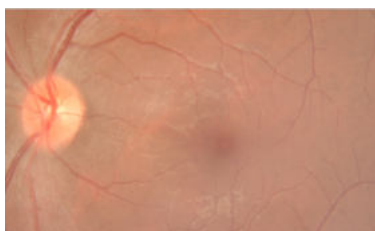


Fig 2: Post treatment fundus photo of left eye showing resolved disc edema and macular star.



Fig 3: UBM image of left eye showing anterior ciliary body rotation at first visit.

His condition improved spontaneously with proper blood pressure control, and his vision returned to normal without further ophthalmic intervention.

DISCUSSION:

We report an interesting case of transient unilateral myopic shift, attributed to ciliary body detachment, occurred with typical signs of unilateral hypertensive retinopathy. The patient was not on any medication. Previous studies highlight similar ocular changes due to sulphonamide drugs, emphasizing the importance of detailed medication review in such cases.(3)

Elevated blood pressure induces mechanical strain and endothelial damage, which may result in fluid buildup in the sub-retinal region and leaking from choroidal veins. The fluid leak could cause myopia, anterior ciliary body rotation, and choroidal effusion as happened in this case.(4)

CONCLUSIONS:

This case underscores an atypical ocular manifestation of hypertensive emergency, where ciliary body detachment and choroidal thickening occur with unilateral retinopathy. Enhanced imaging techniques are essential for proper diagnosis in hypertensive patients with sudden myopic shifts. Reviewing medications for potential side effects is also crucial.

Patient Consent: The patient consented verbally to the publication of this case, and no identifiable information is included.

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