Letter to the Editor

Bilateral macular infarction secondary to haemodialysis in a patient with chronic renal failure

Systemic parameters included blood pressure – 142/84 mmHg, haemoglobin – 10.4 gm%, platelets – 175,000/mm³, total leucocyte count – 9000/mm³, blood urea – 60 mg/dL, serum creatinine – 1.6 mg/dL. Fundus fluorescein angiography showed extensive macular ischaemia with non-filling of retinal arterioles with no leakage anywhere else (Fig. 1c,d). Optical coherence tomography showed extensive cystic changes in both eyes (Fig. 1e,f). The diagnosis of bilateral macular infarction secondary to hypotension post-HD was made. We explained about the irreversible nature of the condition to the patient and expressed our inability to administer any treatment as described in the literature. The patient came for a routine follow up after 4 weeks. The visual acuity and fundus picture was the same as it was at presentation.

Macular infarction has been reported due to various trauma or other symptoms suggestive of cerebrovascular event. Systemically he was a known case of chronic renal insufficiency secondary to hypertension and was on renal replacement therapy for the last 6 months twice a week. He had undergone HD 1 day before and complaint of loss of

patients with sickle cell disease. Macular ischaemia leads to fluid accumulation in inner retinal layers due to alteration in blood retinal barrier and thus produces cystic changes as also is evident in the optical coherence tomography of this subject (Fig. 1e,f). To the best of our knowledge, bilateral macular infarction secondary to HD has never been reported and is a serious irreversible complication.

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Received 25 March 2011; accepted 3 May 2011.
Secondary rhegmatogenous retinal detachment following intravitreal bevacizumab in patients with vitreous hemorrhage or tractional retinal detachment secondary to Eales' disease

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Received: 5 September 2011 / Revised: 12 November 2011 / Accepted: 29 November 2011 / Published online: 15 December 2011
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Abstract
Background To report the occurrence of secondary rhegmatogenous retinal detachment (RRD) after intravitreal bevacizumab injection in patients with Eales’ disease.
Methods This is a retrospective, non-controlled, comparative case series. We reviewed 14 eyes of 14 patients with Eales’ disease who had received pretreatment with intravitreal bevacizumab (1.25 mg/0.05 ml) and subsequently undergone a pars plana vitrectomy for non-resolving vitreous hemorrhage and/or tractional retinal detachment. Clinical records were reviewed. The primary outcome measure was the occurrence of the RRD. Secondary outcome measures include visual acuity, complications, and duration of follow-up.

Keywords Eales’ disease · Intravitreal bevacizumab · Rhegmatogenous retinal detachment · Pars plana vitrectomy

Introduction
Eales’ disease is an idiopathic obliterative vasculopathy of the peripheral retina. It occurs most commonly in young, healthy males in the Indian subcontinent and the Middle East; presenting initially with retinal periphlebitis [1–3]. The characteristic fundus findings include serpiginous lesions surrounded by hemorrhages and exudates, and associated retinal neovascularization.
Epidemiology and intermediate-term outcomes of open- and closed-globe injuries in traumatic childhood cataract

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**Purpose:** To study epidemiology and intermediate-term outcomes of open- and closed-globe injuries (CGI) in traumatic childhood cataract.

**Methods:** In this retrospective interventional case series, demographic parameters and history including type of injury of 57 children younger than 16 years with traumatic cataract were recorded; ocular examination included best-corrected visual acuity (BCVA), slit-lamp biomicroscopy, and posterior seg-
Unilateral persistent fetal vasculature coexisting with anterior segment dysgenesis

Sudarshan Khokhar · Shikha Gupta · Tarun Arora · Varun Gogia · Tanuj Dada

Received: 16 December 2012 / Accepted: 6 March 2013 / Published online: 16 March 2013
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Abstract Persistent fetal vasculature (PFV) is a common congenital developmental anomaly of the eye which results from failure of the embryological primary vitreous and hyaloid vasculature to regress by the time of birth (Int Ophthalmol Clin 48: 53–62, 2008). Typically, it is divided into anterior, posterior or combined types and is characterized by the presence of a vascular stalk located between the optic disc and the posterior lens capsule (Int Ophthalmol Clin 48: 53–62, 2008). Although it has been reported to manifest itself differently, in our case it presented in a microphthalmic eye as anterior segment dysgenesis with broad broad posterior embryotoxon, iridoschisis, ectropion uveae and peripheral anterior synechiae and corneal opacity overlying the area of iridocorneal adhesions were evident biomicroscopically. A total subluxated cataract was observed in the pupillary zone. Anterior segment optical coherence tomography (AS-OCT) depicted circumferential broad-based mid-peripheral anterior synechiae, more prominent temporally (Fig. 1a). Intraocular pressure was 8 mmHg in the left eye. Confocal microscopy of the cornea showed normal endothelial cells in both eyes. A fully dilated evaluation revealed a subluxated total cataract and
Epidemiology of traumatic lenticular subluxation in India

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Received: 2 June 2013 / Accepted: 5 June 2013
© Springer Science+Business Media Dordrecht 2013

Abstract To study the epidemiological and clinical profile of patients with traumatic subluxated lenses at a tertiary care center in India. Ours was a non-comparative descriptive case series. Evaluation of 71 eyes of 71 consecutive patients presenting to the lens clinic over a period of 2 years with traumatic lenticular subluxation was done. Demographic and clinical profile of patients was acquired, followed by a biomicroscopic examination of the cornea, anterior chamber, iris, lens, angles, zonules, anterior vitreous and fundus. Most of the patients were adolescents and belonged to lower socioeconomic status. The mean age was 15.4 ± 5.38 years. Traumatic lenticular subluxation, a unilateral cause of zonulolysis usually occurs while playing with a gulli danda, bow and arrow, or cricket bat and ball in Northern India. It is a major cause of severe visual loss and a modification in risk factors is mandatory to decrease ocular morbidity from trauma.

Keywords Trauma · Lens subluxation · Zonulolysis · Gulli danda · Bow and arrow

Introduction
Case report

Role of voriconazole in combined acanthamoeba and fungal corneal ulcer

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ARTICLE INFO

Keywords:
Voriconazole
Acanthamoeba
Fungal
Corneal ulcer

ABSTRACT

We report a case of a 21 year old male who presented with smear-proven fungal corneal ulcer in left eye, refractory to treatment with topical natamycin. Corneal smears and culture were taken along with anterior chamber tap for microbiological investigations and intracameral 1% voriconazole was injected followed by institution of oral as well as topical voriconazole drops. Corneal and aqueous smear as well as culture confirmed the presence of acanthamoeba. The keratitis responded favourably to voriconazole therapy which was instituted along with topical trophicidal drugs and anterior chamber became quiet by 7th day. The patient was slowly tapered from voriconazole and was off the drug by 6 months. At one year follow up, he continues to remain asymptomatic. The possibility exists that the fungal organisms had either partially or completely responded to natamycin eye drops and voriconazole therapy further inhibited their growth along with being highly efficacious in suppressing acanthamoeba trophozoites. Voriconazole may be specifically instrumental in corneal ulcers with coinfection of acanthamoeba and fungal organisms and preventing recrudescence of both. Normal saline wet mount and 10% KOH mount of paracentesis sample for suspicious cases of refractory corneal ulcers to specifically look for trophozoites in order to institute timely treatment are recommended.
Compliance in Retinoblastoma

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ABSTRACT

Objective. To evaluate compliance to treatment in advanced retinoblastoma.

Methods. This is a retrospective descriptive study of patients of retinoblastoma registered at our cancer center from June 2003-February 2007 to study compliance.

Results. Sociodemographic data of 177 patients revealed rural:urban ratio of 2:1, median age 36 months (unilateral disease) and 24 months (bilateral disease); median symptom duration 7.2 months. Overall, 84/141 evaluated cases took adequate therapy; follow-up could be achieved in 67/141 (47.5%) cases in comparison to 92.4% in Hodgkin’s lymphoma (p=0.001), 62.8% in acute myeloid leukemia (p=0.036) and 72.7% in non Hodgkin’s lymphoma (p=0.001). There was no significant impact of any sociodemographic factors on compliance. Amongst those offered enucleation upfront for intraocular disease, it was accepted in 86/93 (92.5%) eyes.

Conclusions. This is one of the largest studies in relation to sociodemographic factors and clinical spectrum, and the only study from Asia evaluating compliance with recommended therapy in retinoblastoma. In order to improve ocular and patient salvage rates in Asian countries, exact causes for poor compliance in retinoblastoma need to be closely examined through a prospective study. [Indian J Pediatr 2010; 77 (5) : 535-540] E-mail: sambakh@hotmail.com.
changes including a tilted disc, peripapillary atrophy, a shallow posterior staphyloma, and lattice degeneration were also observed (Fig. 1A). Optical coherence tomography (OCT) confirmed the presence of a stage 3 MH with perifoveal cystic changes (Fig. 1B), but no evidence of epiretinal membrane (ERM).

Phacoemulsification, intraocular lens implantation, and PPV with 20% SF6 gas tamponade were performed. At the time of posterior vitreous detachment (PVD) induction, small peripheral retinal breaks occurred which were treated with endolaser. Internal limiting membrane (ILM) peeling was not performed as complete PVD had been successfully induced. Postoperatively, the MH was noted to be closed and the VA improved to 1.0 (Fig. 1C).

Four years later, the patient presented complaining of 6 months of new blurry vision in the right eye. Examination revealed a VA of 0.4 OD and recurrent stage 4 MH with perifoveal cystic changes and partial elevation of the ILM, without evidence of more, other myopic abnormalities such as staphyloma, and vitreous-retinal forces may also be contributing to the loss of foveal integrity. In our case, iatrogenic breaks that occurred during PPV may have also induced microscopic extrafoveal membrane formation, imparting tangential tractional forces on the macula. However, we presume that any tractional forces would have been minimal, because the MH was small and subsequently closed without further surgical intervention. ILM remodelling and the increased elasticity and cellular alterations occurring after vitrectomy may have facilitated the process of spontaneous MH closure.

In conclusion, this case demonstrates that spontaneous closure of recurrent myopic MH in a previously vitrectomized eye can occur.

References


Early onset giant retinal tear after posterior chamber phakic IOL

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doi: 10.1111/j.1755-3768.2010.01965.x

Editor,

Myopic eyes have a higher incidence of retinal complications compared with emmetropic eyes. Posterior chamber phakic (PCP) intraocular lens (IOL) surgery offers several advantages for correction of high-degree myopia, such as reversibility and a greater amount of correction compared with corneal refractive techniques. (Zaldívar et al. 1998). There are reports of retinal detachments after phakic IOL. (Ruiz-Moreno et al. 2003; Lobo-Guillen et al. 2005; W
An unusual cause of macular infarction: protein-losing enteropathy

Sinha Subijay · Gupta Shikha · Bhadange Yogesh · Gogia Varun · Khanduja Sumeet · Venkatesh Pradeep

Received: 19 December 2011 / Accepted: 10 September 2012 / Published online: 26 September 2012
© Springer Science+Business Media Dordrecht 2012

Abstract Protein-losing enteropathy is a multisystem disorder characterized by abnormally high loss of plasma proteins in the gastrointestinal tract. In addition to loss of plasma proteins there is also loss of anticoagulant globulins leading to a prothrombotic state in the body. Single case observation. The patient developed unilateral macular infarction with non-embolic cerebral infarct due to loss of Antithrombin 3

Keywords Protein-losing enteropathy · Macular infarction · Stroke

Introduction

Protein-losing enteropathy is a syndrome characterized by excessive plasma protein loss from the gastrointestinal tract.
Functional Pituitary Tumors Masquerading as Primary Glaucoma and Effect of Hypophysectomy on Intraocular Tension

Shikha Gupta, MD, Ramanjit Sihota, MD, Viney Gupta, MD, Tanuj Dada, MD, Varun Gogia, MD, and Ajay Sharma, BSc

Abstract: We report 2 bilateral cases that presented as primary ocular hypertension and primary angle-closure glaucoma, respectively; however, they were subsequently discovered to be harboring secretory pituitary tumors. After transsphenoidal tumor resection, intraocular pressures (IOPs) in all 4 eyes returned to normal levels. Sudden rise in IOP then again served as a primary manifestation of relapse in the second patient with growth hormone secreting pituitary tumor. It was not found feasible for re-surgery; thus, patient needed trabeculectomy in both eyes to achieve an optimum control of intraocular tension. We conclude that pituitary adenomas may mimic primary glaucoma without producing vertical normal limits (Fig. 3). Systemic evaluation revealed raised blood pressure (210/120mm Hg consistently) and persistently elevated blood sugar (between 301 and 480mg/dL). Endocrine investigations showed elevated plasma cortisol (35.2μg/mL) (range, 4.3 to 22.4μg/mL). Overnight dexamethasone suppression test (2mg) confirmed raised serum cortisol level. Magnetic resonance imaging (MRI) depicted a small well-defined focal lesion of size 7×3 mm in the right adenohypophysis.

Her IOP was well controlled on maximal antiglaucoma medicines and her blood pressure and sugar were controlled medically till she underwent transsphenoidal hypophysectomy. Histopathology from excised specimen revealed basophilic mono-
Systemic parameters included blood pressure – 142/84 mmHg, haemoglobin – 10.4 gm%, platelets – 175 000/mm³, total leucocyte count – 9000/mm³, blood urea – 60 mg/dL, serum creatinine – 1.6 mg/dL. Fundus fluorescein angiography showed extensive macular ischaemia with non-filling of retinal arterioles with no leakage anywhere else (Fig. 1c,d). Optical coherence tomography showed extensive cystic changes in both eyes (Fig. 1e,f). The diagnosis of bilateral macular infarction secondary to hypotension post-HD was made. We explained about the irreversible nature of the condition to the patient and expressed our inability to administer any treatment as described in the literature. The patient came for a routine follow up after 4 weeks. The visual acuity and fundus picture was the same as it was at presentation.

Macular infarction has been reported due to various other causes including sickle cell disease, vascular occlusion, diabetes, malignant hypertension, thrombotic thrombocytopenic purpura and secondary to aminoglycoside toxicity. However, macular infarction post-HD has never been reported and is a serious irreversible complication.

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Received 25 March 2011; accepted 3 May 2011.

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Letter to the Editor

Bilateral macular infarction secondary to haemodialysis in a patient with chronic renal failure

Improved management of patients who have end-stage renal disease and are dependent on haemodialysis (HD) have resulted in increased life expectancy.¹

Patients with chronic renal failure and renal replacement therapy can have vision loss either due to primary disease as diabetic retinopathy and hypertension or secondary to complications associated with dialysis. HD can cause ocular vascular diseases such as ischaemic optic neuropathy and retinal vein occlusion which cause severe visual loss in patients with end-stage renal disease.²

However, no case of macular infarction post-HD has been reported to date.

A 70-year-old man presented with sudden painless loss of vision in both eyes for 1 day. There was no history of trauma or other symptoms suggestive of cerebrovascular event. Systemically he was a known case of chronic renal insufficiency secondary to hypertension and was on renal replacement therapy for the last 6 months twice a week. He had undergone HD 1 day before and complaint of loss of vision immediately after the procedure. The patient was on erythropoietin and antihypertensive medication. There was no history of diabetes or any other systemic abnormality as coronary artery disease and cerebrovascular accident. The patient had visual acuity of finger counting close to face both eyes with projection of light present in all quadrants. On ophthalmological evaluation, anterior segment was normal with no evidence of neovascularization of Iris. There was no evidence of disc oedema. There was grade II hypertensive retinopathy with arteriovenous ratio of 1:3 and arteriovenous crossing changes. Veins were not dilated and non-tortuous. There were scattered retinal haemorrhages without exudation at the posterior pole. However, macula appeared pale in both eyes with surrounding retinal modifications (Fig. 1 & 2)
Comparative evaluation of anatomical and functional outcomes using brilliant blue G versus triamcinolone assisted ILM peeling in macular hole surgery in Indian population

Atul Kumar · Varun Gogia · Vinit M. Shah · Tapas C. Nag

Received: 24 September 2010 / Revised: 25 December 2010 / Accepted: 29 December 2010 / Published online: 14 January 2011
© Springer-Verlag 2011

Abstract

Purpose To compare anatomical and functional outcomes using brilliant blue G (BBG) vs triamcinolone acetonide (TA)-assisted ILM peeling in macular hole surgery (MHS).

Study design Simple, comparative, retrospective, non-randomised, interventional single-centre study.

Methods Ninety-four eyes of 94 patients with idiopathic macular holes (≥ stage 2) who underwent MHS at our centre were included. Patients with failed macular holes, post-traumatic macular holes, history of previous vitreoretinal surgery, high myopia (6 dioptres or more) or any

Results Anatomical hole closure was achieved in 85 eyes (90.43%) and visual gain in 78 eyes (82.9%). Mean postoperative follow-up duration was 16.14±1.95 months. No significant difference was found in anatomical and functional success between the two groups. Group 1 had a significantly higher incidence of postoperative glaucoma. Duration of symptoms of <12 months (p=0.004) and preoperative visual acuity ≤1.0 LogMAR were related to anatomical success. However, greater visual gain was found in patients with chronic holes (≥12 months) (p=0.046) and poor preoperative visual acuity (>1.0 LogMAR) (p=0.001).
Bilateral retinal detachment: a clue to diagnosis of HELLP syndrome

HELP syndrome is characterized by hypertension, elevated liver enzymes, and low platelets, and is a life-threatening complication during pregnancy, both for mother and fetus. Bilateral, serous, nonhemorrhagic retinal detachment (RD) is a rare complication of pre-eclampsia/eclampsia in pregnancy. We report on the clinical course and outcome in a patient in whom sudden loss of vision from bilateral exudative RD was the presenting feature of HELLP syndrome.

A 20-year-old primigravida presented to us with painless, rapid loss of vision of 3 days' duration, associated with headache and vomiting at 28 weeks of gestation. There was no history of any loss of consciousness, seizures, or weakness of limbs. Her antenatal visits at a local nursing home had been irregular, and there were no prior records of blood pressure examination.

Ophthalmologic evaluation revealed a visual acuity of only perception of light in both eyes. Funduscopy showed exudative RD in both eyes (Fig. 1A, 1B). Optical coherence tomography of the retinal layers revealed neurosensory detachment from underlying retinal pigment epithelium and intraretinal cystic changes characteristic of RD in both eyes (Fig. 2A, 2B).

On physical examination, she was conscious and well oriented in time, place, and person. Her pulse was 98, blood
seen in cases of pre-eclampsia with severe hypertension, although it has also been reported in mild hypertension.

Although the pathophysiology of RD is not clear, it has been proposed that terminal arteriolar spasm leads to choroidal ischemia and ischemic injury to the retinal pigment epithelium, thus breaking the blood-retinal barrier. Other proposed mechanisms include disseminated intravascular coagulation due to secoery products from placenta and combination of severe hypertension, microangiopathic hemolysis, and hypoalbuminemia in choroidal vessels that results in focal ischemia leading to RD. \(^7\)

Management of exudative RD involves treatment of the underlying cause, which was control of hypertension and immediate delivery. Prophylactic anticonvulsants were administered, and immediate delivery was induced in view of severe pre-eclampsia. No guidelines are available in the literature regarding the preferred mode of delivery in pre-eclampsia complicated by RD. However, various series indicate higher use of cesarean deliveries as compared with vaginal deliveries. \(^7\) This may be because of the need for immediate termination of pregnancy in view of severe pre-eclampsia/eclampsia. Severe pre-eclampsia may be associated with fetal growth restriction caused by intensive neonatal care postdelivery were explained to the patient's relatives. They refused cesarean section and intrauterine death resulted because of severe fetal hypoxia during the course of vaginal delivery.

Most women with RD show complete recovery within 2 to 12 weeks from delivery and surgical intervention is generally not required in these cases. \(^8\) Our patient recovered to a major degree spontaneously within a week.

In conclusion, RD complicating severe pre-eclampsia and HELLP syndrome is a rare complication and requires prompt management for survival of both mother and child, and also to prevent permanent visual disability.

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**REFERENCES**

A preliminary descriptive analysis of Corneal Transplant Registry of National Eye Bank in India☆

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ARTICLE INFO

Article history:
Received 15 March 2013
Received in revised form 23 July 2013
Accepted 28 August 2013

Keywords:
Corneal transplantation
Graft registry
Eye Bank

ABSTRACT

Purpose: To describe and analyze the Corneal Transplant Registry of National Eye Bank and also evaluate graft outcomes in India.

Methods: All patients who underwent corneal transplant at our center within six months of setting up of Corneal Transplant Registry and installation of database at National Eye Bank were included in the study. The established database was analyzed for utilization, donor and recipient details and graft outcomes. Outcome was assessed at the end of one year follow up. The influence of various donor and recipient factors affecting outcome were evaluated. Visual outcome was analyzed in terms of shift in visual handicap category. Statistical tests like analysis of variance, Kruskal–Wallis test and Chi square tests were applied for determination of clinical significance wherever required.

Results: 326 corneas were received from 168 donors; of these, 234 (71.7%) were utilized for transplantation. Out of 177 patients with adequate (one year) follow up (75.6% patients), optical corneal replacement was performed in 106 patients and therapeutic keratoplasty in 71. 78% (82/106) patients in the optical group retained clear grafts at the end of follow up. 59.7% (49 of 82) of patients who attained clear grafts belonged to visual disability category 3 or worse pre-operatively. 59.1% of these achieved BCVA of ≥6/60 and 40.9% achieved BCVA of ≥6/24.
stromal architecture was disorganized with honeycomb-like edema and intense hyper-reflectivity, and corneal epithelium was unaffected. These features are consistent with histopathologic and confocal studies that show relative sparing of epithelium until late in the disease process. We documented absence of CSNP at the time of presentation with subsequent regeneration at 3 months after foreign body removal. This apparent damage to the nerve plexus could be because of the direct toxic effect of ferrous foreign body. This hypothesis is supported by the fact that patients with hereditary hemachromatosis show idiopathic polyneuropathy in 26% of patients, probably attributable to chronic ferrous overload. A nerve biopsy study in patients with polyneuropathy including those with hemachromatosis showed axonal degeneration. Increased brain ferrous levels are stated to be the pathologic trigger for free radical generation and subsequent glial damage. This along with evidence of regenerating nerve fibres on foreign body extraction suggests a degenerative effect of foreign body on corneal nerves.

Mazzotta et al. reported that post corneal cross-linking, CSNP regenerated as nonbranching nerve fibres after 1 to 3 months, with establishment of normal branching and interconnections much later until 1 year. A similar pattern of nerve regeneration has also been observed after conventional LASIK and femtosecond LASIK. In vivo confocal microscopic studies have shown that the CSNP may be also affected in other conditions such as keratoconus, dry eye, neurotrophic keratopathy in patients with herpetic keratitis, fungal and acanthamoeba keratitis, vernal keratoconjunctivitis, and systemic conditions such as diabetes.

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REFERENCES

Unilateral persistent fetal vasculature coexisting with anterior segment dysgenesis

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Abstract Persistent fetal vasculature (PFV) is a common congenital developmental anomaly of the eye which results from failure of the embryological primary vitreous and hyaloid vasculature to regress by the time of birth (Int Ophthalmol Clin 48: 53–62, 2008). Typically, it is divided into anterior, posterior or combined types and is characterized by the presence of a vascular stalk located between the optic disc and the posterior embryotoxon, iridoschisis, ectropion uveae and peripheral anterior synechiae and corneal opacity overlying the area of iridocorneal adhesions were evident biomicroscopically. A total subluxated cataract was observed in the pupillary zone. Anterior segment optical coherence tomography (AS-OCT) depicted circumferential broad-based mid-peripheral anterior synechiae, more prominent temporally