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Poster

P01 Anti-Vascular Endothelial Growth Factor Agent Reduces Inflammation in Diabetic Macular Edema

Hidetaka Noma, Kanako Yasuda, Ryosuke Motohashi, Ryosuke Matsushima, Masahiko Shimura

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 44.

P02 Hyperreflective Foci in DME with Serous Retinal Detachment: Association with Dyslipidemia

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 44.

P03 Management of Diabetic Macular Edema with Ranibizumab at Mohammad Hoesin General Hospital Palembang

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Purpose: Diabetic Macular Edema (DME) is a major cause of vision loss in patients with diabetes. DME is defined as a hard exudate and the presence of microaneurysms and blot bleeding in one disc diameter at the center of the fovea.
Case Report: Five cases of DME treat with intra-vitreal Anti VEGF (Ranibizumab) injection, diagnose was done by anamnesis, ophthalmology examination and OCT examination. Visual acuity and OCT was re-examined 1 week after the last injection.
Result: Visual acuity and OCT showed good results in all patients. One patient with 1 logMar preoperative became 0.54 logMar 1 week postoperatively.
Conclusion: Anti-VEGF administration showed good results for treated DME cases in Mohammad Hoesin General Hospital Palembang.

P04 Diabetic Proliferative Fibrous Membrane Formation-Histopathological Study

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 44.

P05 Study of the Optic Nerve Head Blood Flow in Patients with PDR Treated with Vitrectomy

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Purpose: To evaluate the optic nerve head blood flow level of a patient with proliferative diabetic retinopathy before and after vitrectomy, using laser speckle flowgraphy (LSGF) for noninvasively ocular blood flow analysis.

Methods: Twenty-three eyes of twenty-three patients were recruited in the present study who underwent vitrectomy at Sapporo Medical University hospital. We measured optic nerve head blood flow before and 2 weeks after operation. The average blood pressure and ocular perfusion pressure were measured before and after surgery.

Results: Blood flow in the central retinal artery and on both the nasal and temporal sides of the optic nerve head significantly increased after surgery in all cases. In cases where the post-operative blood flow in the optic disk temporal side increased by more than 59%, visual acuity was also ameliorated.

Conclusion: LSFG is an effective method for evaluating the optic nerve head blood flow noninvasively and may be useful for prediction of postoperative visual acuity prognosis.

P06 Clinical significance of the ABI and PWV in patients with DR with retinal vascular occlusion

Arisa Takahashi, Fumihito Hikage, Kaku Itoh, Yosuke Ida, Haruka Ida, Chiaki Ohta, Yayoi Handa, Hiroshi Ohguro

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[Purpose] To report the clinical significance of ankle-brachial index (ABI) and pulse wave velocity (PWV) in diabetic retinopathy (DR) with retinal vascular occlusion (RVO).

[Method] We measured the ABI and PWV, which are used as clinical indicators of arteriosclerosis, of 106 patients with RVO as well as DR, hypertensive retinopathy (HR), and 100 age-matched healthy control subjects.

[Results] ABI decreased with advancing age in patients with RVO, whereas no age-related changes were observed in non-RVO patients and control subjects. Furthermore, ABI was significantly lower in patients having combined presence of HR, DR and RVO than it was in patients with either HR, DR, RVO, HR+DR, HR+RVO or DR+RVO. Five out of six patients with abnormally low ABI values (less than 0.9) had associated central retinal artery occlusion (CRAO). In contrast, no such associations were observed in PWV among the groups.

[Conclusion] Our present data provide the first evidence that measurement of ABI may be a clinical marker for management of retinal vascular occlusion, especially for CRAO in patients with DR.

P07 Posterior Sub-Tenon Triamcinolone Acetonide in Macular Edema

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Purpose: Outcome of 40 mg Triamcinolone Acetonide PST injection in macular edema.
Materials and methods: A single PST injection of 40 mg Triamcinolone Acetonide (Trialon) was given to 30 patients in OPD (Out Patients Department). Baseline and post injection VA, IOP and central macular thickness were recorded. VA and IOP were re-evaluated at day 15, 30 and 45. OCT macula was re-evaluated at day 45. Peri and post injection complications were noted.
Result: 22 (73%) were diabetic, 16 (53.33%) were hypertensive and 05 (16.67%) had uveitis. 15 (50%) patients had both diabetes and hypertension; and patients with diabetes and uveitis; hypertension and uveitis; and all three (diabetes, hypertension and uveitis) were 01 (3.33%) each. 50% were diagnosed as diabetic macular edema, 33.33% were retinal venous occlusive disease and 16.67% were cystoid macular edema due to uveitis. There was a significant improvement in VA at day 45. Elevation of IOP was transient. Only 03 (10%) patients had sustained elevated IOP and needed single medication (Timolol) for IOP control. Change in macular thickness was also significant (from baseline 489.23±58.23 μ to 330±71.83 μ at day 45). There were 03 (10%) cases of subconjunctival hemorrhage, 12 (40%) patients reported discomfort and heaviness in the first week which resolved spontaneously.
Conclusion: Posterior subtenon Triamcinolone Acetonide is a simple and effective outpatient procedure with minimal cost. Its judicious use in case of macular edema is promising with minimal adverse effects.

P08 IκB kinase-β inhibitor suppresses both onset and progression of DR in mouse model

Kaku Itoh, Fumihito Hikage, Yosuke Ida, Haruka Ida, Chiaki Ohta, Yayoi Handa, Arisa Takahashi, Hiroshi Ohguro

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PURPOSE: The purpose of the present study is to evaluate the effect of selective IKK-β inhibition by IMD-0354 on inflammation, apoptosis, and angiogenesis in diabetic retinopathy (DR).
METHODS: Before and after diabetic retinopathy (DR), streptozotocin (STZ)- induced mice was systemically administered with IMD-0354 (30 mg/kg) daily for another 6 weeks. Effects of IMD-0354 were analyzed: (1) inhibition of nuclear factor-κB (NF-κB) activation, (2) retinal morphology, (3) apoptotic signaling by cleaved caspase-3, (4) retinal vascular permeability, (5) angiogenesis of the retina, and (6) retinal production of VEGF.
RESULTS: Systemic administration of IMD-0354 for 6 weeks to diabetic mice caused significant reduction in the loss of retinal ganglion cells and apoptotic signaling, with preservation of retinal vascular integrity and suppression of retinal VEGF expression. When inhibition of NF-κB activation treatment started after the onset of STZ-induced DR (week 10), IMD-0354 was still effective in preventing further DR progression while the vascular integrity was preserved.
CONCLUSIONS: The present data indicate that NF-κB activation is the key step in the development of DR. Its suppression by IMD-0354 may present a promising therapeutic strategy for DR, especially in the early stages of the disease.

P09 Effect of triamcinolone acetonide on retinal inflammation and angiogenesis

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 44.

P10 Glial cell line-derived neurotrophic factor is important to vascular integrity breakdown in DR

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Purpose: The blood-retinal barrier (BRB) is a biological unit comprised of specialized capillary endothelial cells firmly connected by intercellular tight junctions and endothelium-surrounding glial cells. The BRB is essential for maintaining the retinal microenvironment and low permeability and is compromised in diabetic retinopathy (DR). In the present study, effects of retinoic acid receptor (RAR) alpha stimulants, a possible enhancer of glial cell line-derived neurotrophic factor (GDNF) toward breakdown of vascular integrity in DR.
Methods: In vivo, effects of RAR alpha toward endothelial permeability in the presence of glial cells were evaluated. In vitro, upon systemic administration of RAR alpha retinal vessels leakage in streptozotocin induced mice were estimated by immunohistochemistry.
Results: RAR alpha stimulants preferentially act on glial cells rather than endothelial cells, resulting in the enhanced expression of GDNF. Conversely, RAR alpha decreases expression of vascular endothelial growth factor (VEGF) and vascular permeability factor. These gene expression alterations causally limit vascular permeability by modulating the tight junction function of capillary endothelium in a paracrine manner in vitro. The phenotypic transformation of glial cells mediated by RAR alpha is sufficient for significant reductions of vascular leakage in DR, suggesting that RAR alpha antagonizes the loss of tight junction integrity induced by diabetes.
Conclusion: Glial cell-derived cytokines regulate BRB function, implying that the glial cell can be a therapeutic target in DR.

P11 Anti Vascular Endothelial Growth Factor in Wet Age-Related Macular Degeneration: A Case Report

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Introduction: Wet age-related macular degeneration is characterized by the presence of choroidal neovascularization which is the growth of new blood vessels from the choriocapillaries to the sub-retinal space which results in leakage of fluids and blood. Risk factors for AMD are old age, hyperopia, bright iris color, smoking, hypertension, hypercholesterolemia, and cardiovascular disease.
Case report: A 59-year-old woman came with a complaint of blurred vision in the left eye. Central vision like covered by a black shadow and wavy vision. Patients have a history of previous hypercholesterolemia. Visual acuity examination using Snellen chart in the left eye 4/60 which cannot be corrected with pinhole. Funduscopy shows a decrease in foveal reflex and soft drusen in the macula. Amsler grid shows the central defect of the left field of view accompanied by metamorphopsia. TD-OCT shows subretinal fluid that causes RPE detachment followed by reduced macular depression. Fluorescence angiography shows a picture of granular hyperfluorescence with indistinct boundaries in the late phase. Patients were diagnosed with wet AMD and received three injections of ranibizumab in the left eye in the first three months and shows increase in visual acuity from 4/60 to 6/60.
Conclusion: Wet AMD treatment is a long-term treatment. Intravitreal anti VEGF injection is given once every month at the first 3 months, after that pro renata. The goal of therapy for AMD is to reduce CNV, reduce leakage, and improve or maintain visual acuity.

P12 Dynamics of Soluble VEGF Receptors and their Ligands in Aqueous Humour During Ranibizumab for AMD

Ryosuke Motohashi, Hidetaka Noma, Kanako Yasuda, Masahiko Shimura

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 45.

P13 Study of effects of blue light-cut filtration on AMD using photostress-induced rat model

Yosuke Ida, Fumihito Hikage, Kaku Itoh, Haruka Ida, Chiaki Ohta, Yayoi Handa, Arisa Takahashi, Hiroshi Ohguro

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Purpose: Cataracts are the most common cause of visual deterioration in elderly people, and intraocular lens (IOL) implantation in conjunction with cataract surgery is the most effective means of restoring visual acuity. There are potential risks inherent with IOL implantation, however, such as retinal damage from Blue light exposure. As well known, blue light toward retina is one of risk factors for age-related macular degeneration (AMD). The aim of the present study is to evaluate retinal morphology and photoreceptor functions in rats subjected to photostress in the presence or absence of a yellow filter that effectively reduces blue light.
Methods: We exposed rats to a 2500 or 5000 lux photostress for 24 hrs in a photostress box with or without a yellow filter. After the treatment, we evaluated retinal morphology and function by electroretinogram (ERG). To examine photoreceptor function, during dark adaptation following the photostress, we employed a spectrometric assay to quantify rhodopsin (Rho) regeneration, and immunohistochemistry to evaluate in vivo Rho phosphorylation and dephosphorylation at 334Ser or 338Ser.
Results: Retinal morphology and ERG responses were significantly preserved by the filter in both 2500 lux and 5000 lux photostresses.
Conclusions: Our study reveals that although there was little impact on photostress-induced changes in photoreceptor function, reducing blue light effectively reduced photostress-induced retinal damage.

P14 IκB kinase β inhibitor suppress choroidal neovascularization in AMD mouse model

Haruka Ida, Fumihito Hikage, Yosuke Ida, Kaku Itoh, Chiaki Ohta, Yayoi Handa, Arisa Takahashi, Hiroshi Ohguro

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Purpose: The purpose of this study is to evaluate the effect of selective IKK-β inhibition by IMD-0354 which is a non-ATP binding competitive selective IKK-β inhibitor in laser induced choroidal neovascularization (CNV).
Method: Nine-week-old C57BL/6 male mice were used for this study. Mice were randomly assigned to IMD-0354 30 mg/kg treated or untreated groups (5 mice). CNV was induced with a 532-nm laser. Laser spots (power 250 mW, spot size 100 μm, time of exposure 50 ms) were created in each eye. In order to compare the efficacy of IMD-0354, another group of mice were treated intraperitoneally with 1.5 mg/kg of ranibizumab. Naive mice were used as control. Using these groups of mice, effects of IMD-0354 toward ameliorative effect on CNV development and size by retinal flatmounts and in vivo fundus imaging, inhibition of NFκB activation, CD45 positive cell infiltration, apoptotic signaling by cleaved caspase-3, and retinal production of vascular endothelial growth factor (VEGF) were analyzed.
Results: Systemic administration of IMD-0354 for 7 days in CNV mice caused significant reduction in the size of CNV area, reduced apoptotic signaling, decreased CD45 positive cells infiltration, and suppression of VEGF. The efficacy of IMD-0354 treatment was comparable with the effect of single intraperitoneal injection of ranibizumab.
Conclusion: The present data indicates that NFκB activation is crucially involved in the development of laser CNV in mice, and its suppression by IMD-0354 might be a promising therapeutic strategy for wet AMD in humans.

P15 Choroidal thickness and blood flow velocity in a patient with acute macular neuroretinopathy

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 45.

P16 Widefield fluorescein angiography findings in patients with retinal edema after cataract surgery

Sohee Jeon

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 45.

P17 Royal jelly related central serous chorioretinopathy masquerade as Vogt-Koyanagi Harada disease

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Background: Central serous chorioretinopathy (CSCR) and Vogt-Koyanagi Harada disease (VKH) are different diseases, however, share similar clinical manifestation. Here we present a case of herb related CSCR masquerade as VKH.
Case: A 44 year old woman presented with sudden onset of blurred vision in the left eye followed by right eye within 5 days. She had past history of laser in-situ keratomileusis in both eyes (about 5-6 myopia) 15 years ago and taking royal jelly as nutrition supplement for half year. At initial visit, the best corrected vision was 6/8.6, OD and 6/12, OS. Ocular examination showed mild anterior chamber reaction in both eyes and multiple bullous retinal detachment in both eyes. Optical computed tomography (OCT) revealed choroid thickening, subretinal fluid, hyerrefractive dots, intraretinal fluid with fibrin in both eyes. Systemic survey for infection or immunologic disorder was negative. Although fluorescein angiography (FAG) showed multiple pinpoint leakage with dye pooling, which was supportive for VKH, we decide to discontinue the herb based on the possible side effect of herb medicine. The symptom and signs improved rapidly. There was no more anterior chamber reaction or serous detachment 3 weeks later. The eyes remained stable with 6/5 vision in both eyes and there was no leaking or staining on follow up FAG 8 months later.
Conclusion: Although acute CSCR and VKH may share some similarity in clinical presentation, the treatment is completely different. Detailed history investigation is helpful to prevent inappropriate management.

P18 The association of oxidized phospholipids in intraocular inflammation

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Purpose: Intraocular inflammation leads to oxidative stress and generate lipid oxidation products. The infiltrated macrophages in rat experimental autoimmune uveitis (EAU) showed oxidized phospholipids (oxPLs) production along with lysosomal phospholipase A2 (LPLA2), a phospholipid-degrading enzyme, expression. The present study was conducted to elucidate the correlation between the formation of oxPLs and the expression of LPLA2 in uveitis using animal model and clinical samples.
Methods: EAU was induced in Lewis rats and uveitis patients were enrolled. The aqueous humor (AH) was collected and analyzed by liquid chromatography mass spectrometry. In addition, the cytotoxicity of 1-palmitoyl-2-azelaoyl-sn-glycero-3-phosphocholine (PAzPC), a truncated oxPL, was examined by WST-1 assay using mouse alveolar macrophages.
Results and Discussion: Six species of truncated oxPLs including PAzPC were detected in AHs of EAU rats and uveitis patients but not of naive rats. The alveolar macrophages from LPLA2 deficient mice showed susceptible to the cytotoxicity by PAzPC. Additionally, the lack of LPLA2 resulted in less catabolism of PAzPC in the cell culture system. These findings demonstrated that oxPLs are produced during intraocular inflammation. The accumulation and longterm exposure to oxPLs may induce irreversible cell damage. The LPLA2 might participate preventing from post inflammation cell damage induced by oxPLs in the eye.
Conclusions: The production of oxPLs were found in aqueous humor of uveitis. The LPLA2 may act to prevent cell damage by oxPLs.

P19 Anti-inflammatory effects of DHMEQ on ARPE-19 cells

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 62.

P20 Outcomes of the treatment for refractory non-infectious uveitis with Adalimumab

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[Purpose] To evaluate the outcomes of the treatment for refractory non-infectious uveitis with Adalimumab (ADA).
[Methods] Retrospective study was performed of 14 patients who were treated with ADA for non-infectious uveitis, which were refractory to existing corticosteroid therapy or immunosuppressive therapy, between October 2011 and September 2017. Degree of anterior and posterior segment inflammation, visual acuity and dosage of corticosteroid or immunosuppressive drugs were assessed before and after ADA therapy.
[Results] 6 men and 8 women were enrolled the study. The causes were Behçet's disease in 6 patients, Vogt-Koyanagi-Harada disease in 3 patients, Sarcoidosis in 2 patients and Scleritis in 1 patient. A mean age at the initiation of ADA therapy was 42.9±13.1 years old. A mean follow-up period was 25.6±23.1 months with a minimum follow-up of 9 months. After ADA therapy, the degree of ocular inflammation was improved in 6 patients and the dosage of corticosteroid or immunosuppressive drugs were successfully reduced in 12 patients. However, the effect was not observed in 2 patients. Visual acuity improved or maintained in 23 eyes out of 25 eyes. The mean dosage of corticosteroids decreased from 9.25mg/day to 4.96mg/day.
[Conclusion] ADA was effective for controlling ocular inflammation and reducing the dosage of steroid, maintaining visual acuity in most patients with refractory non-infectious uveitis.

P21 Efficacy and Patient Satisfaction of Adalimumab for non-infectious uveitis in Japan

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Purpose: To elucidate the efficacy of and patient satisfaction with adalimumab (ADA) for noninfectious uveitis in Japan.
Methods: A chart review of patients with noninfectious uveitis who were treated with ADA at Hiroshima University from September 2016 to May 2018 was performed. Demographic and clinical characteristics, including the type of uveitis, control of inflammation after starting ADA, and corticosteroid-sparing effect, were obtained. Patient satisfaction was also assessed.
Results: Twenty-eight patients were included. The mean age at which therapy was started was 38.8 years. The most common diagnoses were retinal vasculitis and Vogt-Koyanagi-Harada disease. Three patients developed adverse events. Twelve months after starting therapy, the mean dose of prednisolone decreased from 9.9 to 0.2 mg/day. Both anterior cell and vitreous haze were improved during these 12 months. Information on satisfaction was obtained from 15 patients. Twelve patients were very satisfied or moderately satisfied with the treatment. No patients reported that they were dissatisfied.
Conclusion: ADA is a useful agent for treatment of severe noninfectious uveitis that requires long-term systemic corticosteroids or has shown an inadequate response to systemic steroids or conventional immunomodulatory therapy. Eighty percent of patients were satisfied with the therapy. However, >10% of the patients had to transiently or permanently discontinue the therapy because of adverse effects, indicating that patients undergoing ADA therapy require careful monitoring of the their systemic condition.

P22 Opportunistic ocular infection in systemic associated chronic uveitis patients receiving biologics

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P23 Outcome of long-term infliximab treatment for Behçet's uveitis over 5 year

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P24 Clinical features of Behçet's disease in Mongolia: A multicenter study

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 62.

P25 Visual loss in patients with Behçets associated Inflammatory Eye Disease (IED)

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Purpose: To determine the demographics, clinical features as well as causes of visual loss in patients with Behçets associated Inflammatory Eye Disease (IED). Method: A retrospective case series from the Sydney Eye Hospital Database in patients who fulfilled the International Study Group (ISG) classification for Behçets disease. Data recorded included age of onset, ethnicity, country of birth, visual acuity in LogMar, the anatomical location of inflammation as well as complications. Treatment modality including response to treatment was also recorded. Visual morbidity was recorded as moderate or severe (VA 6/12 to 6/60, LogMAR +0.30 to +1.00) or severe vision loss (LogMAR 1.00) without improvement during observation period. Results: 27 patients (out of 1728 patients seen) were diagnosed with Behçets associated IED, affecting 52 eyes. The median age at presentation was 34.3 (SD 9.9 years) with a female gender predominance (n=17 63%). The mean length of follow-up was 3.95 years (1.6 to 9 years). Panuveitis and retinal vasculitis (n=25 or 48%, n=13 or 25%) were the two most common ocular manifestations. Fifteen eyes had moderate or severe vision loss which occurred within the first year of diagnosis (7.2 months SE 4.1). The most common cause of ocular morbidity were visually significant cataracts n=15 with a mean time of 15 months, CMO (n =12 or 40%), fibrosis secondary to occlusive vasculitis (n=50 or 33%), RVO (n=15). Conclusion: Behçets disease is associated with significant visual morbidity often with severe vision loss early in the disease.

P26 Varied Ocular Presentations of Behçet Disease in South India

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Purpose: To describe ocular manifestations, systemic manifestations, investigations including Multimodal imaging, treatment methods and clinical outcome in Behçets disease.
Methods: Retrospective analysis of case records of diagnosed Behçets disease with ocular manifestations from January 2009 to January 2019 were included.
Results & Discussions: Twenty two cases of Behçets disease with age group ranged between 4 to 49 years (Median age group of 27 years), oral ulcerations (45.45%) and genital ulcers (22.7%) were the commonest systemic associations which was less compared to other Behçets studies. ocular involvement in 100 % of cases with Panuveitis (40.9%) followed by hypopyon acute anterior uveitis (36.36%) were seen. FFA, Ocular biomechanics and adaptive optics and confocal microscopy and OCTA changes in selected cases were analyzed. All Patients received systemic steroid therapy, 61% of cases were on immunosuppressive therapy and 19% cases were treated with Biologics and immunosuppressive therapy. Resolution of inflammation was seen in 13% of cases.
Conclusion: Behçets though uncommon in India must be kept in mind as a differential diagnosis for Panuveitis and hypopyon anterior uveitis. Four cases of Paediatric Behçets with various ocular manifestations were studied and youngest being four years.

P27 Temporal trends in ocular manifestations of Behçet's disease in Tunisia between two decades

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 63.

P28 Clinical Profile of Sarcoid Uveitis in a Tertiary Eye Care Center of South India

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Aim: To report clinical features, visual outcome, and complications of the patients diagnosed with ocular sarcoidosis by single uveitis expert in a tertiary eye care center of South India. **Methods:** Retrospective case series analysis of 51 patients (87 eyes) seen between 1993 and 2018. All of these patients underwent a complete eye examination. **Results:** The maximum distribution of the sarcoidosis was noted in the age interval of 40-50 (mean:41±14) years. Thirty-six (71%) patients had bilateral and female predominance (61%) was seen. The mean follow-up period was 3.23 ± 3.81 years. Intermediate uveitis (53%) was the commonest presentation among the total population. 21 (41%) patients received steroids along with immuno-suppressants. We found no statistical improvement between final and baseline visual acuity in those who had immunosuppressants along with steroids and those treated with steroid alone. Cataract (46%), secondary glaucoma (26%) and cystoid macular edema (30%) were the commonest complications seen in our patients. **Conclusion:** sarcoid uveitis in the Indian population often presents as intermediate uveitis. No statistical difference in treatment with steroid and immunosuppressive agents in visual outcome. A complete review of the system with a comprehensive eye examination in a regular interval may prevent ocular or systemic morbidity.

P29 Contrast sensitivity in patients with resolved Vogt-Koyanagi-Harada disease

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[Purpose] To assess contrast sensitivity in patients with resolved Vogt-Koyanagi-Harada disease (VKH).
[Methods] This study included 22 patients with VKH who were considered to have stable visual function for at least 6 months or more after steroid pulse treatment. Decimal visual acuity of all subjects was 1.0 (logMAR 0) or better. We examined contrast sensitivity at 4 spatial frequencies (3, 6, 12, 18 cycles/degree) using the CSV-1000E (Vector Vision). From the data obtained with the CSV-1000E, the area under the log contrast sensitivity function (AULCSF) was calculated. Age-matched 47 normal subjects were also included. Clinical information including age, visual acuity before treatment, duration of disease, presence of macular retinal detachment (RD), presence of pigment epithelium undulation, central foveal thickness, interval from initiation of therapy to RD resolved, recurrence of VKH, development of cystoid macular edema, epiretinal membrane and sunset glow fundus were recorded.
[Results and Discussion] Contrast sensitivity was significantly worse in eyes with VKH than in normal controls at high spatial frequencies (12, 18 cycles/degree). Decreased AULCSF was significantly associated with longer duration of disease and development of epiretinal membrane in eyes with VKH.
[Conclusions] Even in eyes with VKH which have good visual acuity by treatment, contrast sensitivity at high spatial frequencies decreased. Decreased contrast sensitivity was related to longer duration of disease and development of epiretinal membrane.

P30 Multicentre causes of vision loss over 18 years with patients with Vogt Koyanagi Harada Disease

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Purpose: To determine the factors that predict vision loss and treatment outcomes of VKH disease over an 18 year period. Methods: The clinical records of patients with VKH seen for at least 6 months were scrutinised. Results: 127 patients (254 eyes) were diagnosed with VKH, of which 101 were female (80%). Twelve patients (9.5%) were diagnosed as complete VKH, 33 (26%) as incomplete VKH and 82 (64.6%) as probable VKH. The mean age was 37.5yrs (Range 5-74.4yrs). Forty seven (37%) patients were Asian, 29 (23%) were other and 20 (15.7%) were Caucasian. Mean follow up was 7.1 years (range 6mths-46.8yrs). Mean baseline BCVA was 0.38 logMAR, 1 year 0.22, 5 years 0.24 and 10 years 0.4 logMar. The patient cohort had a significant improvement in baseline verse final visual outcome (p=.02). Thirteen eyes (6%) were defined as having moderate visual loss (MVL) and 32 eyes (14.7%) had severe visual loss (SVL). Recurrent episodes occurred in 87 (54%) patients and the mean time to recurrence was 638.5 days. Recurrences were 2.69 per person per year and in MVL or SVL were 0.16 per person/year (0.32 eye years). Fifty-eight patients (45.7%) required additional immunosuppression. Conclusions: Probable VKH had the most significant improvement in vision. Kaplan Meier survival analysis showed vision loss occurred mainly during the first two years. There were a large number of recurrences in this young population group with close to half the patients requiring secondary immunosuppression. Therefore VKH requires aggressive immunosuppression early so as to decrease risk of vision loss.

P31 Recurrence rate of choroidal thickness-guided oral steroid reduced treatment with VKH disease

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Purpose:
To investigate the recurrence rate in patients with Vogt-Koyanagi-Harada (VKH) disease who were treated with steroid pulse therapy followed by it's tapering according to choroidal thickness (CT).
Methods:
Ten patients (5 males and 5 females, 57.7±11.2 years old) with VKH who were treated with pulse intravenous corticosteroids in Saitama Medical University from January 2016 to December 2018, were enrolled. The treatment protocol was as follows. After steroid pulse, intravenous prednisolone was administered at a dose of 1mg/kg/day and gradually decreased to 40mg/day. Next, oral prednisolone was administered at a dose of 40mg/day and tapered every 4 weeks. At the time of examination, when CT was thickened with enhanced depth imaging optical coherence tomography (EDI-OCT), oral steroid was increased, and when CT was not thickened, oral steroid was reduced. Only the increase in CT without symptoms or inflammation was regarded as OCT recurrence.
Results:
The median follow-up period was 20 months (3-38 months). Five patients (50%) showed OCT recurrence and it was at least 2 times. Among them, one showed anterior segment inflammation (10%) and three needed additional adalimumab treatments. Seventeen eyes had a best corrected visual acuity of > 20/20 (85%).
Conclusion:
The EDI-OCT guided oral corticosteroid tapering treatment might be useful to prevent VKH disease recurrence.

P32 Impact of inflammation and treatment on QoL in patients with Vogt-Koyanagi-Harada disease

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Purpose: To evaluate associations between vision- and health-related quality of life (QoL) metrics and visual function, disease activity signs and treatment in VKHD patients.
Methods: Cross-sectional study included 22 patients (20F, mean age 35.8±12.4y) with VKHD (minimum 12-m follow-up), who were prospectively followed from acute onset with systematic evaluation (clinical, posterior segment imaging and full-field ERG exams) and treatment protocols (corticosteroid (CS) only, n=4; early immunosuppressive therapy (IMT), n=10; late IMT, n=8). Clinical characteristics were: visual acuity (VA)=20/20 in 86%; active disease (anterior chamber cells (ACC); macular edema) in 25%; subclinical inflammation in 100%; mild/moderate fundus in 90% and stable ERG in 77%. Self-reported NEI VFQ-25 and SF-36 questionnaires were applied. Data were analyzed with descriptive statistics, Mann-Whitney and Spearman's rank correlation tests and generalized linear model analysis.
Results: Worse VA, severe fundus, fluctuation of VA, ACC, higher CS total dose and use of 2 IMT impacted negatively on several VFQ-25 subscale item scores. Further, higher CS total dose and use of IMT also impacted negatively on several SF-36 subscale item scores.
Conclusions: Worse VA, clinical inflammation and treatment with CS and IMT have a significant impact on both questionnaires. Subclinical inflammation did not seem to impact on QoL metrics. A more comprehensive understanding of the significance of subclinical inflammation in light of negative impact of long-term treatment should be considered.

P33 Impact of immunosuppression on inflammatory signs in Vogt-Koyanagi-Harada disease: a 24-mo follow-up

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Purpose: To evaluate the impact of immunosuppressive therapy (IMT) on inflammatory signs in VKHD.
Methods: 11 women diagnosed with acute VKHD and prospectively followed for 24-mo were systematically evaluated with clinical and imaging exams (fluorescein and indocyanine green angiographies; EDI OCT) and full-field ERG. All patients were treated with methylprednisolone pulsetherapy followed by oral prednisone with slow tapering and systemic IMT (azathioprine; mofetil mycophenolate in refractory/intolerant cases). Eyes were categorized in 2 different groups based on scotopic ffERG parameters variation >30% between M12-M24: worsening or stable group. Descriptive statistics, Fisher exact and Mann-Whitney tests were used to analyze data.
Results: Patients, with mean age at diagnosis of 34y and mean time from symptoms till treatment of 28d, were categorized as worsening in 36.4% and as stable in 63.6%. Anterior chamber cells (ACC) and posterior segment inflammation were detected in 36.4% and in 100%, respectively during 24-mo follow-up. Dark dots (DD) scores significantly reduced in early IMT group in comparison to late IMT group; a higher DD score at M18 was related with worse function based on ffERG (p=0.002). Later treatment start was related with more clinical/subclinical signs: ACC (p=0.001); ACC fluctuation (p=0.009) and perivascular leakage (p=0.007). A greater pleocytosis (p=0.038) was related with worsening ERG parameters.
Conclusions: IMT impacted positively on inflammation and on ffERG; however, it did not eliminate clinical/subclinical signs during 24-mo follow-up.

P34 Anterior choroidal detachment in acute V-K-H disease

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A 59-year-old woman and 53-year-old man were referred to us with a complaint of metamorphopsia and blurred vison. Examinations by findus and fluorescein angiography, PS-OCT and B-mode ultrasonography disclosed characteristic features of the Vogt-Koyanagi-Harada disease. Further investigation by UBM, AS-OCT and immersion B-mode ultrasonography revealed anterior choroidal detachment in both cases. This symptom was immediately reduced and resolved by systemic steroid pulse therapy. Although acute angle closure and shallow anterior chamber as an initial sign of V-K-H disease have been reported, anterior choroidal detachment, to our knowledge has never been described previously. The clinical findings and courses of these two cases will be presented.

P35 Experience of sympathetic ophthalmia in a tertiary referral center in southern Taiwan

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 63.

P36 A case of TINU syndrome in a patient with CNV successfully treated with adalimumab

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[Background]
The report of a patient case with tubulointerstitial nephritis and uveitis (TINU) syndrome accompanied with choroidal neovascularization (CNV) who were treated with adalimumab.
[Case]
A 15-year-old girl diagnosed with tubulointerstitial nephritis from the result of renal biopsy was referred to our hospital for photophobia in both eyes. Her best corrected visual acuity (BCVA) was 20/20.Slit lamp examination revealed the presence of inflammation in the anterior chamber and swelling of optic disc for both eyes, and she was diagnosed with TINU syndrome. Although she was treated with oral prednisolone and topical betamethasone eye drop, inflammation relapsed 3 times a year. Immunosuppressive agents were introduced but it failed to suppress inflammation. Three years after treatment, her left BCVA has decreased to 20/66 and the presence of subretinal fluid (SRF) and fibrin was confirmed. With fluorescence and indocyanine green angiography, we found that CNV was accompanied with uveitis. She was treated with anti-vascular endothelial growth factor (anti-VEGF) injection, but SRF and inflammation recurred. Consecutively, the introduction of adalimumab successfully suppressed inflammation, and the number of inflammation relapse decreased to 0.5 per year. After applying the adalimumab, the patient ceased the anti-VEGF injection.
[Conclusion]
We experienced a case of TINU syndrome patient who could not control inflammation with oral prednisolone and topical betamethasone eye drop. Adalimumab treatment is shown to possibly not only suppress inflammation but also suppress CNV development.

P37 Analysis of clinical features in 17 patients with tubulointerstitial nephritis and uveitis syndrome

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 63.

P38 Inflammatory CNVM: Associated Pathologies, Location And Treatment Response, a Retrospective Study

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Purpose: To study location, aetiology, clinical features and presentations of inflammatory choroidal neo-vascular membrane with various ocular inflammatory conditions. We studied the response of treatment and factors associated with recurrence of CNVM.
Methods: A retrospective study. We went through all the folders diagnosed as inflammatory CNVM. And collect the data related to demographics, diagnosis clinical findings and modes of treatment with its response.
Results: We reviewed all the uveitis patients from March 2002 to April 2017 and found 61 patients with active inflammatory CNVM. These include 17 (27.86 %) patients of Choroiditis, 16 (26.22%) patients of multifocal choroiditis, 10 (16.39%) patients of VKH, 7 (11.47%) patients of Serpigenous choroiditis, 3 (4.91%) patients of intermediate uveitis, 3 (4.91%) patients of Toxoplasma choroiditis. Mean+/-SD follow up period was 23.48 +/-33.60 months. VKH is more associated with peri-papillary CNVM. Multifocal choroiditis is associated with sub-foveal CNVM. Choroiditis was associated with juxta-foveal CNVM.
Out of 61 patients 48 were treated with only Intravitreal Bevacizumab Inj
Out of the 61 patients, fifty-seven patients came for follow- up and 36 have improved vision and 8 have stable vision
Mean visual acuity change/ improvement was -0.17 logMAR
4 Patients had recurrence of CNVM
Conclusion: Inflammatory CNVM can be presented with healed or active uveitis. Location of CNVM have association with aetiology. Chances of recurrence is very less. Most of the patients have responded well with intravitreal anti VEGF inj.

P39 A case of multiple evanescent white dot syndrome with remarkable reduced rod response

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Background: To report a case of multiple evanescent white dot syndrome (MEWDS) with remarkable reduced rod response.
Case: A 24-year-old Japanese man presented with rapid visual loss and night blindness in his right eye. The best-corrected visual acuity was 0.7 in the right eye and 1.5 in the left eye. Color fundus photograph of the right eye revealed multiple white dots observed from the posterior pole to the periphery. Fluorescein angiography showed hyperfluorescence spots, and indocyanine green angiography showed hypofluorescence dots in early and late phases. Optical coherence tomography demonstrated multiple disruptions of ellipsoid zone (EZ). These examinations including fundus examination appeared normal in the left eye. Humphrey perimetry showed enlargement of the blind spot. In the electroretinography (ERG), the amplitude of rod was more markedly reduced than that of cone in the both eyes. Multifocal ERG revealed severely reduced responses in the right eye and in the area of the peripapillary lesion in the left eye. Based upon these results, he was diagnosed with MEWDS in the right eye and suspected acute occult outer retinopathy in the left eye. After three months, the white dots, disruption of EZ, night blindness in the right eye disappeared spontaneously, and the amplitude of ERG became normal in the both eyes.
Conclusion: This case represents a rare case of MEWDS with transient night blindness due to widespread rod dysfunction.

P40 Effect of Antituberculous Therapy on Uveitis Associated With Latent Tuberculosis

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 64.

P41 Pattern of Tubercular Uveitis in Bangladesh

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 64.

P42 Ocular infection with Cytomegalovirus in Thailand: The Clinical features, treatments and outcomes

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Purpose: To study the clinical features, treatments and outcomes of cytomegalovirus (CMV) ocular infection.
Methods: Retrospective case series. Medical records of patients with ocular CMV infection treated at Thammasat Hospital, Thailand from 1/2015 - 5/2017 were included.
Results and Discussion: 41 patients were diagnosed with ocular CMV diseases including infection in immunocompetent patients (61%) and infection in immunocompromised cases (39%). Among the immunocompetent group, anterior uveitis was the most common (88%). Posner Schlossman syndrome (56%) was majority of CMV anterior uveitis. Patients with CMV anterior uveitis had iris atrophy in 90.5%, increased intraocular pressure in 88%, decreased endothelial cell count in 38.1% and coin-shaped lesions in 27.3%. Anti-viral therapy was administered in 88% of cases and 64% of cases needed long-term topical corticosteroids. Most of immunocompromised patients were diagnosed with CMV retinitis (93.8%). Almost all patients were HIV infection. Immune recovery uveitis was developed in 21.4%. Five cases (31.3%) of CMV retinitis received intravenous ganciclovir with adjunctive intravitreal injection of ganciclovir while 68.8% of cases were treated with only intravitreal ganciclovir. Most of patients well responded to treatments with the mortality rate of 6.3%.
Conclusions: Cytomegalovirus can infect both immunocompetent and immunocompromised host with variety of clinical features. Anterior uveitis was common in immunocompetent cases while retinitis was common in immunocompromised patients.

P43 Mortality Risk for Patients with Cytomegalovirus Retinitis and Acquired Immune Deficiency Syndrome

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 64.

P44 Immune cell profiling in CMV anterior uveitis identifies NK cell subsets with CMV response potential

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P45 Ganciclovir Intravitreal Injection As Cytomegalovirus Retinitis Treatment

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Background: Cytomegalovirus (CMV) retinitis is an opportunistic infection which is common in patients with acquired immunodeficiency syndrome. Kuppermann and associates found that 30% of their patients with CD4 counts of less than 50 cells/microliter had CMV retinitis. Antiretroviral therapy and ganciclovir intravitreal injection provided excellent control of cytomegalovirus retinitis.
Aim: To report a case of CMV retinitis with intravitreal Ganciclovir injection.
Case report: A 36-year-old man with a history of HIV had a blurred in both eyes. Visual acuity of right eye is 6/21 and no light perception in the left eye. There is total retinal detachment in the left eye. From fundus photography we found tomato ketchup appearance and frosted branch angiitis in the right eye. CD4 counts of this patient was 3 cells/microliter. We manage this patient with repeated ganciclovir 2 mg intravitreal injection in the right eye together with oral valganciclovir 900 mg twice a day.
Result: After repeated intravitreal ganciclovir injection for two months. Visual acuity of right eye is 6/12 pinhole 6/9 with decrease of retinal exudates and haemorrage. CD4 counts after 2 months treatment was 93 cells/microliter.
Conclusion: HIV patients with complications of CMV retinitis performed repeated Ganciclovir intravitreal injection therapy together with Valganciclovir 900 mg twice a day PO for two months. This is effective to treat CMV retinitis in HIV patients, improve visual acuity and increase CD4 counts.
Key Word: Cytomegalovirus retinitis, Ganciclovir intravitreal injection, AIDS.

P46 Cat Scratch Disease (CSD)- A Cat Lover Trouble

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This abstract has been nominated to Rapid Fire as an excellent abstract. See page 63.

P47 Delayed-onset endophthalmitis due to Aspergillus and Propionibacterium acnes after cataract surgery

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[Background] Fungal endophthalmitis is rare and a definitive diagnosis is often difficult to establish. Here, we describe a patient who exhibited delayed-onset endophthalmitis due to *Aspergillus* and *Propionibacterium acnes* infection after cataract surgery.
[Case] An 80-year-old woman was treated with topical and systemic corticosteroid for persistent ocular inflammation after uneventful cataract surgery at the previous clinic. She developed iris bombe and was referred to our clinic for further treatment. Slit lamp examination showed persistent iris bombe configuration with severe anterior chamber inflammation in the left eye. We performed peripheral iridotomy and collected aqueous humour for multiplex PCR analysis to detect microorganisms; the results were negative. We diagnosed the patient with non-infectious uveitis and initiated methotrexate with tapering of prednisolone. Three months later, hypopyon appeared. We then diagnosed the patient with delayed-onset endophthalmitis; thus, we performed intraocular lens removal and vitrectomy. Aspirated hypopyon revealed numerous filamentous fungi on microscopic examination. Culture of aqueous humour revealed *Propionibacterium acnes*, and pathological examination showed *Aspergillus*. Ocular inflammation resolved slowly with systemic voriconazole.
[Conclusions] In this case, causal organisms were identified via microscopic examination, following initial negative multiplex PCR and culture results. It is essential to consider the possibility of infection, especially when uveitis does not respond to immunosuppressive treatment.

P48 Ocular Toxoplasmosis in a tertiary referral centre. Clinical features, treatment and prognosis

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P49 Usefulness of vitreous biopsy for steroid-resistant intermediate uveitis

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P50 Cystoid macular edema as the major manifestation of infectious uveitis

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Purpose: To report 3 cases of infectious uveitis in which cystoid macular edema was the most evident clinical presentation at first.

Methods: Case reports and literature review.

Results: We present 3 cases, which manifested cystoid macular edema either in both eyes or in one eye, as the only evident initial presentation and were eventually diagnosed as infectious uveitis after systemic survey. The patients were infected by different pathogens, including Tuberculosis, Toxoplasma gondii and Herpes simplex virus, respectively. All the patients showed decreased in macular edema and improvement in visual acuity after treated with specific anti-pathogen medication.

Conclusions: Cystoid macular edema might be the sole clinical presentation in infectious uveitis, either caused by Tuberculosis, Toxoplasma or Herpes simplex virus. When encountering a patient with cystoid macular edema without other specific reasons, detailed history taking and systemic survey should be done and infectious uveitis should be considered as one of the differential diagnosis.

P51 Paradoxical worsening in a case of tuberculous choroiditis

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[Background]
Tuberculous choroiditis is an uncommon form of uveitis in Japan. A subset of patients with tuberculous choroiditis develop paradoxical worsening after initiation of anti-tuberculosis therapy (ATT).
[Case]
A 30-year-old otherwise healthy man was referred to our hospital complaining of vision loss and pain in the right eye. At presentation, the best-corrected visual acuity was 0.05 in the right eye. Funduscopy revealed peripapillary yellowish-white chorioretinal lesions spreading into the macula, with retinal vascular tortuosity. Tuberculin skin testing showed a 25 mm x 25 mm positive reaction, but the IGRA was negative and the chest X-ray was normal. HIV testing was also negative. Tuberculous choroiditis was suspected and after 6 days of systemic ATT, the choroidal lesions diminished and the macular edema resolved. Two weeks later, oral prednisolone was added at a dose of 30 mg/day, tapered by 10 mg per week. However, after tapering to PSL 10 mg/day, new scleritis with retinal perivasculitis developed. For this paradoxical worsening, prednisolone was increased to 25 mg/day with good resolution of the scleritis and retinal vasculitis.
[Conclusions]
Paradoxical worsening of tuberculous choroiditis occurred after initial improvement on ATT. This was successfully managed by increasing systemic corticosteroids.

P52 A curious case of Chickungunya Retinitis presenting a diagnostic and therapeutic challenge

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Purpose: To report and discuss management options of a case of sight threatening chickungunya retinitis.
Methods: History, visual acuity (VA), slit lamp bio-microscopy, indirect ophthalmoscopy, fluorescein angiography (FFA) and optical coherence tomography (OCT) were done.
Results: 28 year old Asian female presented with history of decreased vision in right eye since 2 weeks. Her visual acuity in the right eye was 6/60, 6/6 in the left eye. Slit lamp exam showed 1+ AC cells, 2+ vitreous cells. Fundus exam showed a retinitis patch along the inferior arcade with macular oedema. FFA revealed occlusive arteritis with late leakage, OCT showed macular oedema. All disease directed laboratory work-up was normal. Transient one line improvement in vision was noted 3 weeks after starting oral steroids and anti-toxoplasma therapy after which the macular oedema and ischemia increased. Addition of intravitreal Avastin, IV Methyl prednisololne and immunosuppresives worsened visual acuity and similar lesions were noted nasal to the disc in the left eye. After extensive literature search T. Acyclovir(400mg) 5 times a day was added to a schedule of tapering oral steroids which resulted in complete resolution of lesions bilaterally and improvement in vision after 4 weeks of treatment.
Conclusion: Chickungunya retinitis should be considered an important differential in cases of retinitis with occlusive arteritis. Prompt intervention in the form of anti-viral therapy can salvage eyesight.

P53 Povidone-Iodine/Dexamethasone Eye Drops in Adenoviral Conjunctivitis Treatment: A Systematic Review

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P54 The Characteristics of Gonococcal Conjunctivitis in a Rural Hospital, Indonesia

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Purpose: To describe the characteristics of Gonococcal conjunctivitis presenting to a rural hospital, Indonesia, from 2014 to 2017.
Materials and methods: This retrospective study consist 32 patients with Gonococcal conjunctivitis referred to ophthalmology division at Merauke Government Public Hospital, between 2014 and 2017. Patients were divided into three age groups: neonate, infant-child and adult. Demographic, clinical features, microbiological data and their treatment were documented.
Results:
Most cases in neonate age group (41,6%). The mean duration of symptoms was 4 days. Adult age group manifest unilateral cases mostly. Classical presentation includes profuse mucopurulent discharge, severe conjunctival injection and marked lid edema were observed in all cases. Corneal involvement was present in 28% of patients. Resolution of infection was observed all cases.
Conclusion:
Gonococcal conjunctivitis remain a serious problem of newborn. Prompt and appropriate treatment can minimize sequelae.

Keywords: Gonococcal Conjuncttivitis, Ocular Gonorrhoeae

P55 Clinical Characteristics of Relapsing Intraocular Lymphoma

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Purpose: To investigate the clinical characteristics of relapsing intraocular lymphoma.
Methods: The medical records of 17 patients who were newly diagnosed with IOL between 2013 and 2018 in National Taiwan University Hospital were retrospectively reviewed. Clinical data such as the demographics, lymphocyte surface markers, and disease course including the duration of follow-up; managements; time to relapse; and site of relapse were recorded and analyzed.
Results and Discussion: Eight out of 17 patients had a relapse of intraocular lymphoma. There was no significance in age, gender, duration of diagnosis, or cell types between the relapsing and the non-relapsing patients. The flow cytometry tended to report a difference in CD3+ and CD5+ between patients with relapse and those without relapse (p= 0.0152 and 0.0278, respectively). However, if the patients who followed up less than one year were excluded, there was no significance in these surface markers (p= 0.1429, for both CD3+ and CD5+). There were sixteen relapses among these eight patients: six times (38%) in intraocular area, four times (25%) in cerebrospinal fluid (CSF), three times (19%) in brain mass, once (6%) in skin, in combination of local and central nervous system, and in bone marrow.
Conclusions: There was no clear correlation between lymphocyte surface markers and the relapse of IOL in patients who followed up more than one year. The most common site of relapse was intraocular area, followed by CSF and then brain.

P56 Optical coherence tomography in vitreoretinal lymphoma with or without vitelliform submaculopathy

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[Purpose] To evaluate the characteristics manifestations in optical coherence tomography (OCT) in vitreoretinal lymphoma patients with or without vitelliform submaculopathy (VSM).
[Methods] This was a retrospective study of 15 eyes from 15 patients (9 females, mean age of 64.2 years) with active eight primary and seven secondary vitreoretinal lymphoma. As VSM corresponds to posterior accumulated subretinal hyperreflective materials in OCT, there were 4 patients with VSM (VSM+) and 11 patients without VSM (VSM-) with OCT imaging. We measured the changes of subfoveal choroidal thickness (SFCT) and foveal thickness (FT) between before treatment and at last visit and compared the difference of those between VSM+ and VSM-. Moreover, we evaluated the presence of retinal pigment epithelium (RPE) undulation, RPE elevation and choroidal hyper-reflective particle (CHRP) before treatment.
[Results and Discussion] There were significant differences in the changes of SFCT and FT between VSM+ and VSM- (p=0.03, -85±45 μm vs -25±31 μm and p=0.01, -162±167 μm vs 35±63 μm). The presence of RPE undulation and CHRP had significant differences between VSM+ and VSM- [p=0.03, 4eyes (100%) vs 3 eyes (27%) and p<0.01, 3 eyes vs none, respectively], though the presence of RPE elevation had no significant difference (p=0.23, 3 eyes vs 3 eyes).
[Conclusions] Vitreoretinal lymphoma with VSM had significant larger changes of retinal and choroidal structures after treatment compared to those with no VSM. RPE undulation and CHRP may have a relation with VSM.

P57 Effect of vitreous injection of methotrexate on primary intraocular lymphoma

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[Methods] Retrospective analysis of 8 patients diagnosed with primary intraocular lymphoma by pathological examination of diagnostic vitrectomy. All patients were ruled out central nervous system metastasis. All eyes were treated with intravitreal methotrexate injections according to the induction period (2 times a week for 4 times), a consolidation period (1 time per week, 8 times in total), and a maintenance period (1 time per month, 10 times in total). [Results and Discussion] The follow-up period was 36 months. No tumor cells were detected. All 8 eyes completed intraocular chemotherapy and achieved clinical remission after treatment. Compared with before treatment, the average visual acuity improved significantly after treatment, and the difference was statistically significant (t=2.063, P<0.01). Four patients developed brain metastases during treatment, one patient died 3 months after completion of intraocular treatment, and the remaining 7 eyes did not have intraocular tumor recurrence during the follow-up period. [Conclusions] Intravitreal injection of MTX for the treatment of primary intraocular lymphoma can effectively control intraocular tumors, reduce the extent of intraocular lesions, and improve patient vision. But it can not reduce the probability of involvement of the central nervous system, and can not extend the life of patients.

P58 Retinal complications in uveitis patients in Taiwan

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P59 A 10-year uveitis experience in a developing African country

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Purpose: To report the results of a 10 year old uveitis service in Egypt.

Design and Method: Retrospective review of the records of patients attending a uveitis practice in Egypt from January 2008 to February 2018. In addition to the causes of uveitis of these patients, the clinical presentation, the treatment received, the initial and final best corrected visual acuity, the author also studied the demographic and socioeconomic factors associated with a late initial visit to the tertiary uveitis service.

Results and Discussion: The study included 1352 patients. The prevalence of various causes of uveitis was different among the different Egyptian regions, with tuberculosis being more common in Upper Egypt. Female gender, lack of formal education, residence in Upper Egypt, presence of 4 or more children in the family, and a monthly income of the patient below 2000 Egyptian pounds (112 US dollars) were factors significantly associated with a visual acuity at presentation < 20/200, p<0.05 for each factor.

Conclusion: The sub optimum socioeconomic conditions in some parts of Egypt still jeopardize the result of uveitis practice.

P60 Characteristics and Clinical Outcomes of Hypertensive anterior uveitis

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Purpose: To determine characteristics of hypertensive anterior uveitis and prevalence of the Herpesviridae family. Characteristics, individual pathogen and clinical outcome were compared.
Study: Retrospective cohort
Methods: Sixty-four anterior uveitis participants with increased intraocular pressure and Herpesviridae family PCR analysis results were included.
Results: The prevalence of Herpes family was 53.1% (6.3 % for HSV, 10.9% for VZV, 34.4% for CMV and 1.6% for EBV). Posner-Schlossman Syndrome 25%, Fuchs Uveitis Syndrome 7.8% and idiopathic 14.1%. The recurrence rate was 70.3%. Age in PCR-proven infection group (52.7 ± 15.3) was older than the PCR-negative group (44.4 ± 12.5) (p=0.021). Some characteristics suggest diagnosed PCR-proven infections including elderly age, skin lesion, sectoral iris atrophy, pupil dilatation and decreased corneal sensation. Glaucoma in PCR-proven infection group (44.1%) was more than in PCR-negative group (16.7%) (p=0.018). Corneal endothelial cell count in PCR-proven infection group (1879.3 ± 952.3) was lower than in PCR-negative group (2532.9 ± 540.4) (P=0.004).
Conclusion: Viral infection was found in one half of hypertensive anterior uveitis. The complications of PCR-proven infectious case were more severe than PCR-negative case.

P61 Axial Length Change Considered for Silicon Oil Removal in Acute Retinal Necrosis

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[Background] Hypotony after silicon oil (SO) removal in complex retinal detachment (RD) procedures occurred more in acute retinal ecrosis (ARN) than rhegmatogenous RD. The SO needs to be refilled to avoid corneal decompensation and even bulbar atrophy. The decision of SO removal was sometimes difficult to made.
[Case] A 23 year-old male manifested as ARN with initial VA of HM of the right eye underwent scleral buckle, vitrectomy and SO implantation in addition to anti-viral medication. The initial axial length (AL) by ultrasonography was 23.72mm in both eyes. The ALs obtained by IOL master were OD 22.75mm and OS 24.34 mm three months after surgery. Intraocular pressure was at low teens. Retina being attached, because of the increased discrepancy of AL of both eye post-operatively measured repeatedly. Phacoemulcification and IOL implantation was done without SO removal. The post-operative VA was 2/60 with +0.75 -1.25x150 after 3 years of follow up.
[Conclusions] Serial monitoring AL may reveal the feasibility of silicon oil removal in ARN patients receiving complex retinal detachment surgeries in addition to pre-removal intraocular pressure. If not removed, meticulous calculation of IOL power and maintenance of visual axis clarity will facilitate the maximal visual outcome in these patients.

P62 Schwartz Matsuo Syndrome in a teenager

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Background: Schwartz Matsuo Syndrome was first described by Schwartz in 1973. The retinal breaks used to be at extreme periphery, and masquerading as uveitis. Here we present a case of Schwartz Matsuo Syndrome in a teenager.

Case: A 13 year old boy was referred to our clinic due to persistent uveitis, OD. He denied any systemic disease except atopic rhinitis. At initial visit, the best corrected vision was 0.9, OD and 1.0, OS. Ocular examination was remarkable in his left eye. Right eye showed keratic precipitates, (+) cell in the anterior chamber and complicated cataract with mild subluxation. Besides, shallow retinal detachment without visible break was also noted. The patient was treated initially as uveitis and 2nd glaucoma, but in vain. Atopia related retinal detachment was suspected based on his medical history and habit of rubbing eye. Scleral buckle followed by pneumopexy failed to attach the retina. The retinal detachment and complicated cataract progressed. Pars plana vitrectomy was done and giant tear at pars plica was identified to be sealed by laser. The retina attached well and the anterior chamber reaction cleared after vitrectomy.

Conclusion: High awareness and detailed history is the key to correct diagnosis and appropriate treatment of Schwartz Matsuo Syndrome.

P63 Inflammatory characteristics in TAO using 3D human organoid

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P64 Structural changes in the Posterior segment of the eye among HIV-infected individuals

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BACKGROUND: HIV is a major global public health concern. Life expectancy of HIV-positive individuals have approached that of the normal population. But, with a health that is not fully restored. Concerns have shifted from HIV-related infectious comorbidities to HIV-associated age-related diseases.
PURPOSE: To determine if there are any changes in the retinal layers, BMO-MRW, cRNFL, choroidal thickness and retinal vascular caliber among HIV-infected individuals when compared to age and sex-matched controls.
METHODS: Matched case-control study of known HIV-positive patients and healthy subjects were examined using fundus imaging and SD-OCT to assess the structure of the posterior segment of the eye.
RESULTS AND DISCUSSION: Of 29 eligible patients, 51.7% were positive for HIV infection. Average age range from 26 to 53 years. Average CD4 count was 42. This study found both thinning and thickening of the structures of the posterior segment. HIV-positive individuals are known to undergo accelerated aging or premature senescence. The author postulated that either a shared pathogenic mechanism of inflammation and degenerative process, or a possible continuum of inflammation ensuing to degeneration could be present in patients with HIV infection.
CONCLUSION: Despite good vision, structural variations occur in the posterior segment of HIV-positive individuals. HIV infection has become a chronic disease, these subtle structural changes could be clinically relevant in time.