Ophthalmology Bulletin

Articles

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A comparison between the compass fundus perimeter and the humphrey field analyzer.
[The purpose of this multicentre, cross sectional, case-control study, was to evaluate relative diagnostic precision and test–retest variability of 2 devices, the Compass (CMP, CenterVue, Padova, Italy) fundus perimeter and the Humphrey Field Analyzer (HFA, Zeiss, Dublin, CA), in detecting glaucomatous optic neuropathy (GON).]
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A randomized trial comparing bilateral lateral rectus recession versus unilateral recess and resect for basic-type intermittent exotropia.
Donahue SP. *Ophthalmology* 2019;126(2):305-317.
[The purpose of this multicentre, randomized clinical trial was to compare long-term outcomes after bilateral lateral rectus recession (BLRc) or unilateral lateral rectus recession combined with medial rectus resection in the same eye (R&R) for primary treatment of childhood intermittent exotropia (IXT).]
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Acute macular neuroretinopathy: pathogenetic insights from optical coherence tomography angiography.
[The aim of the study was to describe the optical coherence tomography angiography (OCT-A) features of patients affected by acute macular neuroretinopathy (AMN).]
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Atypical epiretinal tissue in full-thickness macular holes: pathogenic and prognostic significance.
[The purpose of this study was to elucidate the clinical characteristics of a full-thickness macular hole (FTMH) with atypical epiretinal tissue (AET), and expand the spectrum of pathogenesis of MH.]
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Childhood lensectomy is associated with static and dynamic reduction in schlemm canal size: a biomechanical hypothesis of glaucoma after lensectomy.
[The purpose of this cross-sectional observational study was to compare Schlemm canal (SC) and trabecular meshwork (TM) in children with healthy eyes and those with and without glaucoma after
lensectomy.]
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**Comparative analysis of large macular hole surgery using an internal limiting membrane insertion versus inverted flap technique.**
[To determine whether the internal limiting membrane (ILM) insertion technique is as effective as the inverted ILM flap technique for the initial surgical treatment of eyes with large idiopathic macular holes (MHs).]
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**Contrast sensitivity and visual acuity under low light conditions in macular telangiectasia type 2.**
[Macular pigment optical density (MPOD) is centrally depleted early on in macular telangiectasia type 2 (MacTel). Contrast sensitivity (CS) might be related to MPOD, and thus impaired in early MacTel. The effect of low luminance was assessed on both CS and best corrected visual acuity (BCVA).]
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**Corneal shape changes of the total and posterior cornea after temporal versus nasal clear corneal incision cataract surgery.**
[The purpose of this study was to compare changes in the shape and astigmatism of the total and posterior cornea between eyes with a nasal clear corneal incision (CCI) and eyes with a temporal CCI in cataract surgery.]
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**Correspondence between retinotopic cortical mapping and conventional functional and morphological assessment of retinal disease.**
[The present study describes retinotopic mapping of the primary visual cortex using functional MRI (fMRI) in patients with retinal disease. It addresses the relationship between fMRI data and data obtained by conventional assessment including microperimetry (MP) and structural imaging.]
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**Detailed genetic characteristics of an international large cohort of patients with Stargardt disease: ProgStar study report 8.**
[The aim of this study was to describe the genetic characteristics of the cohort enrolled in the international multicentre progression of Stargardt disease 1 (STGD1) studies (ProgStar) and to determine geographic differences based on the allele frequency.]
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**DICER1 syndrome: characterization of the ocular phenotype in a family-based cohort study.**

[The purpose of this study was to characterize the ocular phenotype of DICER1 syndrome.]

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**Efficacy of non-fovea-sparing ILM peeling for symptomatic myopic foveoschisis with and without macular hole.**


[The purpose of this study anatomical and visual outcomes of pars plana vitrectomy (PPV) with non-fovea-sparing (entire) internal limiting membrane (ILM) peeling in eyes with myopic foveoschisis (MF).]

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**Endoscopic cyclophotocoagulation (ECP) for open angle glaucoma and primary angle closure.**

Tóth M. *Cochrane Database of Systematic Reviews* 2019;2:CD012741.

[Glaucoma is a leading cause of irreversible blindness. A number of minimally invasive surgical techniques have been introduced as a treatment to prevent glaucoma progressing. Among them, endoscopic cyclophotocoagulation (ECP) is a cyclodestructive procedure developed by Martin Uram in 1992.]

**Impact of drusen and drusenoid retinal pigment epithelium elevation size and structure on the integrity of the retinal pigment epithelium layer.**


[The purpose of this study was to evaluate the impact of drusen size and structure on retinal pigment epithelium (RPE) and photoreceptor layers in eyes with early to intermediate age-related macular degeneration (AMD) using polarisation-sensitive optical coherence tomography (OCT).]

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**In vivo confocal microscopy indicates an inverse relationship between the sub-basal corneal plexus and the conjunctivalisation in patients with limbal stem cell deficiency.**


[Limbal stem cell deficiency (LSCD) is characterised by a marked decrease in limbal stem cells. It is classified primarily using subjective slit-lamp observations. In vivo confocal microscopy (IVCM) can non-invasively provide objective information on the condition of the limbal niche, the corneal epithelial basal cell density and the corneal sub-basal nerve plexus density (SND). We here used IVCM to evaluate changes in SND to improve LSCD classification.]

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**Inter-relationship between ageing, body mass index, diabetes, systemic blood pressure and intraocular pressure in Asians: 6-year longitudinal study.**


[Normal ageing and reduced systemic BP are associated with reduced IOP in Malay and Indian adults. Given that high IOP is a risk factor for glaucoma, our finding highlights the importance of controlling hypertension in older adults, where hypertension and glaucoma incidences are on a rise.]

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Intraocular pressure and myopia progression in Chinese children: the Anyang Childhood Eye Study.
[The purpose of this study was to explore the relationship between intraocular pressure (IOP) at baseline and myopia progression in Chinese children from the Anyang Childhood Eye Study.]
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Long-term reconstruction of foveal microstructure and visual acuity after idiopathic macular hole repair: three-year follow-up study.
[The purpose of this study was to evaluate long-term reconstructive changes in foveal microstructures and their associations with visual improvement in eyes with surgically closed macular holes (MHs).]
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[The association between long-term cardioprotective aspirin use and neovascular age-related macular degeneration (AMD) is controversial. This study was undertaken to estimate the risk of neovascular AMD with long-term regular use of low-dose aspirin.]
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Macular dysfunction in patients with macula-on rhegmatogenous retinal detachments.
[The purpose of this study was to assess macular function in patients with macula-on rhegmatogenous retinal detachments (RRDs) using focal macular electroretinography (FMERG).]
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Macular morphology and visual acuity in year five of the comparison of age-related macular degeneration treatments trials.
[The purpose of this cohort study within a randomized clinical trial, was to evaluate associations of morphologic features with 5-year visual acuity (VA) in the Comparison of Age-related Macular Degeneration Treatments Trials (CATT).]
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Microaneurysm turnover is a predictor of diabetic retinopathy progression.
[The purpose of this study was to analyse retinopathy phenotypes and microaneurysm (MA) turnover in mild non-proliferative diabetic retinopathy (NPDR) as predictors of progression to diabetic central-involved macular oedema (CIMO) in patients with type 2 diabetes mellitus (DM) in two different ethnic populations.]
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Microinterventional endocapsular nucleus disassembly: novel technique and results of first-in-human randomised controlled study.
[Microinterventional endocapsular fragmentation with the manual, disposable miLOOP device achieved consistent, ultrasound-free, full-thickness nucleus disassembly and significantly improved overall phaco efficiency in advanced cataracts.]
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Natural history of drusenoid pigment epithelial detachment associated with age-related macular degeneration: age-related eye disease study 2 Report No. 17.
[The purpose of retrospective analysis of a prospective cohort study was to investigate the natural history and genetic associations of drusenoid pigment epithelial detachment (DPED) associated with age-related macular degeneration (AMD).]
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Ophthalmic manifestations of Gaucher disease: the most common lysosomal storage disorder.
[GD is associated with a various structural and functional abnormalities that can affect any part of the eye. Some can be sight threatening and potentially amenable to therapy. Due to the reported increased risk of haematological malignancy and melanoma in GD, suspicious ocular findings should be fully investigated so as to exclude these conditions. Although retinal involvement is rare in GD, any manifestations should be monitored and treated early to reduce the risk of progression.] Available with an NHS OpenAthens password for eligible users

Optic nerve head cupping in glaucomatous and non-glaucomatous optic neuropathy.
[Enlargement of optic disc cupping is seen both in glaucoma and in neurological disorders. The authors used enhanced depth imaging with spectral-domain optical coherence tomography to differentiate glaucoma from non-glaucomatous optic neuropathy.] Available with an NHS OpenAthens password for eligible users

Periocular triamcinolone vs. intravitreal triamcinolone vs. intravitreal dexamethasone implant for the treatment of uveitic macular edema: the periocular vs. intravitreal corticosteroids for uveitic macular edema (POINT) trial.
[The purpose of this study was to evaluate the comparative effectiveness of 3 regional corticosteroid injections for uveitic macular edema (ME): periocular triamcinolone acetonide (PTA), intravitreal triamcinolone acetonide (ITA), and the intravitreal dexamethasone implant (IDI).]
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Prevalence of glaucoma in the Australian National Eye Health Survey.
[The purpose of this study was to estimate the prevalence of glaucoma in Australia.]
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**Punctal occlusion for dry eye syndrome: summary of a Cochrane systematic review.**
[Dry eye disease is a disorder of the tear film associated with ocular signs and symptoms. Punctal occlusion aids the preservation of natural tears. The authors conducted a Cochrane systematic review to assess the effectiveness of punctal plugs for managing dry eye. Randomised and quasi-randomised trials were included.]
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**Quantifying vascular density and morphology using different swept-source optical coherence tomography angiographic scan patterns in diabetic retinopathy.**
[The purpose of this study was to evaluate quantitative metrics of the retinal microvasculature in eyes with diabetic retinopathy (DR) using various en face swept-source optical coherence tomography angiography (SS-OCTA) image sizes.]
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**Rapid assessment of avoidable blindness in Papua New Guinea: a nationwide survey.**
[The purpose of this population based study was to estimate the prevalence and main causes of blindness and vision impairment in people aged 50 years and older in Papua New Guinea (PNG).]
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**Repeatability, interocular correlation and agreement of quantitative swept-source optical coherence tomography angiography macular metrics in healthy subjects.**
[The aim of the study was investigate the repeatability, interocular correlation and agreement of quantitative swept-source optical coherence tomography angiography (SS-OCTA) metrics in healthy subjects.]
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**Resting nailfold capillary blood flow in primary open-angle glaucoma**
[An altered haemodynamic profile for various ocular posterior segment capillary beds has been documented in primary open-angle glaucoma (POAG). POAG may also involve abnormal non-ocular blood flow, and the nailfold capillaries, which are not affected by elevated intraocular pressure (IOP), are readily assessable.]
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**Retrospective cohort study exploring whether an association exists between spatial distribution of cystoid spaces in cystoid macular oedema secondary to retinitis pigmentosa and response to treatment with carbonic anhydrase inhibitors.**
[In this study, INL fluid was found to be the most common spatial distribution of RP-CMO. However, patients who were classed as a ‘responder’ to CAI treatment all demonstrated coexisting ONL fluid on their pretreatment OCT scans. This may be explained by CAIs having better access to retinal pigment epithelium basolateral membrane than neurosensory retina. The study also suggests a minimal impact on response to CAIs by ERM.]
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Ten-year incidence of primary angle closure in elderly Chinese: the Liwan Eye Study.
[The purpose of this study was to determine the 10-year incidence of all forms of primary angle closure (PAC) in phakic eyes and its risk factors in an urban Chinese population aged 50 years and older.]
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The Associations between near visual activity and incident myopia in children: A nationwide 4-year follow-up study.
[This nationwide population-based study aimed to examine the prospective association between near visual activities and incident myopia in Taiwanese children 7 to 12 years old over a 4-year follow-up period.]
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The impact of SIGN glaucoma guidelines on false-positive referrals from community optometrists in Central Scotland.
[The purpose of the study was to assess the impact of Scottish Intercollegiate Guidelines Network (SIGN) 144 on quality of referrals from community optometrists.]
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True rotational stability of a single-piece hydrophobic intraocular lens.
[The purpose of this study was to evaluate rotation and its influencing factors of an aspheric one-piece hydrophobic acrylic intraocular lens (IOL) Vivinex XY1 during 6 months after operation. Assessing the true IOL position at the end of surgery is crucial for the evaluation of rotational stability of IOLs. No IOL rotation exceeding 5° could be detected 6 months after surgery.]
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Variability of vertical cup to disc ratio measurement and the effects of glaucoma 5-year risk estimation in untreated ocular hypertensive eyes.
[The purpose of this study was to compare the vertical cup to disc ratio (VCDR) measurements obtained with optical coherence tomography (OCT), Heidelberg retina tomography (HRT) and stereophotography of the optic nerve head (ONH) in patients with ocular hypertension (OHT), and
their corresponding estimated 5-year risk for development of glaucoma.]

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Guidelines

The following new guidance has recently been published:

**Serious eye disorders.**
National Institute for Health and Care Excellence (NICE); 2019.
[https://www.nice.org.uk/guidance/qs180](https://www.nice.org.uk/guidance/qs180)

[This quality standard covers the diagnosis and management of cataracts, glaucoma and age-related macular degeneration (AMD) and the prevention of sight loss. It describes high-quality care in priority areas for improvement.]

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This Bulletin was created by Liz Wright of NHS East Dorset Knowledge and Library Service

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