

Ophthalmology Update

Feb 2022



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Databases searched: Medline, Embase and Emcare. Sept 2021 – Feb 2022 (most recent first)

Early predictors of disability of paediatric-onset AQP4-IgG-seropositive neuromyelitis optica spectrum disorders

Item Type: Journal Article

Authors: Camera, Valentina;Messina, Silvia;Elhadd, Kariem Tarek;Sanpera-Iglesias, Julia;Mariano, Romina;Hacohen, Yael;Dobson, Ruth;Meletti, Stefano;Wassmer, Evangeline;Lim, Ming J.;Huda, Saif;Hemingway, Cheryl;Leite, Maria Isabel;Ramdas, Sithara and Palace, Jacqueline

Publication Date: 2022

Journal: Journal of Neurology, Neurosurgery, and Psychiatry 93(1), pp. 101-111

Abstract:

OBJECTIVE: To describe onset clinical features predicting time to first relapse and time to long-term visual, motor and cognitive disabilities in paediatric-onset aquaporin-4 antibody (AQP4-IgG) neuromyelitis optica spectrum disorders (NMOSDs).

METHODS: In this retrospective UK multicentre cohort study, we recorded clinical data of paediatric-onset AQP4-IgG NMOSD. Univariate and exploratory multivariable Cox proportional hazard models were used to identify long-term predictors of permanent visual disability, Expanded Disability Status Scale (EDSS) score of 4 and cognitive impairment.

RESULTS: We included 49 paediatric-onset AQP4-IgG patients (38.8% white, 34.7% black, 20.4% Asians and 6.1% mixed), mean onset age of 12+/-4.1 years, and 87.7% were female. Multifocal onset presentation occurred in 26.5% of patients, and optic nerve (47%), area postrema/brainstem (48.9%) and encephalon (28.6%) were the most involved areas. Overall, 52.3% of children had their first relapse within 1 year from disease onset. Children with onset age <12 years were more likely to have an earlier first relapse ($p=0.030$), despite showing no difference in time to immunosuppression compared with those aged 12-18 years at onset. At the cohort median disease duration of 79 months, 34.3% had developed permanent visual disability, 20.7% EDSS score 4 and 25.8% cognitive impairment. Visual disability was associated with white race ($p=0.032$) and optic neuritis presentations ($p=0.002$). Cognitive impairment was predicted by cerebral syndrome presentations ($p=0.048$), particularly if resistant to steroids ($p=0.034$).

CONCLUSIONS: Age at onset, race, onset symptoms and resistance to acute therapy at onset attack predict first relapse and long-term disabilities. The recognition of these predictors may help to power future paediatric clinical trials and to direct early therapeutic decisions in AQP4-IgG NMOSD. Copyright © Author(s) (or their employer(s)) 2022. No commercial re-use. See rights and permissions. Published by BMJ.

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Efficacy and safety of current treatment options for peripheral retinal haemangioblastomas: a systematic review

Item Type: Journal Article

Authors: Hajjaj, Anass;van Overdam, Koen,A.;Gishti, Olta;Ramdas, Wishal D. and Kilic, Emine

Publication Date: 2022

Journal: Acta Ophthalmologica 100(1), pp. e38-e46

Abstract:



IMPORTANCE: Approximately twenty per cent of Von Hippel-Lindau patients with retinal haemangioblastomas (RH) suffer from visual impairment. Various treatment options are available for peripheral RH. However, management of peripheral RH is complex due to multifocality and bilaterality.,

OBJECTIVE: To summarize published evidence on efficacy and safety of different interventions for peripheral RH and to provide treatment recommendations for specialists.,

EVIDENCE REVIEW: Comprehensive searches were performed using Medline, Embase, Web of Science and Google Scholar database on 4 March 2020. English publications that described outcomes related to efficacy or complications in at least two patients with peripheral RH were included. Efficacy and safety were estimated by complete tumour eradication rate, pretherapeutic and treatment-related complication rate. Odds ratios (OR) with 95% confidence intervals (CI) were calculated to calculate the risk estimate of complications between treatment options.,

FINDINGS: Twenty-seven articles were included in this review describing nine different treatment options for peripheral RH: laser photocoagulation (n = 230), cryotherapy (n = 50), plaque radiotherapy (n = 27), vitreoretinal surgery (n = 88), photodynamic therapy (PDT; n = 14), transpupillary thermotherapy (TTT; n = 10), external beam radiotherapy (n = 3), systemic treatment (n = 7) and intravitreal anti-VEGF (n = 2). Complete tumour eradication was achieved in 86.7% (95% CI: 83.5-89.9%) of all eyes. For the different treatments, this was after laser photocoagulation 89.9% (86.1-93.7%), cryotherapy 70.2% (57.0-83.4%), plaque radiotherapy 96.3% (89.1-100.0%), vitreoretinal surgery (100.0%), PDT 64.3% (38.3-90.3%) and TTT 80.0% (53.8-100.0%). No complete tumour eradication was achieved after systemic therapy, external beam radiotherapy or intravitreal anti-VEGF. Photodynamic therapy and vitreoretinal surgery showed the highest complication rate after treatment compared to the other treatments (OR 10.5 95% CI: 2.9-38.4]) and (OR 5.9 95% CI: 3.4-9.9]), respectively. Cases that had pretherapeutic complications showed a higher treatment-related complication rate (OR 14.8 95% CI: 7.3-30.0]) than cases without complications before treatment.,

CONCLUSIONS AND RELEVANCE: These findings suggest that laser photocoagulation is the safest and most effective treatment method for peripheral RH up to 1.5 mm in diameter. Vitreoretinal surgery has the highest success rate for complete tumour eradication and may be the most suitable treatment option in the presence of pretherapeutic complications and for larger tumours. Copyright © 2021 Acta Ophthalmologica Scandinavica Foundation. Published by John Wiley & Sons Ltd.

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Risk factors associated with post-operative uveitis after cataract surgery: a retrospective case-control study

Item Type: Journal Article

Authors: Halim, Jonathan;Westcott, Felix;Cascone, Nikhil and Coombes, Andrew

Publication Date: 2022

Journal: Eye (London, England) 36(1), pp. 198-205

Abstract:

BACKGROUND/AIM: Post-operative uveitis is the most common complication after cataract surgery in the UK. The study aims to evaluate the risk of post-operative uveitis in cataract surgery patients of different ethnicity in the presence and absence of co-morbidities as well as operative complications using multivariate analysis., **METHODS:** A retrospective case-control study of patients undergoing phacoemulsification cataract surgery between January 2018 to December 2019 at two hospital sites. Differences in demographic and clinical characteristics were compared between two groups defined by the development of post-operative uveitis. Statistically significant factors in univariate analysis were further analysed using multivariate analysis to account for confounders.,

RESULTS: One thousand and five hundred eighty seven eyes had undergone phacoemulsification cataract operations with 104 (6.6%) developing post-operative uveitis. Compared to eyes of White/Mixed/Other ethnicity, Asian and Afro-Caribbean eyes were associated with a twofold (OR 2.02, 95% CI 1.16-3.52, P = 0.013) and fivefold (OR 5.15,



95% CI 2.85-9.29, $P < 0.001$) risk of post-operative uveitis, respectively. Complicated surgery involving eyes with small pupil/iris hooks/Malyugin ring (OR 2.70, 95% CI 1.16-6.30, $P = 0.022$) and posterior capsular rupture (OR 6.00, 95% CI 2.55-14.12, $P < 0.001$) were associated with an increased risk of post-operative uveitis.,
CONCLUSIONS: The factors significantly associated with a post-operative uveitis outcome were patients of Asian and Afro-Caribbean ethnicity, small intra-operative pupil size, use of iris hooks or Malyugin ring and PCR. The post-operative management plan should be tailored in these group of patients with a view of early assessment and prompt management of symptoms. Copyright © 2021. The Author(s), under exclusive licence to The Royal College of Ophthalmologists.

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Challenges in Elucidating Ophthalmology's Standards of Care: A Review

Item Type: Journal Article

Authors: Hellem, Amy and VanderBeek, Brian L.

Publication Date: 2022

Journal: JAMA Ophthalmology

Abstract:

Importance: Defining a standard of care is difficult, and physicians don't always agree on what it means in specific contexts. This is, in part, owing to constantly changing treatment patterns; but at the same time, the underlying framework that determines standards of care is continuously evolving. This situation presents clear challenges for all practicing physicians, including ophthalmologists.,

Observations: Complicating the issue of defining a standard of care are the confusing origins and lexicon used to describe 3 related yet distinct ideas: standard of care, practice guidelines, and gold standards. Indeed, each of these terms is defined and influenced by many stakeholders both inside and outside the health care system. The term standard of care is one example that, although used frequently as a medical term, is often decided by courts and industry. Ophthalmology itself has provided one of the most influential cases in standard-of-care law history (Helling v Carey), which standardized the routine use of tonometry after the plaintiff lost vision because of a delayed glaucoma diagnosis. But even the courts' current view of standard of care is far different than it was at that defining moment in eye care history.,

Conclusions and Relevance: Today, health care professionals typically equate standard of care with best clinical practices, and yet the law specifies a standard of minimal competence when determining standard of care. These competing definitions are, at best, misleading and, at worst, counterproductive. This narrative review examines how medical guidelines are developed, formalized, communicated, and adopted in the United States. It seeks to clarify ophthalmologists' understanding of the related but distinct ideas of standard of care, practice guidelines, and gold standards. Last, this review argues that quality of care must be distinguished from standard of care and outlines how legal definitions of standards of care can set exceedingly low benchmarks, discouraging innovation without reducing frivolous litigation.

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Outcomes of cataract surgery in patients previously treated with orbital radiotherapy

Item Type: Journal Article

Authors: Hind, Jennifer;Jamison, Aaron;Schipani, Stefano;Connolly, Julie;Cauchi, Paul and Chadha, Vikas



Publication Date: 2022

Journal: Journal of Cataract and Refractive Surgery 48(2), pp. 162-167

Abstract:

PURPOSE: To quantify the risks for cataract surgery in patients who have previously undergone external beam radiotherapy (EBRT).,

SETTING: Tertiary ophthalmology and oncology hospital.,

DESIGN: Retrospective case series.,

METHODS: Patients treated with orbital EBRT at the Beatson West of Scotland Cancer Centre between 2001 and 2019 were identified, and clinical records were reviewed to identify those who had subsequently undergone cataract surgery. Preoperative and postoperative case records, and operation records, were reviewed to identify demographic data and data regarding complications and surgical outcomes.,

RESULTS: 46 eyes (of 33 patients) were included. The indications for EBRT included thyroid eye disease, lymphoma, choroidal metastases, and other orbital malignancies. Mean corrected preoperative Snellen visual acuity was 20/100 (range 20/30 to 20/2000) improving to 20/25 (20/12 to 20/160, 1-way analysis of variance $P < .01$). Mean visual gain was 0.5 logMAR (-0.9 to 1.9). There was 1 case of posterior capsule (PC) rupture with vitreous loss (2%). Dense PC plaque was noted intraoperatively in 19.5% ($n = 9$). 13% ($n = 6$) required Nd:YAG laser posterior capsulotomy. There were 6 cases (13%) of cystoid macular edema (CME).,

CONCLUSIONS: Visual outcomes after cataract surgery in this cohort of patients were similar to those obtained in a nationwide cohort. EBRT seemed to be associated with an increased incidence of intraoperative PC plaque, postoperative CME (which in most cases settled with treatment), and need for posterior capsulotomy. Copyright © 2021 Published by Wolters Kluwer on behalf of ASCRS and ESCRS.

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Functional Ophthalmic Factors Associated With Extreme Prematurity in Young Adults

Item Type: Journal Article

Authors: Jain, Saurabh;Sim, Peng Yong;Beckmann, Joanne;Ni, Yanyan;Uddin, Nabil;Unwin, Bronia and Marlow, Neil

Publication Date: 2022

Journal: JAMA Network Open 5(1), pp. e2145702

Abstract:

Importance: Children born preterm (<37 weeks' gestation) have a higher risk of visual impairment and ocular morbidities compared peers born at full term. However, the long-term ocular sequelae in adulthood for those born extremely preterm (EP), who have the highest risk of neonatal retinopathy, are unknown.,

Objective: To evaluate visual function and ocular morbidity in young adults born EP compared with controls born full term.,

Design, Setting, and Participants: This prospective cohort study of a geographically based birth cohort in the UK and Ireland born from March 1 through December 31, 1995, included 128 participants aged 19 years (born at 22-25 weeks' gestation) and 65 age-matched controls born at full term. Statistical analysis was performed from March 1, 2020, to November 26, 2021.,

Exposures: Participants underwent eye examinations as part of a comprehensive outcome evaluation.,

Main Outcomes and Measures: Best-corrected visual acuity, refractive status, contrast sensitivity, color vision, prevalence of strabismus and nystagmus, and patient-reported visual function, measured using the Health Utilities Index Mark 3.,



Results: The study comprised 128 participants (256 eyes; 68 female participants 53%]; mean SD] age, 19.3 0.5] years) and 65 age-matched controls born at full term (130 eyes; 40 female participants 62%]; mean SD] age, 19.2 0.5] years). Compared with control eyes, the mean (SD) best-corrected visual acuity among eyes in the EP group was significantly worse (monocular vision: -0.06 0.14] logMAR in the control group vs 0.14 0.38] logMAR in the EP group; $P < .001$; binocular vision: -0.14 0.15] logMAR in the control group vs 0.06 0.37] logMAR in the EP group; $P < .001$). Participants in the EP group had a significantly higher prevalence of strabismus (36% 46 of 127] vs 0%; $P < .001$), abnormal ocular motility (15% 19 of 125] vs 0%; $P < .001$), and nystagmus (13% 16 of 127] vs 0%; $P < .001$) than the control group. No significant differences between participants in the EP group and controls were observed for refractive error, contrast sensitivity, color vision, or patient-reported visual function. Among the participants in the EP group, 48% of eyes (120 of 250) had no retinopathy of prematurity (ROP), 39% (98 of 250) had ROP not requiring neonatal treatment, and 13% (32 of 250) received cryotherapy or laser ablation for ROP. Within the EP group, there was no significant difference in binocular visual function parameters, prevalence of ocular morbidity, and patient-reported visual function by neonatal ROP status.,

Conclusions and Relevance: Extreme prematurity is associated with an increased prevalence of visual and ocular deficits in young adulthood; this study suggests that, for individuals born EP, visual and ocular deficits appear to be partially independent of ROP status in the neonatal period but reports similar overall visual function.

DOI: <https://libkey.io/https://dx.doi.org/10.1001/jamanetworkopen.2021.45702>

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Oculopharyngeal Muscular Dystrophy Ptosis, Mueller's Muscle Involvement, and a Review of Management Over 34 Years

Item Type: Journal Article

Authors: Jordan, David R.; Klapper, Stephen R. and Farmer, James

Publication Date: 2022

Journal: Ophthalmic Plastic and Reconstructive Surgery

Abstract:

PURPOSE: To review the management of the ptosis associated with oculopharyngeal muscular dystrophy (OPMD) from one author's experience over 34 years, demonstrate Mueller's muscle involvement in this disease, and how this impacts the preferred choice of surgery.,

METHODS: Retrospective, nonrandomized comparative case series. Forty patients with OPMD who underwent primary bilateral ptosis surgery through an anterior eyelid incision and had their Mueller's muscle biopsied (one side) and sent for histopathologic analysis were selected for chart review. The main outcome measure was the presence or absence of dystrophic changes in the biopsied Mueller's muscle., RESULTS: In 29/40 biopsies (72.5%), there were dystrophic changes and fatty infiltration of Mueller's muscle identified histopathologically.,

CONCLUSIONS: Mueller's muscle is involved in the dystrophic process more often than expected contributing to ptosis in the OPMD syndrome. A combined Mueller's-aponeurotic advancement is more effective at elevating the eyelid than simply advancing the aponeurosis when Mueller's is fatty infiltrated at the time of external levator advancement surgery in our experience. Management strategies for ptosis surgery in OPMD are reviewed. The age of onset, levator muscle function, previous ptosis repair, how debilitated the patient is with their disease process systemically, as well as the presence of other eye problems (e.g., dry eye, prior glaucoma filtering procedures, history of corneal surgery, laser refractive procedure) are important clinical considerations in patients with OPMD. Copyright © 2022 by The American Society of Ophthalmic Plastic and Reconstructive Surgery, Inc., All rights reserved.

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A Component or Multiple Components of Bleeding Gums May Ameliorate Both Glaucoma and Alzheimer's Disease

Item Type: Journal Article

Authors: Lehrer, Steven;Rheinstein, Peter H. and Schmeidler, James

Publication Date: 2022

Journal: Cureus 14(1), pp. e21004

Abstract:

BACKGROUND: Although clinical studies have shown an increased prevalence of primary open-angle glaucoma (POAG) in patients with Alzheimer's disease (AD), a population-based epidemiologic study from Denmark found no increased risk of Alzheimer's disease in patients with glaucoma, and other studies have failed to demonstrate a link. However, a possible relationship between POAG and AD might manifest in their association with oral pathology. Dental caries, periodontal disease, stomatitis, and the related inflammatory burden increase AD risk, while oral pathology and the oral microbiome correlate with POAG vulnerability. To further examine the relationship, we analyzed POAG, AD, and oral disease in the UK Biobank (UKBB) cohort.,

METHODS: Our analysis included all subjects with POAG and AD. POAG diagnosis was ascertained using the 10th Revision of the International Classification of Diseases (ICD-10), H40.11. AD diagnosis was ascertained using the 10th Revision of the International Classification of Diseases (ICD-10), G30. Oral cavity, ulceration, stomatitis, periodontitis, teeth, and dental problems were in UKBB data field 6149.,

RESULTS: A "yes" answer to a question about bleeding gums is associated with a greater proportional POAG reduction (24.2%) than a "yes" answer to having none of the six listed problems (6.3%). Similarly, bleeding gums were associated with a greater proportional AD reduction (46.2% versus 16.9%). Logistic regression controlling for age and sex showed that bleeding gums (no/yes) were negatively associated with AD (odds ratio (OR) = 0.713, 95% confidence interval (CI) = 0.521-0.976, p = 0.035). Age-weighted least-squares linear regression showed that the lower corneal-compensated intraocular pressure (IOP) in the left eye was associated with bleeding gums (unstandardized regression coefficient = -0.174, p < 0.001), controlling for type 2 diabetes and past smoking.,

CONCLUSION: It is difficult to predict what component or components of periodontal inflammation might be ameliorating POAG and AD. Prostaglandin is a possibility. Identification of the component or components could lead to new treatments for POAG and AD. Further studies are warranted. Copyright © 2022, Lehrer et al.

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Long-term outcomes in Primary congenital glaucoma, aniridia and anterior segment dysgenesis

Item Type: Journal Article

Authors: Magan, Tejal;Tanner, Alexander;Fajardo-Sanchez, Julia;Lim, Kin Sheng;Goyal, Saurabh;Rodrigues, Ian;Amaya, Luis;Tripathi, Sameer;Kulkarni, Avinash;Hammond, Christopher;Lascazatos, Gerassimos and Yu-Wai-Man, Cynthia

Publication Date: 2022

Journal: European Journal of Ophthalmology , pp. 11206721211073208

Abstract:



AIM: To determine the long-term outcomes of a cohort of complex patients with primary congenital glaucoma, aniridia and anterior segment dysgenesis.,

METHODS: Retrospective consecutive series between 1990-2021 in two UK tertiary centres: Guy's and St Thomas' NHS Foundation Trust and King's College Hospital NHS Foundation Trust. We recorded the number and types of surgical and laser treatments along with preoperative and postoperative data, including intraocular pressures (IOP) and anti-glaucoma medications.,

RESULTS: A total of 41 eyes of 21 patients were included. Primary diagnoses were primary congenital glaucoma in 16 eyes (39.0%), aniridia in 14 eyes (34.2%), and anterior segment dysgenesis in 8 eyes (19.5%). Sixteen eyes (39.0%) had one or more glaucoma surgery or laser procedures for advanced glaucoma, and the long-term follow-up was 12.8 +/- 3.6 years. There was a significant decrease in postoperative IOP (mmHg) at 3 months (16.5 +/- 1.6; p = 0.0067), 6 months (18.7 +/- 2.1; p = 0.0386), 12 months (18.6 +/- 1.7; p = 0.0229), 3 years (14.7 +/- 1.2; p = 0.0126), 5 years (15.5 +/- 1.8; p = 0.0330) and 10 years (15.4 +/- 2.3; p = 0.7780), compared to preoperatively (24.1 +/- 2.6). Surgical success (complete and qualified) was 62.5%, 50.0%, 43.8%, 46.2%, 45.5% and 28.6% at 3 months, 6 months, 12 months, 3 years, 5 years and 10 years, respectively. There was no significant change in the number of anti-glaucoma drugs postoperatively (p > 0.05). Four eyes (25.0%) had postoperative complications (hyphaema, hypotony) that resolved after conservative management.,

CONCLUSIONS: Surgical management of these complex eyes with advanced glaucoma is challenging. Overall, the cohort had good surgical outcomes with a significant decrease in IOP by 36.1% after long-term follow-up.

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10. Current trends in gene therapy for retinal diseases (Review)

Item Type: Journal Article

Authors: Moraru, Andreea Dana;Costin, Danut;Iorga, Raluca Eugenia;Munteanu, Mihnea;Moraru, Radu Lucian and Branisteanu, Daniel Constantin

Publication Date: 2022

Journal: Experimental and Therapeutic Medicine 23(1), pp. 26

Abstract: The eye is considered an effective target for genetic therapy, as it has a privileged immune status, it is easily accessed for medication delivery and it is affected by a number of inherited disorders. In particular, the retina is considered for gene therapy due to the fact that it can be visualized with ease, it does not have lymphatic vessels, nor a direct blood network for the outer layers and its cells do not divide after birth, and thus transgene expression is not affected. As gene therapy is currently on a continuously progressive development trend, this emerging field of gene manipulation techniques has yielded promising results. This involves the development of treatments for a number of debilitating and blinding diseases, which were to date considered intractable. However, numerous unanswered questions remain as regards the long-term efficacy and safety profile of these treatments. The present review article discusses the current research status regarding genetic manipulation techniques aimed at addressing visual impairment related to retinal disorders, both inherited and degenerative. Copyright: © Moraru et al.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=pmnm&NEWS=N&AN=34815778>

11. Topical Review: An Update of Diagnostic and Management Algorithms for Acquired Blepharoptosis

Item Type: Journal Article



Authors: Nichols, Kelly K.;Malloy, Kelly A.;Karpecki, Paul M.;Bacharach, Jason;Douglas, Raymond S.;Foster, Shane;Gromacki, Susan J. and Whitley, Walter O.

Publication Date: 2022

Journal: Optometry and Vision Science : Official Publication of the American Academy of Optometry

Abstract: SIGNIFICANCE: Acquired ptosis is a condition of the upper eyelid that has negative cosmetic and functional effects, but is likely underdiagnosed and undertreated. Given the evolving understanding of the condition and expanding therapeutic options, this review re-appraised published evidence and clinical experience regarding diagnosis and treatment of acquired ptosis. The authors met over two structured virtual working sessions to review current evidence and develop timely recommendations for acquired ptosis identification, differential diagnosis, characterization, and treatment selection. Diagnostic algorithms, plus management and referral guidelines, are presented. Eyelid evaluation, and when needed, ptosis diagnostic workup, is essential in the comprehensive eye examination. Acquired ptosis can be efficiently identified via patient questionnaire, history, and photo review combined with assessment of eyelid position and symmetry using established methods. When ptosis is present, it is essential to evaluate onset, symptoms, pupil diameter, and extraocular muscle function to identify or rule out serious underlying conditions. If signs of serious underlying etiology are present, immediate referral/follow-up testing is required. After ruling out serious underlying causes, masquerade conditions, and pseudoptosis, pharmacologic or surgical treatment should be selected based on the clinical evidence. Effectively managing acquired ptosis requires practice-wide commitment to thorough eyelid evaluation, accurate diagnosis, and adoption of new treatment modalities. Aided by evolving pharmacologic therapeutic options, shifting from a 'detect and refer' to a 'diagnose and manage' approach can support identification and treatment of more patients with acquired ptosis, particularly mild-to-moderate cases. Copyright © 2022 American Academy of Optometry.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=35058403>

12. Clinical features of endophthalmitis clusters after cataract surgery and practical recommendations to mitigate risk: systematic review

Item Type: Journal Article

Authors: Park, Jeff;Popovic, Marko M.;Balas, Michael;El-Defrawy, Sherif;Alaei, Ravin and Kertes, Peter J.

Publication Date: 2022

Journal: Journal of Cataract and Refractive Surgery 48(1), pp. 100-112

Abstract: Intraocular transmission of exogenous pathogens in cataract surgery can lead to endophthalmitis. This review evaluates the features of endophthalmitis clusters secondary to pathogen transmission in cataract surgery. Articles reporting on pathogen transmission in cataract surgery were identified via searches of Ovid MEDLINE, EMBASE, and Cochrane CENTRAL, and a total of 268 eyes from 24 studies were included. The most common source of infectious transmission was attributed to a contaminated intraocular solution (ie, irrigation solution, viscoelastic, or diluted antibiotic; n = 10). Visual acuity at presentation with infectious features was 1.89 logMAR (range: 1.35 to 2.58; ~counting fingers) and 1.33 logMAR (range: 0.04 to 3.00; Snellen: ~20/430) at last follow-up. Patients with diabetes had worse outcomes compared with patients without diabetes. The most frequently isolated pathogen from the infectious sources was Pseudomonas sp. (50.0%). This review highlights the various routes of pathogen transmission during cataract surgery and summarizes recommendations for the detection, prevention, and management of endophthalmitis clusters. Copyright © 2021 Published by Wolters Kluwer on behalf of ASCRS and ESCRS.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=34538777>

13. A One-Week Course of Levofloxacin/Dexamethasone Eye Drops: A Review on a New Approach in Managing Patients After Cataract Surgery

Item Type: Journal Article

Authors: Rizzo, Stanislao;Gambini, Gloria;De Vico, Umberto;Rizzo, Clara and Kilian, Raphael

Publication Date: 2022

Journal: Ophthalmology and Therapy 11(1), pp. 101-111

Abstract: A new fixed-dose combination of dexamethasone and levofloxacin eye drops has recently been approved for the prevention and treatment of inflammation, and the prevention of infection associated with cataract surgery in adults. This combination has been developed to respond to a series of unmet needs in the practical management of patients undergoing cataract surgery. Namely, despite updated guidelines, many ophthalmologists employ protocols mainly based on their personal experience. As a result, the choice of drugs, treatment duration, and drug association is not evidence-based medicine (EBM)-oriented. In addition, antibiotic resistance may occur since antibiotics are used for an extended length of time, even with tapering. Corticosteroids are also prescribed for prolonged periods, frequently without follow-up. Therefore, patient adherence to postsurgical self-care is low, and mainly affects older patients who are the majority undergoing cataract surgery. In both rabbit and human trials, it has been demonstrated that both active ingredients penetrate the ocular system without pharmacokinetic interaction between the two. The concentrations of both ingredients in aqueous humor after their ocular instillation are high enough at the site of action to carry out their expected potent anti-inflammatory and antibiotic activity. Tested in a pivotal study aimed at investigating efficacy and safety of the intended indication, the mixture/compound was non-inferior to a 2-week treatment with dexamethasone/tobramycin in preventing or reducing inflammation and in preventing infection when administered for 1 week, followed by the administration of dexamethasone alone for another week. The outcomes obtained by this study suggest that a 1-week course of levofloxacin/dexamethasone eye drops is sufficient to resolve inflammation and prevent infection in patients undergoing cataract surgery. In addition, this study underlines that a follow-up visit after 1 week allows for a decision about whether to stop or continue a treatment in patients still experiencing symptoms or inflammation. In conclusion, this new dose combination could represent a turning point in managing patients after cataract surgery, while mostly avoiding antibiotic resistance and improving treatment adherence. Copyright © 2021. The Author(s).

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=pmnm&NEWS=N&AN=34936061>

14. An updated review about perceptual learning as a treatment for amblyopia

Item Type: Journal Article

Authors: Rodan, Antonio;Candela Marroquin, Elena and Jara Garcia, Laura,C.

Publication Date: 2022

Journal: Journal of Optometry 15(1), pp. 3-34

Abstract: The purpose of our work is to do an update of recent investigations about amblyopia treatment based on perceptual learning, dichoptic training and videogames. Therefore, we conducted a search of the studies published about this subject in the last six years. The review shows that the investigations during that period have used several



kinds of treatments regarding their design (e.g., type of stimulus and context used, duration of the training), and in a wider range of age that also include adults. Most of the studies have found an improvement in some mono and binocular visual functions, such as visual acuity, contrast sensitivity and stereopsis, which for now, it seems advisable that these processes could be used, as an alternative or a complement of the traditional passive therapy. Nevertheless, it would be plausible to conduct additional, controlled and random, clinical trials in order to discover in a more deeply way which perceptive learning method of treatment is more effective for the improvement of visual functions and for how long the effects of the treatment could persist. Copyright © 2020 Spanish General Council of Optometry. Published by Elsevier Espana, S.L.U. All rights reserved.

DOI: <https://libkey.io/https://dx.doi.org/10.1016/j.optom.2020.08.002>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=33243673>

15. Alcohol, intraocular pressure and open-angle glaucoma: A systematic review and meta-analysis

Item Type: Journal Article

Authors: Stuart, Kelsey V.;Madjedi, Kian;Luben, Robert N.;Chua, Sharon Y. L.;Warwick, Alasdair N.;Chia, Mark;Pasquale, Louis R.;Wiggs, Janey L.;Kang, Jae H.;Hysi, Pirro G.;Tran, Jessica H.;Foster, Paul J.;Khawaja, Anthony P. and Modifiable Risk Factors for, Glaucoma Collaboration

Publication Date: 2022

Journal: Ophthalmology

Abstract:

TOPIC: This systematic review and meta-analysis summarizes the existing evidence for the association of alcohol use with intraocular pressure (IOP) and open-angle glaucoma (OAG).,

CLINICAL RELEVANCE: Understanding and quantifying these associations may aid clinical guidelines or treatment strategies and shed light on disease pathogenesis. The role of alcohol, a modifiable factor, in determining IOP and OAG risk may also be of interest from an individual or public health perspective.,

METHODS: The study protocol was pre-registered in the Open Science Framework Registries

(<https://osf.io/z7yeg>). Eligible articles (as of 14 May 2021) from three databases (PubMed, Embase, Scopus) were independently screened and quality assessed by two reviewers. All case-control, cross-sectional and cohort studies reporting a quantitative effect estimate and 95% confidence interval (CI) for the association between alcohol use and either IOP or OAG were included. The evidence for the associations with both IOP and OAG were qualitatively summarized. Effect estimates for the association with OAG were pooled using random effects meta-analysis. Studies not meeting formal inclusion criteria for systematic review, but with pertinent results, were also appraised and discussed. Certainty of evidence was assessed using the GRADE framework.,

RESULTS: Thirty four studies were included in the systematic review. Evidence from 10 studies reporting an association with IOP suggest that habitual alcohol use is associated with higher IOP and prevalence of ocular hypertension (IOP >21mmHg), although absolute effect sizes were small. Eleven of 26 studies, comprising 173 058 participants, that tested for an association with OAG met inclusion criteria for meta-analysis. Pooled effect estimates indicated a positive association between any use of alcohol and OAG (1.18; 95% CI, 1.02-1.36; p=0.03; I²=40.5%), with similar estimates for both prevalent and incident OAG. The overall GRADE certainty of evidence was very low.,

CONCLUSION: While this meta-analysis suggests a harmful association between alcohol use and OAG, our results should be interpreted cautiously given the weakness and heterogeneity of the underlying evidence base, the small absolute effect size and the borderline statistical significance. Nonetheless, these findings may be clinically relevant and future research should focus on improving the quality of evidence. Copyright © 2022. Published by Elsevier Inc.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=35101531>



16. Confidence of UK Ophthalmology Registrars in Managing Posterior Capsular Rupture: Results from a National Trainee Survey

Item Type: Journal Article

Authors: Swampillai, A. J.;Nowak, V. A.;Maubon, L.;Neffendorf, J. E.;Sahota, D.;Williams, O.;Lakhani, B.;Soare, C.;Sychev, I.;Ridyard, E.;Patel, P. J.;Park, J. C.;Abbas, S.;Abdalla, Y.;Abdel-Hay, A.;Aggarwal, K.;Agorogiannis, E.;Ah-See, K. L. W.;Ahmed, M.;Ahmed, S., et al

Publication Date: 2022

Journal: Ophthalmology and Therapy 11(1), pp. 225-237

Abstract:

Introduction: To establish the level of confidence amongst UK ophthalmology specialist registrars (residents) in managing posterior capsule rupture (PCR) during cataract surgery.

Method(s): An online nine-item questionnaire was distributed to all registrars, recruited nationwide via regional representatives. Data collected included stage of training, number of completed cataract operations, cumulative PCR rate, number of PCRs independently managed, understanding of vitrectomy settings and fluidic parameters and access to simulation. Respondents self-evaluated their confidence in managing PCR with vitreous loss.

Result(s): Complete responses were obtained from 248 registrars (35% response rate). Mean number of phacoemulsification procedures performed was 386. For senior registrars (OST 6-7), 35 out of 70 (50%) felt confident to manage PCR independently and 55 out of 70 (78.6%) were either quite confident or very confident at deciding when to implant an intraocular lens during PCR management. Lower confidence levels were noted for junior trainees (OST 1-2). Over 65% of survey respondents had access to relevant simulation.

Conclusion(s): Our results represent the largest UK survey analysing the confidence of PCR management amongst registrars. Confidence improves with duration of training and increased exposure to management of PCR. However, 50% of senior registrars still lacked confidence to independently manage PCR and vitreous loss. A specific competency-based framework, potentially using a simulator or simulating a PCR event, incorporated into the curriculum may be desirable. Copyright © 2021, The Author(s).

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URL: <http://www.springer.com/springer+healthcare/journal/40123> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emexb&NEWS=N&AN=2014258244>

17. Confidence of UK Ophthalmology Registrars in Managing Posterior Capsular Rupture: Results from a National Trainee Survey

Item Type: Journal Article

Authors: Swampillai, Andrew J.;Nowak, Victoria A.;Maubon, Laura;Neffendorf, James E.;Sahota, Dilraj;Williams, Olayinka;Lakhani, Bansri;Soare, Cristina;Sychev, Ivan;Ridyard, Edward;Patel, Praveen J.;Park, Jonathan C. and Ophthalmology Trainee Clinical, Research Network

Publication Date: 2022

Journal: Ophthalmology and Therapy 11(1), pp. 225-237

Abstract:

INTRODUCTION: To establish the level of confidence amongst UK ophthalmology specialist registrars (residents) in managing posterior capsule rupture (PCR) during cataract surgery.,



METHODS: An online nine-item questionnaire was distributed to all registrars, recruited nationwide via regional representatives. Data collected included stage of training, number of completed cataract operations, cumulative PCR rate, number of PCRs independently managed, understanding of vitrectomy settings and fluidic parameters and access to simulation. Respondents self-evaluated their confidence in managing PCR with vitreous loss.,
RESULTS: Complete responses were obtained from 248 registrars (35% response rate). Mean number of phacoemulsification procedures performed was 386. For senior registrars (OST 6-7), 35 out of 70 (50%) felt confident to manage PCR independently and 55 out of 70 (78.6%) were either quite confident or very confident at deciding when to implant an intraocular lens during PCR management. Lower confidence levels were noted for junior trainees (OST 1-2). Over 65% of survey respondents had access to relevant simulation.,
CONCLUSIONS: Our results represent the largest UK survey analysing the confidence of PCR management amongst registrars. Confidence improves with duration of training and increased exposure to management of PCR. However, 50% of senior registrars still lacked confidence to independently manage PCR and vitreous loss. A specific competency-based framework, potentially using a simulator or simulating a PCR event, incorporated into the curriculum may be desirable. Copyright © 2021. The Author(s).

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=pnm&NEWS=N&AN=34799828>

18. A prospective evaluation of the clinical safety and effectiveness of a COVID-19 Urgent Eyecare Service across five areas in England

Item Type: Journal Article

Authors: Swystun, Alexander G. and Davey, Christopher J.

Publication Date: 2022

Journal: Ophthalmic & Physiological Optics : The Journal of the British College of Ophthalmic Opticians (Optometrists) 42(1), pp. 94-109

Abstract:

PURPOSE: Although urgent primary eye care schemes exist in some areas of England, their current safety is unknown. Accordingly, the aim of the present study was to quantify the clinical safety and effectiveness of a COVID-19 Urgent Eyecare Service (CUES) across Luton, Bedford, Hull, East Riding of Yorkshire and Harrogate.,
METHODS: Consenting patients with acute onset eye problems who had accessed the service were contacted to ascertain what the optometrist's recommendation was, whether this worked, if they had to present elsewhere and how satisfied they were with the CUES.,

RESULTS: A total of 27% (170/629) and 6.3% (28/445) of patients managed virtually and in person, respectively, did not have their acute eye problem resolved. Regression analysis revealed that patients who attended a face-to-face consultation were 4.66 times more likely to be correctly managed $Exp(\beta) = 5.66$, relative to those solely managed virtually. Optometrists' phone consultations failed to detect conditions such as stroke, intracranial hypertension, suspected space occupying lesions, orbital cellulitis, scleritis, corneal ulcer, wet macular degeneration, uveitis with macular oedema and retinal detachment. Of referrals to hospital ophthalmology departments, in total, 19% were false-positives. Patients, however, were typically very satisfied with the service. Uptake was associated with socioeconomic status.,

CONCLUSION: The present study found that a virtual assessment service providing optometrist tele-consultations was not effective at resolving patients' acute-onset eye problems. The range and number of pathologies missed by tele-consultations suggests that the service model in the present study was detrimental to patient safety. To improve this, optometrists should follow evidence based guidance when attempting to manage patients virtually, or in person. For example, patients presenting with acute-onset symptoms of flashing lights and/or floaters require an urgent dilated fundus examination. Robust data collection on service safety is required on an ongoing basis.
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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med19&NEWS=N&AN=34761424>

19. Standalone XEN45 Gel Stent implantation in the treatment of open- angle Glaucoma: A systematic review and meta-analysis

Item Type: Journal Article

Authors: Yang, Lim Sheng;Kaijun, Betzler Bjorn;Leonard, Yip Wei Leon;Syril, Dorairaj and Hou, Ang Bryan Chin

Publication Date: 2022

Journal: Survey of Ophthalmology

Abstract: The XEN45 Gel Stent (Allergan Inc., Irvine, CA, USA) allows the drainage of aqueous into the sub-conjunctival space, through a minimally-invasive approach. This systematic review and meta-analysis evaluates its intraocular pressure (IOP)-lowering efficacy and complications in the treatment of open-angle glaucoma. 14 studies comprising 963 eyes were included. IOP decreased significantly ($p < 0.001$) across all timepoints (1 day, 1 week, 1, 3, 6, 12, 18 and 24 months) with a mean decrease of 7.44mmHg (95%CI:4.91-9.97) at 24 months. IOP-lowering medications decreased significantly ($p < 0.001$) across all timepoints (1 week, 1, 3, 6, 12, 18, 24 months) with a mean reduction of 1.67 medications (95%CI:1.28-2.06) at 24 months. Numerical hypotony occurred in 39% (95%CI:14-67%) and stent exposure in 1% (95%CI:0-2%) of eyes. 38% (95%CI:30-46%) of eyes required at least one post-operative needling, with an average of 0.6 (95%CI:0.37-0.81) needlings per eye. Standalone XEN45 Gel Stent implantation is effective in lowering IOP in open-angle glaucoma. Transient numerical hypotony is the most common post-operative complication. Sight-threatening complications are rare. Post-operative needling may be required to maintain IOP-lowering outcomes. However, the overall quality of current evidence is low, with the need for more randomized controlled trials and outcomes measured with a clinically meaningful definition of success. Copyright © 2022. Published by Elsevier Inc.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=35081414>

20. Transient cortical blindness secondary to hepatic encephalopathy in a pediatric patient: A case report and literature review

Item Type: Journal Article

Authors: Ain-Nasyrah, A. S.;Majid, N. A. and Shatriah, I.

Publication Date: 2021

Journal: Taiwan Journal of Ophthalmology 11(4), pp. 413-416

Abstract: Cortical blindness, also known as cerebral visual impairment, may occur in pediatric patients. Hepatic encephalopathy is a rare cause of cortical blindness in children. This report describes a girl with underlying type 1 autoimmune hepatitis, who complained of sudden-onset, painless visual loss in both eyes, which was associated with generalized headache and altered mental status. She was treated with intravenous antibiotics and syrup lactulose. The patient regained full visual recovery after 1 week. Prompt diagnosis and treatment are mandatory in such uncommon instances. Copyright © 2021 Wolters Kluwer Medknow Publications. All rights reserved.

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URL: <http://www.e-tjo.org/> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=636771299>

21. Hearing and vision care provided to older people residing in care homes: a cross-sectional survey of care home staff

Item Type: Journal Article

Authors: Andrusjak, W.;Barbosa, A. and Mountain, G.

Publication Date: 2021

Journal: BMC Geriatrics 21(1), pp. 32

Abstract: Background: Hearing and vision loss in older people has been proven to affect physical and mental health and increase the speed of cognitive decline. Studies have demonstrated that certain practices and improved staff knowledge increase the effective care of residents' ears and eyes, yet it is not known which practices are being implemented in care homes. This study aimed to identify the gaps in staff knowledge regarding hearing and vision difficulties in older residents, and which practices known to improve ear and eye care in older care home residents are not commonly implemented in care homes in England. Method(s): This study used a cross-sectional survey design. Survey questions were informed by the existing literature and were focused on practices, staff knowledge, and other aspects that have shown to affect residents' hearing and vision care. A convenience sample of care home staff were recruited from care homes across England between November 2018 and February 2019 via email and in paper format. Descriptive statistics and Chi-Square analysis were applied to identify the factors influencing the care being provided to care home residents. Result(s): A total of 400 care home staff responded from 74 care homes. The results revealed that less than half of staff respondents reported to use screening tools to identify hearing (46%) and vision impairments (43.8%); that care homes rarely have access to other assistive devices for hearing (16%) and vision loss (23.8%), and that audiology services do not regularly assess care home residents (46.8%). A majority of staff who responded were not confident in ear and eye care. Responses were found to be influenced by the respondents' job role, length of time working in care homes and also the care home type. Findings confirmed a lack of standardised practice and the importance of shared communication for promulgation of best practice. Conclusion(s): This study has identified that some practices known to facilitate ear and eye care are not commonly applied in a sample of English care homes. It has also shown that care home staff knowledge of ear and eye care is inconsistent. The information derived from this survey can be used to inform guidelines for best practice and inform needs for future research. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1186/s12877-020-01959-0>

URL: <http://www.biomedcentral.com/bmcgeriatr/> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2010141457>

22. A review of acquired blepharoptosis: prevalence, diagnosis, and current treatment options

Item Type: Journal Article

Authors: Bacharach, J.;Lee, W. W.;Harrison, A. R. and Freddo, T. F.

Publication Date: 2021

Journal: Eye (Basingstoke) 35(9), pp. 2468-2481

Abstract: Blepharoptosis (ptosis) is among the most common disorders of the upper eyelid encountered in both



optometric and ophthalmic practice. The unilateral or bilateral drooping of the upper eyelid that characterises ptosis can affect appearance and impair visual function, both of which can negatively impact quality of life. While there are several known forms of congenital ptosis, acquired ptosis (appearing later in life, due to a variety of causes) is the predominant form of the condition. This review summarises the prevalence, causes, identification, differential diagnosis, and treatment of acquired ptosis. Particular attention is paid to the differential diagnosis of acquired ptosis and emerging treatment options, including surgical and pharmacologic approaches. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41433-021-01547-5>

URL: <http://www.nature.com/eye/index.html> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2011329263>

23. A Narrative Review of Current Understanding and Classification of Dry Eye Disease with New Insights on the Impact of Dry Eye during the COVID-19 Pandemic

Item Type: Journal Article

Authors: Barabino, S.

Publication Date: 2021

Journal: Ophthalmology and Therapy 10(3), pp. 495-507

Abstract: Dry eye disease (DED) is a complex, progressive and multifactorial condition that is commonly seen in clinical practice and can be challenging to accurately diagnose. Untreated or suboptimally managed dry eye can progress to severe, chronic disease which may become resistant to treatment. Symptoms include ocular irritation and visual impairment. Patients frequently report negative consequences regarding quality of life (QoL), productivity and psychological wellbeing. Certain lifestyle factors (e.g. use of screen-based devices, air conditioning) can induce or exacerbate symptoms of DED, leading to progressive and debilitating complications. Exposures to such triggers are likely to have increased significantly during the ongoing COVID-19 pandemic with people across the globe living with heightened levels of stress/anxiety while being forced to adapt most aspects of their daily lives (from work and education through to social activities) to accommodate social distancing, primarily through the use digital technologies. This review aims to provide a concise and practical overview of current understanding regarding DED, highlighting proposals for refined diagnostic categories and therapeutic terminologies that are designed to improve identification and management of dry eye as well as reduce or slow disease progression. Finally, the findings of a European survey are shared to illustrate the impact of the COVID-19 pandemic on the lives of people with DED. The survey was conducted during the first lockdown period (March-September 2020) and explored issues relating to psychological wellbeing, QoL and engagement with healthcare services. The results demonstrate the ways in which the pandemic amplified the impact of dry eye on daily life and may be valuable in enhancing understanding among clinicians of the challenges faced by people with DED, which extend beyond the signs and symptoms of disease. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1007/s40123-021-00373-y>

URL: <http://www.springer.com/springer+healthcare/journal/40123> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2013175891>

24. Experience of orbital floor fractures in a UK level one trauma centre: a focus on the surgical approach and lid-related complications

Item Type: Journal Article



Authors: Borghol, Khaled;Turton, Natalie and Sharp, Ian

Publication Date: 2021

Journal: The British Journal of Oral & Maxillofacial Surgery

Abstract: The two surgical approaches to access orbital fractures are transconjunctival and transcutaneous. The aim of this study was to assess the outcomes of orbital repairs with a focus on lid-related complications and their management. A retrospective analysis was carried out over a five-year period (January 2015 to January 2020) to assess all consecutive orbital repairs in our unit. Data were collected for variables including demographics, fracture pattern, surgical approach, and details of postoperative complications. A total of 111 patients were included in the study, 94 were male (85%), the majority being between 16 and 45 years of age. A total of 46 (41%) had isolated orbital floor fractures, 31 (28%) zygomaticomaxillary complex, and 18 (16%) Le Fort pattern fractures. Eighty per cent (n = 91) received a transconjunctival approach as first choice. In the transconjunctival group, six (6.6%) had entropion and increased scleral show, four (4.4%) had ectropion, and none had canthal malposition. In the transcutaneous group (n = 20) there was a higher rate of ectropion (25%, n = 5), a lower rate of entropion (n = 1, 5%) and higher rate of increased scleral show (n = 2, 10%). Factors associated with a higher rate of complications included complex fractures, use of conjunctival sutures, and increased length of time to surgery. Seventy-two per cent of patients who suffered entropion required further surgical treatment. The most common complication of the transconjunctival approach was entropion, and clinicians should have a low threshold for early surgical management. We feel that this should be part of the consenting process, especially in high-risk cases. Crown Copyright © 2021. Published by Elsevier Ltd. All rights reserved.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34952743>

25. Effects of anti-inflammatory treatment on efficacy of selective laser trabeculoplasty: a systematic review and meta-analysis

Item Type: Journal Article

Authors: Chen, Yu-Sheng;Hung, Hai-Ting;Guo, Siao-Pei and Chang, Hua-Ching

Publication Date: 2021

Journal: Expert Review of Clinical Pharmacology , pp. 1-8

Abstract:

BACKGROUND: Selective laser trabeculoplasty (SLT) can evidently reduce intraocular pressure (IOP) in cases of open-angle glaucoma. Several studies have investigated the effectiveness of anti-inflammatory treatment to relieve discomfort after SLT, but whether such treatments affect the response of SLT remains uncertain.,
METHODS: We systematically searched PubMed, Embase, Web of Science, and Cochrane Library for relevant studies published before 31 March 2021. The major outcomes were the efficacy of post-SLT anti-inflammatory treatment on IOP reduction, incidence of discomfort, and anterior chamber inflammation compared with those of placebo agents.,
RESULTS: Five randomized controlled trials with 235 eyes receiving anti-inflammatory treatment and 170 eyes receiving placebo agents were included in the meta-analysis. Compared with placebo, no significant differences were present in IOP reduction effects upon using topical non-steroidal anti-inflammatory drugs or steroid post-SLT. The results were consistent from 1 to 6 months during follow-up. Furthermore, anti-inflammatory treatment had no significant effects on pain or discomfort or the presence of anterior chamber cells 1 h to 1 week post-SLT.,
CONCLUSION: Topical anti-inflammatory treatment after SLT for patients with glaucoma neither significantly affected IOP reduction nor remarkably relieved clinical discomfort and anterior chamber inflammation. Hence, regular use of post-SLT anti-inflammatory treatment may be unnecessary.



DOI: <https://libkey.io/https://dx.doi.org/10.1080/17512433.2021.1981860>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34524035>

26. Natural and iatrogenic ocular manifestations of rheumatoid arthritis: a systematic review

Item Type: Journal Article

Authors: Dammacco, Rosanna;Guerriero, Silvana;Alessio, Giovanni and Dammacco, Franco

Publication Date: 2021

Journal: International Ophthalmology

Abstract:

PURPOSE: To provide an overview of the ocular features of rheumatoid arthritis (RA) and of the ophthalmic adverse drug reactions (ADRs) that may be associated with the administration of antirheumatic drugs., **METHODS:** A systematic literature search was performed using the PubMed, MEDLINE, and EMBASE databases. In addition, a cohort of 489 RA patients who attended the Authors' departments were examined., **RESULTS:** Keratoconjunctivitis sicca, episcleritis, scleritis, peripheral ulcerative keratitis (PUK), and anterior uveitis were diagnosed in 29%, 6%, 5%, 2%, and 10%, respectively, of the mentioned cohort. Ocular ADRs to non-steroidal anti-inflammatory drugs are rarely reported and include subconjunctival hemorrhages and hemorrhagic retinopathy. In patients taking indomethacin, whorl-like corneal deposits and pigmentary retinopathy have been observed. Glucocorticoids are frequently responsible for posterior subcapsular cataracts and open-angle glaucoma. Methotrexate, the prototype of disease-modifying antirheumatic drugs (DMARDs), has been associated with the onset of ischemic optic neuropathy, retinal cotton-wool spots, and orbital non-Hodgkin's lymphoma. Mild cystoid macular edema and punctate keratitis in patients treated with leflunomide have been occasionally reported. The most frequently occurring ADR of hydroxychloroquine is vortex keratopathy, which may progress to "bull's eye" maculopathy. Patients taking tofacitinib, a synthetic DMARD, more frequently suffer herpes zoster virus (HZV) reactivation, including ophthalmic HZ. Tumor necrosis factor inhibitors have been associated with the paradoxical onset or recurrence of uveitis or sarcoidosis, as well as optic neuritis, demyelinating optic neuropathy, chiasmopathy, and oculomotor palsy. Recurrent episodes of PUK, multiple cotton-wool spots, and retinal hemorrhages have occasionally been reported in patients given tocilizumab, that may also be associated with HZV reactivation, possibly involving the eye. Finally, rituximab, an anti-CD20 monoclonal antibody, has rarely been associated with necrotizing scleritis, macular edema, and visual impairment.,

CONCLUSION: The level of evidence for most of the drug reactions described herein is restricted to the "likely" or "possible" rather than to the "certain" category. However, the lack of biomarkers indicative of the potential risk of ocular ADRs hinders their prevention and emphasizes the need for an accurate risk vs. benefit assessment of these therapies for each patient. Copyright © 2021. The Author(s).

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34802085>

27. Hearing and vision health for people with dementia in residential long term care: Knowledge, attitudes and practice in England, South Korea, India, Greece, Indonesia and Australia

Item Type: Journal Article

Authors: Dawes, P.;Leroi, I.;Chauhan, N.;Han, W.;Harbishettar, V.;Jayakody, D. M. P.;Jones, L.;Konstantinou, A.;Maharani, A.;Martini, A.;Politis, A.;Prabhakar, S.;Prew, S.;Prouskas, C.;Russell, G.;Sturrock, A.;Sunarti, S.;Taylor, J.;Vorvolakos, T. and Worthington, M.

Publication Date: 2021



Abstract:

Objectives: Up to 90% of people with dementia in long term care (LTC) have hearing and/or vision impairment. Hearing/vision difficulties are frequently under-recognised or incompletely managed. The impacts of hearing/vision impairment include more rapid cognitive decline, behavioural disturbances, reduced quality of life, and greater care burden. This research investigated LTC staff knowledge, attitudes and practice regarding hearing/vision care needs for residents with dementia.

Method(s): A survey of staff in LTC facilities in England, South Korea, India, Greece, Indonesia and Australia.

Respondents used a five-point scale to indicate agreement or YES/NO response to questions regarding sensory-cognitive care knowledge (what is known); attitudes (what is thought); practice (what is done).

Result(s): Respondents reported high awareness of hearing/vision care needs, although awareness of how to identify hearing/vision difficulties or refer for assessment was low. Most felt that residents were not able to use hearing/vision devices effectively due to poor fit, being poorly tolerated or lost or broken devices. A substantial minority of respondents reported low confidence in supporting use of assistive hearing/vision devices, with lack of training the main reason. Most staff did not undertake routine checking of hearing/vision devices, and it was rare for facilities to have designated staff responsible for sensory needs. Variation among countries was not significant after accounting for staff experience and having received dementia training.

Conclusion(s): There is a need to improve sensory support for people with dementia in LTC facilities internationally. Practice guidelines and training to enhance sensory-cognitive knowledge, attitudes and practice in professional care teams is called for. Copyright © 2021 The Authors. International Journal of Geriatric Psychiatry published by John Wiley & Sons Ltd.

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URL: [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1099-1166](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1166) <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2011414597>

28. Eye protection following cataract surgery: a systematic review

Item Type: Journal Article

Authors: Dhoot, Arjan S.;Popovic, Marko M.;Lee, Soomin;El-Defrawy, Sherif and Schlenker, Matthew B.

Publication Date: 2021

Journal: Canadian Journal of Ophthalmology.Journal Canadien D'Ophtalmologie

Abstract:

BACKGROUND: There is a high variability in the use of postoperative eye protection among ophthalmologists. Postoperative eye protection treatment modalities include an eye shield, an eye patch, an ocular bandage, and instant vision. The aim of this study was to review and compare the evidence on the various options for eye protection.,

METHODS: A systematic literature search was conducted, and original comparative articles that reported on subjective symptoms (e.g., foreign-body sensation, photophobia, tearing, and pain) and postoperative outcomes (e.g., tear film breakup time, best-corrected visual acuity, etc.) after usage of an eye protection method were included.,

RESULTS: Overall, 598 eyes across 8 articles were included. Included studies investigated ocular bandages (n=6), eye patches (n=4), instant vision (n=2), and eye shields (n=1) postoperatively. In 5 studies, patients receiving ocular bandages self-reported symptoms, including pain (n=3), foreign-body sensation (n=4), photophobia (n=3), and tearing (n=3), at a reduced or equivalent rate compared with other treatment modalities. With the ocular bandage, 3 studies reported increased tear film breakup time, and 1 study reported improvements in corneal wound healing compared with a control group. Two studies reported reduced tear film breakup time for the eye patch relative to



the ocular bandage, and another study reported reduced tear film breakup time for instant vision compared with the eye patch.,

CONCLUSIONS: Patient-reported symptoms are acutely reduced for patients receiving an ocular bandage relative to instant vision following cataract surgery. Patients prefer receiving some form of postoperative protection as opposed to instant vision. Copyright © 2021 Canadian Ophthalmological Society. Published by Elsevier Inc. All rights reserved.

DOI: <https://libkey.io/https://dx.doi.org/10.1016/j.jcjo.2021.11.001>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34863675>

29. Ambulatory cataract surgery centre without perioperative anaesthesia care: a prospective cohort study

Item Type: Journal Article

Authors: Duroi, Q.;Baudet, J. -M;Bigoteau, M.;Slim, M.;Pichard, T.;Pisella, P. -J and Khanna, R. K.

Publication Date: 2021

Journal: Scientific Reports 11(1), pp. 8311

Abstract: This study aims to evaluate the safety and patient satisfaction of a fast-track procedure for cataract surgery under topical anaesthesia without perioperative anaesthesia care. This is a prospective single-centre study including all cataract procedures in the Centre Ambulatoire de la Chirurgie de la Cataracte at the Hospital of Bourges between May and August 2018. Procedures were performed under topical anaesthesia without the presence of a nurse anaesthesiologist or anaesthesiologist, the patient had not fasted, and no peripheral venous line was placed. Only heart rate and oxygen saturation were monitored intraoperatively with pulse oximetry. Incidence and nature of intraoperative adverse events and surgical complications were recorded. Patient satisfaction was assessed using the Iowa Satisfaction with Anaesthesia Scale (ISAS). In total, 651 cataract surgeries were performed among which 614 (94.3%) were uneventful. Thirty (4.6%) intraoperative adverse events and 8 (1.2%) surgical complications were recorded. All surgeries were successfully completed. No medical emergency team intervention or hospital admittance was encountered. The mean ISAS score was 5.7/6, indicating high patient satisfaction. Cataract surgery in an ambulatory cataract surgery centre without perioperative anaesthesia care is a safe procedure with high patient satisfaction for screened patients. Anaesthesia resources are scarce and may be more beneficial to more complex ophthalmic or non-ophthalmic surgeries. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41598-021-87926-0>

URL: <http://www.nature.com/srep/index.html> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2011200541>

30. Review of glaucoma medication adherence monitoring in the digital health era

Item Type: Journal Article

Authors: Erras, Alaa;Shahrvini, Bitia;Weinreb, Robert N. and Baxter, Sally L.

Publication Date: 2021

Journal: The British Journal of Ophthalmology

Abstract: Current glaucoma treatments aim to lower intraocular pressure, often with topical ocular hypotensive medications. Unfortunately, the effectiveness of these medications depends on sustained patient adherence to regimens which may involve instilling multiple medications several times daily. Patient adherence to glaucoma medications is often low. Recent innovations in digital sensor technologies have been leveraged to confirm eyedrop



medication usage in real-time and relay this information back to providers. Some sensors have also been designed to deliver medication reminders and notifications as well as assist with correct eyedrop administration technique. Here, we review recent innovations targeted at improving glaucoma medication adherence and discuss their limitations. Copyright © Author(s) (or their employer(s)) 2021. No commercial re-use. See rights and permissions. Published by BMJ.

DOI: <https://libkey.io/https://dx.doi.org/10.1136/bjophthalmol-2020-317918>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=33858837>

31. Fluocinolone acetonide vitreous insert for chronic diabetic macular oedema: a systematic review with meta-analysis of real-world experience

Item Type: Journal Article

Authors: Fallico, M.;Maugeri, A.;Lotery, A.;Longo, A.;Bonfiglio, V.;Russo, A.;Avitabile, T.;Furino, C.;Cennamo, G.;Barchitta, M.;Agodi, A.;Marolo, P.;Ventre, L.;Caselgrandi, P. and Reibaldi, M.

Publication Date: 2021

Journal: Scientific Reports 11(1), pp. 4800

Abstract: We conducted a meta-analysis of real-world studies on the 0.19 mg Fluocinolone Acetonide (FAC) intravitreal implant for chronic diabetic macular oedema (DMO), comparing these findings with the Fluocinolone Acetonide for Diabetic Macular Edema (FAME) study. The primary outcome was mean change of best corrected visual acuity (BCVA) at 24 months. Secondary outcomes were 36-month mean BCVA, mean central macular thickness (CMT) change, rates of eyes receiving supplementary intravitreal therapy, cataract surgery, intraocular pressure (IOP)-lowering drops and glaucoma surgery. Mean differences (MDs) with 95% confidence intervals (CIs) were calculated. Nine real-world studies were included. The FAC implant yielded a significantly improved BCVA at 24 and 36 months (24-month MD = 4.52; 95% CI 2.56-6.48; 36-month MD = 8.10; 95% CI 6.34-9.86). These findings were comparable with the FAME study. The FAC implant yielded significantly reduced 24- and 36-month CMT. Pooled proportions of cataract surgery, IOP-lowering drops and glaucoma surgery were 39%, 27% and 3%, respectively, all lower than the FAME study. Pooled estimate of supplementary intravitreal therapy was 39%, higher than the 15.2% of the FAME study. This meta-analysis of real-world studies confirms favorable visual and anatomical outcomes following FAC insert for chronic DMO. In real-life studies more than one third of patients received supplementary intravitreal therapy, an issue that needs to be further explored. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41598-021-84362-y>

URL: <http://www.nature.com/srep/index.html> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2010596978>

32. Intravitreal dexamethasone implant versus anti-vascular endothelial growth factor therapy combined with cataract surgery in patients with diabetic macular oedema: a systematic review with meta-analysis

Item Type: Journal Article

Authors: Fallico, Matteo;Lotery, Andrew;Maugeri, Andrea;Favara, Giuliana;Barchitta, Martina;Agodi, Antonella;Russo, Andrea;Longo, Antonio;Bonfiglio, Vincenza;Avitabile, Teresio;Marolo, Paola;Borrelli, Enrico;Parisi, Guglielmo;Cennamo, Gilda;Furino, Claudio and Reibaldi, Michele

Publication Date: 2021



Journal: Eye (London, England)

Abstract:

OBJECTIVE: To compare outcomes of cataract surgery combined with either anti-Vascular Endothelial Growth Factor (anti-VEGF) therapy or dexamethasone implant (DEX) in patients with diabetic macular oedema (DMO).,

METHODS: Pubmed and Embase databases were searched for studies reporting outcomes of diabetic cataract surgery combined with either anti-VEGF or DEX, with a follow-up ≥ 3 months. The primary outcome was the mean change in central macular thickness (CMT). Mean change in best corrected visual acuity (BCVA) was considered as a secondary outcome. The mean difference between baseline and post-treatment values (MD) with 95%-Confidence Interval (95%CI) was calculated and meta-analyses were performed.,

RESULTS: Nine-teen studies were included, 8 in the DEX group and 11 in the anti-VEGF group. A significant reduction of macular thickness was shown in the DEX group at 3 months (MD = -98.35 microm; 95% CI, -147.15/-49.54), while mean CMT change was non-significant in the anti-VEGF group (MD = -21.61 microm; 95% CI, -59.46/16.24; test of group differences, $P < 0.001$). At 3 months, no difference in visual gain was found between the two groups ($P = 0.13$).,

CONCLUSIONS: In DMO patients, cataract surgery combined with DEX seems to provide better anatomical outcomes compared with cataract surgery combined with anti-VEGF therapy. However, our evidence was limited by significant heterogeneity. Randomised trials comparing these two different combined approaches are warranted. Copyright © 2021. The Author(s), under exclusive licence to The Royal College of Ophthalmologists.

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41433-021-01847-w>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34795415>

33. Retinopathy of prematurity: a review of epidemiology and current treatment strategies

Item Type: Journal Article

Authors: Hong, Eun Hee;Shin, Yong Un and Cho, Heeyoon

Publication Date: 2021

Journal: Clinical and Experimental Pediatrics

Abstract: Retinopathy of prematurity (ROP) is among the most common causes of childhood blindness. Three phases of ROP epidemics have been observed worldwide since ROP was first described in the 1940s. Despite advances in neonatal care, the occurrence of ROP and associated visual impairment has been increasing somewhere on Earth and remains difficult to control. Conventional treatment options for preventing ROP progression include retinal ablation using cryotherapy or laser therapy. With the emergence of anti-vascular endothelial growth factor (anti-VEGF) treatment for ocular diseases, the efficacy and safety of anti-VEGF therapy for ROP have recently been actively discussed. In the advanced stage of ROP with retinal detachment, surgical treatment including scleral buckling or vitrectomy is needed to maintain or induce retinal attachment. At this stage, the visual outcome is usually poor despite successful anatomical retinal attachment. Therefore, preventing ROP progression by timely screening examinations and treatment remains the most important part of ROP management.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34645255>

34. Ocriplasmin for treatment of vitreomacular traction and macular hole: A systematic literature review and individual participant data meta-analysis of randomized, controlled, double-masked trials

Item Type: Journal Article

Authors: Jackson, Timothy L.;Haller, Julia;Blot, Koenraad H.;Duchateau, Luc and Lescauwaeet, Benedicte



Publication Date: 2021

Journal: Survey of Ophthalmology

Abstract: Ocriplasmin is used to treat vitreomacular traction (VMT), with or without full-thickness macular hole (MH). We systematically reviewed the evidence on ocriplasmin's effect on vitreomacular adhesion resolution (VMAR), MH closure, vitrectomy, and best-corrected visual acuity (BCVA) and investigated the effect of baseline covariates on outcome. We applied individual participant data meta-analyses to the entire population and to subgroups defined by MH or epiretinal membrane (ERM) presence. Safety data were pooled and tabulated. Five randomized controlled trials (1,067 participants) were included. Six months after treatment, ocriplasmin achieved higher rates of VMAR and MH closure versus control, lowered vitrectomy odds, and increased the likelihood of a ≥ 10 -letter BCVA increase. VMAR rates were lower when ERM, broad VMA (> 1500 microm), diabetic retinopathy, or pseudophakia were present and higher in younger participants, women, and eyes with MHs. Ocriplasmin-treated participants experienced more short-term visual impairment that was not predictive of final BCVA, as well as vitreous floaters, photopsia, photophobia, eye pain, blurred vision, and dyschromatopsia. The most common serious adverse events for ocriplasmin and control, respectively, were MH progression (22.5%, 17.3%), new MH (1.5%, 3.4%) and retinal detachment (0.8%, 1.2%). Ocriplasmin promotes VMAR and MH closure. Transient visual phenomena are not uncommon. Copyright © 2021 Elsevier Inc. All rights reserved.

DOI: <https://libkey.io/https://dx.doi.org/10.1016/j.survophthal.2021.08.003>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34480895>

35. Ultrasound biomicroscopy of the anterior segment in patients with primary congenital glaucoma: a review of the literature

Item Type: Journal Article

Authors: Janssens, Robin;van Rijn, Laurentius,J.;Eggink, Cathrien A.;Jansonius, Nomdo M. and Janssen, Sarah F.

Publication Date: 2021

Journal: Acta Ophthalmologica

Abstract:

PURPOSE: Primary congenital glaucoma (PCG) is a form of childhood glaucoma caused by maldevelopment of the anterior chamber. Disease severity differs greatly amongst patients. Ultrasound biomicroscopy (UBM) is a non-invasive technique that can visualize the anterior segment in infants in vivo. The purpose of this narrative review is to make an overview of the UBM data in PCG and study the applicability of UBM in characterizing the disease., **METHODS:** An online search was performed on PubMed in December 2020. After a critical appraisal of the included articles, study and patient characteristics were summarized. The UBM measurements of the anterior segment in PCG of the different studies were analysed., **RESULTS:** Six studies were included in this review. All were cross-sectional prospective studies. A total of 221 PCG eyes were examined. PCG eyes showed a larger trabecular iris angle, decreased iris thickness, narrower or absent Schlemm's canal and an increased zonular length compared to controls. Abnormal tissue membrane covering the trabecular meshwork and abnormal insertion of the iris and ciliary process were frequently found. The success rate of glaucoma surgery depended on the severity of anterior segment malformations found with UBM., **CONCLUSION:** Malformations of the anterior segment in PCG can be demonstrated by UBM in vivo. This imaging can help to characterize disease severity and might support surgical treatment decisions. Copyright © 2021 The Authors. Acta Ophthalmologica published by John Wiley & Sons Ltd on behalf of Acta Ophthalmologica Scandinavica Foundation.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34939345>

36. Defining stable glaucoma: a Delphi consensus survey of UK optometrists with a specialist interest in Glaucoma

Item Type: Journal Article

Authors: Lakhani, B. K.;Giannouladis, K.;Leighton, P.;Spry, P. G. D.;Harper, R. A. and King, A. J.

Publication Date: 2021

Journal: Eye (Basingstoke) 35(9), pp. 2524-2534

Abstract:

Background: Increasing demand on hospital services has led to the development of alternative community-based services, often run by optometrists for monitoring 'stable' and low-risk glaucoma patients.

Method(s): An online Delphi exercise was undertaken to derive a consensus definition of 'stable glaucoma' amongst optometrists with a special interest in glaucoma. Participants were asked to score their agreement for various clinical parameters. Results from each round were used to inform subsequent rounds.

Result(s): 31 optometrists participated in the study. 100%, 77%, and 68% completion rates were achieved over three rounds respectively. Consensus was reached for 7 parameters: Stability should be defined over a period of 36-48 months, summary measure Visual Field (VF), and/or Trend Analysis should be used to assess VF stability. Two or more decibel (dB) of change of VF mean deviation (MD) is considered unstable. Intraocular pressure (IOP) should be below a target defined by the patient's clinician or a fixed-percentage reduction compared to the presenting IOP. No treatment change during the stability assessment period is considered stable. Imaging with Ocular Coherence Topography Retinal Nerve Fibre Layer (OCT RNFL) assessment should be used to define glaucoma stability. Overview by a glaucoma consultant was considered important for glaucoma monitoring schemes.

Conclusion(s):: This Delphi exercise has generated a consensus definition for glaucoma stability by UK Optometrists with a specialist interest in glaucoma. This consensus definition can be used to inform the selection of suitable patients from hospital services for transfer to monitoring in community-based 'stable' optometry run glaucoma clinics. Copyright © 2020, The Author(s), under exclusive licence to The Royal College of Ophthalmologists.

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41433-020-01251-w>

URL: <http://www.nature.com/eye/index.html> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2007245206>

37. Low vision rehabilitation in improving the quality of life for patients with impaired vision: A systematic review and meta-analysis of 52 randomized clinical trials

Item Type: Journal Article

Authors: Liu, Jianhua;Dong, Jige;Chen, Yaping;Zhang, Weidong;Tong, Shuai and Guo, Jiangzhou

Publication Date: 2021

Journal: Medicine 100(19), pp. e25736

Abstract:

BACKGROUND AIM: Low vision rehabilitation optimizes the use of residual vision after severe vision loss, but also teaches skills to improve visual functioning in daily life. These skills promote independence and active participation in society. This meta-analysis was designed to evaluate the efficacy of low vision rehabilitation in improving the quality of life (QoL) in visually impaired adults.,



METHODS: We searched the Cochrane Library, PubMed, EMBASE, and Web of Science up to January 1, 2020. Randomized controlled trials (RCTs) that compared rehabilitation interventions with active or inactive controls were included. The standardized mean difference (SMD) with a 95% confidence interval (CI) was estimated to compare outcomes. Two reviewers extracted data and assessed trial quality independently. All statistical analyses were performed using the standard statistical procedures of RevMan 5.2.,

RESULTS: A total of 52 RCTs with 6,239 participants were included in this meta-analysis. Compared to inactive comparators including waiting list or no care, low vision rehabilitation improved vision-related QoL, visual functioning (QoL: psychological aspect), and self-efficacy or self-esteem (QoL: psychological aspect), with pooled SMDs of -0.61 (95% CI -0.95 to -0.26; P = .0006), -1.14 (95% CI -1.69 to -0.59; P < .0001), and -0.84 (95% CI -1.47 to -0.22; P < .0001), respectively. Compared to active comparators, low vision rehabilitation improved vision-related QoL (SMD -0.26; 95% CI -0.46 to -0.06; P = .01) and activities of daily living (QoL: physical aspect) (SMD -0.39; 95% CI -0.67 to -0.12 P < .0001). However, no significant difference in health-related QoL and adaptation to vision loss (QoL: psychological aspect) was found between low vision rehabilitation and inactive comparators.,

CONCLUSIONS: This meta-analysis indicated that low vision rehabilitation interventions, particularly psychological therapies and methods of enhancing vision, may improve vision-related QoL and visual functioning in people with sight loss compared to usual care. Further studies should explore longer maintenance effects and the costs of several types of low vision rehabilitation. Studies characterizing the mechanisms of rehabilitation interventions in different settings, including low-income countries, are also required. Copyright © 2021 the Author(s). Published by Wolters Kluwer Health, Inc.

DOI: <https://libkey.io/https://dx.doi.org/10.1097/MD.0000000000025736>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med18&NEWS=N&AN=34106601>

38. Review of Loteprednol Etabonate 0.5%/Tobramycin 0.3% in the Treatment of Blepharokeratoconjunctivitis

Item Type: Journal Article

Authors: Mah, F. S. and Karpecki, P. M.

Publication Date: 2021

Journal: Ophthalmology and Therapy 10(4), pp. 859-875

Abstract: Use of a combination corticosteroid and antibiotic in a single formulation is common in the treatment of ocular inflammatory conditions for which corticosteroid therapy is indicated and there exists a risk of superficial bacterial infection. Loteprednol etabonate (LE) is a corticosteroid engineered to maintain potent anti-inflammatory activity while minimizing the risk of undesirable class effects of corticosteroids, such as elevated intraocular pressure and cataract. Tobramycin is a broad-spectrum aminoglycoside antibiotic that is considered generally safe and well tolerated. An ophthalmic suspension combining LE 0.5% and tobramycin 0.3% (LE/T) is approved in the US and several other countries. Use of a combination therapy increases convenience, which may promote patient adherence. A systematic literature review was conducted to examine the efficacy and safety of LE/T for ocular inflammatory conditions within the scope of its labeled indications. Results of published studies indicate that LE/T is effective in the treatment of blepharokeratoconjunctivitis in adults, with similar efficacy as dexamethasone 0.1%/tobramycin 0.3%, but is associated with a lower risk of clinically significant increases in intraocular pressure as demonstrated in both efficacy and safety studies and studies with healthy volunteers. Furthermore, studies in children with blepharitis or blepharoconjunctivitis indicate LE/T was well tolerated in this population, although efficacy vs vehicle was not demonstrated, potentially due to improvements in all groups overall and/or limited sample size. Separately, tobramycin demonstrated potent in vitro activity against most bacterial species associated with blepharitis. In conclusion, published data demonstrate the utility of LE/T for the treatment of the various clinical manifestations of blepharokeratoconjunctivitis in adults. Copyright © 2021, The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1007/s40123-021-00401-x>



URL: <http://www.springer.com/springer+healthcare/journal/40123> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2014029496>

39. Intravitreal injections as a leading cause of acute postoperative endophthalmitis-a regional survey in England

Item Type: Journal Article

Authors: Ong, Ariel Yuhan;Rigaudy, Axelle;Toufeeq, Shafak;Robins, Julian;Shalchi, Zaid;Bindra, Mandeep Singh and Charbel Issa, Peter

Publication Date: 2021

Journal: Eye (London, England)

Abstract:

BACKGROUND: To evaluate the characteristics, treatment patterns and outcomes of acute postoperative endophthalmitis.,

METHODS: Patients presenting with acute postoperative endophthalmitis between January 2017 to December 2019 were identified from hospital records in this multicentre retrospective cohort study. Clinical records were reviewed for visual acuity (VA) at various timepoints, cause of endophthalmitis, microbiological results, treatments and complications.,

RESULTS: Forty-six eyes of 46 patients were included. Intravitreal injections were the leading cause of acute postoperative endophthalmitis (n = 29; 63%), followed by cataract surgery (n = 8; 17%), vitreoretinal surgery (n = 7; 15%), and secondary intraocular lens insertion (n = 2, 4%). The absolute risk of endophthalmitis was 0.024% (1:4132) for intravitreal injections, 0.016% (1:6096) for cataract surgery, and 0.072% (1:1385) for vitreoretinal surgery. The majority of patients (n = 38; 83%) had better VA at 6 months compared to presentation, although fewer (n = 13; 28%) maintained similar or better VA compared to before the precipitating surgery. Twenty-four cases yielded positive culture results, of which staphylococcus epidermidis was the most commonly isolated organism.

Microbiological yield was not associated with better final visual outcomes. Patients who underwent therapeutic vitrectomy (n = 15; 33%) had poorer VA at presentation, but subsequently achieved visual outcomes comparable to those who received medical treatment alone. There was no difference in time to presentation, visual outcome and retinal detachment rates among the different causative procedures.,

CONCLUSION: Intravitreal injections were the most common cause of endophthalmitis in our region, primarily because of their higher frequency compared to other intraocular procedures. In this cohort, the primary procedure had no effect on presentation, management or visual outcomes. Copyright © 2022. The Author(s).

DOI: <https://libkey.io/https://dx.doi.org/10.1038/s41433-021-01886-3>

URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34949787>

40. Clinimetric properties of visuo-perceptual and visuo-cognitive assessment tools used for children with cerebral visual impairment and cerebral palsy or developmental delay: a systematic review

Item Type: Journal Article

Authors: Philip, S. S.;Guzzetta, A.;Gole, G. A. and Boyd, R. N.

Publication Date: 2021

Journal: Disability and Rehabilitation

Abstract:



Purpose: The aim of this systematic review is to evaluate the psychometrics and clinical utility of visuo-perceptual and visuo-cognitive assessment tools in children with cerebral visual impairment (CVI) and cerebral palsy (CP) or neurodevelopmental delay (DD).

Material(s) and Method(s): Five databases (PubMed, EMBASE, SCOPUS, CINAHL, and Cochrane Database) were comprehensively searched from 1970 till June 2021. The PRISMA checklist was utilised to report on the process of selecting eligible papers. The methodological quality of included studies was evaluated using CONsensus-based Standards for the selection of health Measurement INstrument (COSMIN) checklist.

Result(s): Of the 26 assessment tools identified, only seven tools had psychometric evidence supporting their use. Based on COSMIN guidelines, 60% of included studies were rated as inadequate or doubtful for their methodological quality of measurement properties, with equal number being rated as indeterminate on the overall rating.

Conclusion(s): Cerebral visual impairment due to its varied clinical presentation is often missed in children with CP and DD. There is a paucity of studies reporting on the validity and reliability of functional vision tools. Further studies are needed to conduct high-quality psychometric reporting using the updated COSMIN guidelines to identify appropriate functional vision tools for children with CP or DD. Implications for rehabilitation There are paucity of studies evaluating the validity and reliability of existing perceptual and cognitive assessment tools in children with cerebral visual impairment (CVI) and cerebral palsy (CP). Development of age-appropriate assessment tools evaluating all aspects of functional vision will assist in providing more holistic child-centric rehabilitation programs. A combination of detailed perinatal history, direct observation, and clinical assessments of functional vision are important to recognise CVI in children with CP. Copyright © 2021 Informa UK Limited, trading as Taylor & Francis Group.

DOI: <https://libkey.io/https://dx.doi.org/10.1080/09638288.2021.1990421>

URL: <http://www.tandfonline.com/loi/idre20> <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emca&NEWS=N&AN=2013976802>

41. Referral pattern and co-management of keratoconus patients in primary eye care: A survey of three European countries

Item Type: Journal Article

Authors: Rahmani, M.; Ortiz-Toquero, S. and Martin, R.

Publication Date: 2021

Journal: Contact Lens & Anterior Eye : The Journal of the British Contact Lens Association , pp. 101518

Abstract:

PURPOSE: To explore current primary care practices in keratoconus management in Portugal and compare with previous reported results in two European countries (the UK and Spain), with a special focus on interdisciplinary collaboration and referral practice patterns.,

METHODS: An online survey adapted to European professional practice was distributed (via newsletters) by the Portuguese Optometrist Association to explore keratoconus patient management and referral practice patterns among Portuguese practitioners.,

RESULTS: Responses of 119 optometrists were compared with previous reported of 464 eye-care practitioners (126 in the UK and 338 in Spain). Most respondents (79% in Portugal, 71% in the UK and 76% in Spain; $p = 0.31$) had < 5 new keratoconus patients each year. No accepted referral criterion was found ($p < 0.01$) because small number of the respondents (14%) in Portugal referred out at initial diagnosis (50% in the UK and Spain); 32% referred out when progression was detected (17% in the UK and 30% in Spain); and a minority (10% in Portugal, 9% in the UK, and 6% in Spain) referred out when visual acuity was affected. A majority of respondents (83%) in Portugal reported no co-management with ophthalmologists (60% in the UK and 73% in Spain; $p < 0.01$).,

CONCLUSION: The results of this study suggest that it is necessary to encourage interdisciplinary collaboration between practitioners to improve referral of patients with suspected keratoconus to an ophthalmology specialist to



change the course of this disease, to reduce keratoconus progression and visual acuity impairment and to minimize the impact of this disease on patients' quality of life. Copyright © 2021 The Authors. Published by Elsevier Ltd.. All rights reserved.

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34772626>

42. Normalisation process theory and the implementation of a new glaucoma clinical pathway in hospital eye services: Perspectives of doctors, nurses and optometrists

Item Type: Journal Article

Authors: Read, S.;Morgan, J.;Gillespie, D.;Nollett, C.;Weiss, M.;Allen, D.;Anderson, P. and Waterman, H.

Publication Date: 2021

Journal: PLoS ONE 16(8), pp. e0255564

Abstract:

Background: Normalisation process theory reports the importance of contextual integration in successfully embedding novel interventions, with recent propositions detailing the role that 'plasticity' of intervention components and 'elasticity' of an intended setting contribute. We report on the introduction of a clinical pathway assessing patient non-responsiveness to treatment for glaucoma and ocular hypertension. The aim of this study was to assess the feasibility of implementing the Cardiff Model of Glaucoma Care into hospital eye services, identifying any issues of acceptability for staff through the filter of normalisation process theory.

Methods: A prospective observational study was undertaken in four hospital eye services. This incorporated detailed qualitative semi-structured interviews with staff (n = 8) to gather their perceptions on the intervention's usefulness and practicality. In addition, observational field notes of patient and staff consultations (n = 88) were collected, as well as broader organisational observations from within the research sites (n = 52). Data collection and analysis was informed by the normalisation process theory framework.

Results: Staff reported the pathway led to beneficial knowledge on managing patient treatment, but the model was sometimes perceived as overly prescriptive. This perception varied significantly based on the composition of clinics in relation to staff experience, staff availability and pre-existing clinical structures. The most commonly recounted barrier came in contextually integrating into sites where wider administrative systems were inflexible to intervention components.

Conclusions: Flexibility will be the key determinant of whether the clinical pathway can progress to wider implementation. Addressing the complexity and variation associated with practice between clinics required a remodelling of the pathway to maintain its central benefits but enhance its plasticity. Our study therefore helps to confirm propositions developed in relation to normalisation process theory, contextual integration, intervention plasticity, and setting elasticity. This enables the transferability of findings to healthcare settings other than ophthalmology, where any novel intervention is implemented. Copyright © 2021 Read et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

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43. Reaching a FEVR Pitch: A Case Series of Familial Exudative Vitreoretinopathy in Northern Ireland

Item Type: Journal Article



Authors: Shute, Clare L. and McLoone, Eibhlin

Publication Date: 2021

Journal: Journal of Pediatric Ophthalmology and Strabismus , pp. 1-8

Abstract:

PURPOSE: To evaluate the heterogeneity of both the clinical features and genetics of familial exudative vitreoretinopathy (FEVR) in a Northern Irish population.,

METHODS: A retrospective trawl of a secure pediatric database was completed, as well as communication with all Northern Ireland ophthalmologists to identify adult cases. Cases were cross-referenced with a regional genetics database. Data on patient demographics, clinical findings, genetic testing, and patient treatment were collected.,

RESULTS: Sixteen patients were identified. Average age at presentation was 11.8 years (range: 4 months to 38 years). Earlier age at presentation was associated with more advanced disease and those presenting later had more subtle signs such as retinal tear or vitreous hemorrhage. Four types of gene mutations were identified in 7 patients (NDP, TSPAN12, FZD4, and KIF11). Thirteen patients had complications associated with FEVR and associated systemic conditions were found in 5 patients. Twelve eyes received active treatment to control disease.,

CONCLUSIONS: FEVR is a sight-threatening disease affecting prenatal retinal angiogenesis with a spectrum of disease and diverse genetic basis. Clinicians should look for signs of systemic and other ophthalmic sequelae in patients with FEVR because this could point to a genetic cause. Vigilance should also be exercised in older patients with unexplained vitreous hemorrhage or retinal tear with consideration of widefield angiography if FEVR is suspected. J Pediatr Ophthalmol Strabismus. 20XX;X(X):XX-XX.].

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URL: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=34592872>

44. Glaucoma in Adults-Screening, Diagnosis, and Management: A Review

Item Type: Journal Article

Authors: Stein, Joshua D.;Khawaja, Anthony P. and Weizer, Jennifer S.

Publication Date: 2021

Journal: Jama 325(2), pp. 164-174

Abstract: Importance: Glaucoma is the most common cause of irreversible blindness worldwide. Many patients with glaucoma are asymptomatic early in the disease course. Primary care clinicians should know which patients to refer to an eye care professional for a complete eye examination to check for signs of glaucoma and to determine what systemic conditions or medications can increase a patient's risk of glaucoma. Open-angle and narrow-angle forms of glaucoma are reviewed, including a description of the pathophysiology, risk factors, screening, disease monitoring, and treatment options., Observations: Glaucoma is a chronic progressive optic neuropathy, characterized by damage to the optic nerve and retinal nerve fiber layer, that can lead to permanent loss of peripheral or central vision. Intraocular pressure is the only known modifiable risk factor. Other important risk factors include older age, nonwhite race, and a family history of glaucoma. Several systemic medical conditions and medications including corticosteroids, anticholinergics, certain antidepressants, and topiramate may predispose patients to glaucoma. There are 2 broad categories of glaucoma, open-angle and angle-closure glaucoma. Diagnostic testing to assess for glaucoma and to monitor for disease progression includes measurement of intraocular pressure, perimetry, and optical coherence tomography. Treatment of glaucoma involves lowering intraocular pressure. This can be achieved with various classes of glaucoma medications as well as laser and incisional surgical procedures., Conclusions and Relevance: Vision loss from glaucoma can be minimized by recognizing systemic conditions and medications that



increase a patient's risk of glaucoma and referring high-risk patients for a complete ophthalmologic examination. Clinicians should ensure that patients remain adherent with taking glaucoma medications and should monitor for adverse events from medical or surgical interventions used to treat glaucoma.

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45. Artificial intelligence applications and cataract management: A systematic review

Item Type: Journal Article

Authors: Tognetto, Daniele;Giglio, Rosa;Vinciguerra, Alex Lucia;Milan, Serena;Rejdak, Robert;Rejdak, Magdalena;Zaluska-Ogryzek, Katarzyna;Zweifel, Sandrine and Toro, Mario Damiano

Publication Date: 2021

Journal: Survey of Ophthalmology

Abstract: Artificial intelligence (AI)-based applications exhibit the potential to improve the quality and efficiency of patient care in different fields, including cataract management. A systematic review of the different applications of AI-based software on all aspects of a cataract patient's management, from diagnosis to follow-up, was carried out in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. All selected articles were analyzed to assess the level of evidence according to the Oxford Centre for Evidence-Based Medicine 2011 guidelines, and the quality of evidence according to the Grading of Recommendations Assessment, Development and Evaluation system. Of the articles analyzed, 49 met the inclusion criteria. No data synthesis was possible for the heterogeneity of available data and the design of the available studies. The AI-driven diagnosis seemed to be comparable and, in selected cases, to even exceed the accuracy of experienced clinicians in classifying disease, supporting the operating room scheduling, and intraoperative and postoperative management of complications. Considering the heterogeneity of data analyzed, however, further randomized controlled trials to assess the efficacy and safety of AI application in the management of cataract should be highly warranted. Copyright © 2021. Published by Elsevier Inc.

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46. A systematic review of current teleophthalmology services in new zealand compared to the four comparable countries of the united kingdom, australia, united states of america (usa) and Canada

Item Type: Journal Article

Authors: Walsh, L.;Hong, S. C.;Chalakkal, R. J. and Ogbuehi, K. C.

Publication Date: 2021

Journal: Clinical Ophthalmology 15, pp. 4015-4027

Abstract:

Background: Over 700,000 New Zealanders (NZ), particularly elderly and Maori, live without timely access to specialist ophthalmology services. Teleophthalmology is a widely recog-nised tool that can assist in overcoming resource and distance barriers. Teleophthalmology gained unprecedented traction in NZ during the COVID-19 pandemic and subsequent lock-down. However, its provision is still limited and there are equity issues. The aim of



this study was to conduct a systematic review identifying, describing and contrasting teleophthalmology services in NZ with the comparable countries of Australia, USA, Canada and the United Kingdom.

Method(s): The electronic databases Embase, PubMed, Web of Science, Google Scholar and Google were systemically searched using the keywords: telemedicine, ophthalmology, tele-ophthalmology/teleophthalmology. The searches were filtered to the countries above, with no time constraints. An integrative approach was used to synthesise findings.

Result(s): One hundred and thirty-two studies were identified describing 90 discrete tele-ophthalmology services. Articles spanned from 1997 to 2020. Models were categorised into general eye care (n=21; 16%); emergency/trauma (n=6; 4.5%); school screening (n=25; 19%); artificial intelligence (AI) (n=23; 18%); and disease-specific models of care (MOC) (n=57; 43%). The most common diseases addressed were diabetic retinopathy (n=23; 17%); retinopathy of prematurity (n=9; 7%); and glaucoma (n=8; 6%). Programs were mainly centred in the US (n=72; 54.5%), followed by the UK (n=29; 22%), then Canada (n=16; 12%), Australia (n=13; 10%), with the fewest identified in NZ (n=3; 2%). Models generally involved an ophthalmologist consultative service, remote supervision and triaging. Most models involved local clinicians transmitting fed-forward or live images.

Conclusion(s): Teleophthalmology will likely play a crucial role in the future of eye care. COVID-19 has offered a unique opportunity to observe the use of teleophthalmology services globally. Feed-forward and, increasingly, live-based teleophthalmology services have demonstrated feasibility and cost-effectiveness in similar countries internationally. New Zealand's teleophthalmology services, however, are currently limited. Investing in strategic partnerships and technology at a national level can advance health equities in ophthalmic care. Copyright © 2021 Walsh et al.

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47. Association of visual impairment with risk for future Parkinson's disease

Item Type: Journal Article

Authors: Zhu, Z.;Hu, W.;Liao, H.;Tan, Z.;Chen, Y.;Shi, D.;Shang, X.;Zhang, X.;Huang, Y.;Yu, H.;Wang, W.;He, M. and Yang, X.

Publication Date: 2021

Journal: eClinicalMedicine 42, pp. 101189

Abstract:

Background: Although visual dysfunction is one of the most common non-motor symptoms among patients with Parkinson's disease (PD), it is not known whether visual impairment (VI) predates the onset of clinical PD. Therefore, we aim to examine the association of VI with the future development of PD in the UK Biobank Study.

Method(s): The UK Biobank Study is one of the largest cohort studies of health, enrolling over 500,000 participants aged 40-69 years between 2006 and 2010 across the UK. VI was defined as a habitual distance visual acuity (VA) worse than 0.3 logarithm of the minimum angle of resolution (LogMAR) in the better-seeing eye. Incident cases of PD were determined by self report data, hospital admission records or death records, whichever came first. Multivariable Cox proportional hazard regression models were used to investigate the association between VI and the risk of incident PD.

Finding(s): A total of 117,050 participants were free of PD at the baseline assessment. During the median observation period of 5.96 (IQR: 5.77-6.23) years, PD occurred in 222 (0.19%) participants. Visually impaired participants were at a higher risk of developing PD than non-VI participants ($p < 0.001$). Compared with the non-VI group, the adjusted hazard ratio was 2.28 (95% CI 1.29-4.05, $p = 0.005$) in the VI group. These results were consistent in the sensitivity analysis, where incident PD cases diagnosed within one year after the baseline assessment were excluded.



Interpretation(s): This cohort study found that VI was associated with an increased risk of incident PD, suggesting that VI may serve as a modifiable risk factor for prevention of future PD. Copyright © 2021

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