This Current Awareness Bulletin is produced by the Healthcare Library. It includes recently published policy, guidance, research articles, news items, and details of new library resources.

**Athens**

To access journal articles that are available in full text you will need to have a username and password for Athens. To register for an Athens account click [here](#).

For further information or support please contact the Healthcare Library, SDH Central, Salisbury District Hospital, Salisbury, Wiltshire SP2 8BJ. 01722 429054 or 01722 336262 ext 4430, [Library.office@salisbury.nhs.uk](mailto:Library.office@salisbury.nhs.uk), or visit the library website at [www.library.salisbury.nhs.uk](http://www.library.salisbury.nhs.uk)

### New and Updated Cochrane Systematic Reviews

**New Reviews – September 2014**

*Systemic safety of bevacizumab versus ranibizumab for neovascular age-related macular degeneration*

**Updated Reviews – September 2014**

*Interventions for asymptomatic retinal breaks and lattice degeneration for preventing retinal detachment*

### Cochrane Editorial

*A clearer view of evidence in treating macular degeneration: off-label policies and independent research*

By: Giulio Formoso, Anna Maria Marata, Nicola Magrini & Lisa Bero

On: September 15, 2014, 13:00

### Resources on UpToDate

[Ophthalmology topics in UpToDate](#)

### Journals – Latest Issues with Full Text Access

Click on the journal titles to access the contents pages for these journals. Use your Athens username and password to access full text. To register for an Athens account click [here](#).

**Latest Issues with full text access**

*British Journal of Ophthalmology*

Current issue - full text access with Athens

*Ophthalmology*

Current issue - full text access with Athens

*Survey of Ophthalmology*

Current Issue - full text access with Athens
Click on the journal titles to access the contents pages for these journals. If you would like to request any of the articles please contact the library or click here.

**American Journal of Ophthalmology**
Current issue

**Eye**
October 2014, Volume 28 Issue 10

**JAMA Ophthalmology**
Current issue

**Journal of Pediatric Ophthalmology and Strabismus**
September/October 2014, Volume 51 Issue 5

**Retina**
Current Issue

---

**Journal Articles**

Please click on the blue link at the end of the abstract (where available) to access full text. You may need an Athens username and password. To register for an Athens account click here.

**Table of Contents**

1. A comprehensive review and update on the non-biologic treatment of adult noninfectious uveitis: Part I
2. A safety evaluation of ranibizumab in the treatment of age-related macular degeneration
3. Age-related macular degeneration: Genetics and biology coming together
4. Antimicrobial contact lenses and lens cases: A review
5. Artificial tears potpourri: A literature review
6. Corneal biomechanical properties measured by the ocular response analyzer in acromegalic patients
7. Diabetes mellitus and risk of age-related macular degeneration: A systematic review and meta-analysis
8. Diabetes mellitus as a risk factor for open-angle glaucoma: A systematic review and meta-analysis
9. Diabetic retinopathy: Current and future methods for early screening from a retinal hemodynamic and geometric approach
10. Effect of age and other factors on macular pigment optical density measured with resonance Raman spectroscopy
11. Effect of gestational age and birthweight on the risk of strabismus among premature infants
12. Efficacy and safety of pain relief medications after photorefractive keratectomy: Review of prospective randomized trials
13. Efficacy and safety of tafluprost 0.0015% and timolol maleate 0.5% fixed combination in patients with ocular hypertension or open-angle glaucoma
14. Efficacy of intravitreal dexamethasone implant for prostaglandin-induced refractory pseudophakic cystoid macular edema: Case report and review of the literature
15. Efficacy of nonpenetrating glaucoma surgery in the treatment of open angle glaucoma: A systematic review
16. Evolving trends in retinal detachment surgery
17. Factors associated with lifetime risk of open-angle glaucoma blindness
18. Functional architecture of the retina: Development and disease
19. Guidelines for the management of neovascular age-related macular degeneration by the European Society of Retina Specialists (EURETINA)
raw_text
inflammation. Part I covers classic immunomodulation and latest information on corticosteroid therapy. Expert opinion: The hazard of chronic corticosteroid use for the treatment of adult, noninfectious uveitis is well-documented. Corticosteroid-sparing therapies, which offer a very favorable risk-benefit profile when administered properly, should be substituted.

**Publication type:** Journal: Review  
**Source:** EMBASE

---

**2: A safety evaluation of ranibizumab in the treatment of age-related macular degeneration**

**Citation:** Expert Opinion on Drug Safety, September 2014, vol./is. 13/9(1259-1270), 1474-0338;1744-764X (September 2014)  
**Author(s):** Gibson J.M., Gibson S.J.  
**Language:** English  
**Abstract:** Introduction: The use of intravitreal ranibizumab has transformed the outcomes for thousands of patients with wet age related macular degeneration (AMD), which is the leading cause of blindness in developed countries. Prior to its introduction, most patients with wet AMD would rapidly lose central vision. The use of intravitreal ranibizumab has been shown to reduce certifiable visual loss by about a half. Current treatment regimens with ranibizumab in wet AMD require multiple injections over several years and so it is highly relevant to review the safety record of this important drug. Areas covered: This review considers the important ocular and systemic adverse events (AE) that have been reported in the literature, particularly in the context of the pivotal clinical trials that have been performed. It also reviews the safety of other anti-VEGF drugs that are used in wet AMD, namely bevacizumab and aflibercept, and compares these drugs with ranibizumab. Expert opinion: Overall, intravitreal ranibizumab can be considered a safe and highly effective drug for patients with wet AMD. However recent concerns about retinal thinning following ranibizumab therapy, possible systemic AE associated with all anti-VEGF drugs and the occurrence of complications relating to drug preparation and delivery must be considered. 2014 Informa UK, Ltd.  
**Publication type:** Journal: Article  
**Source:** EMBASE

---

**3: Age-related macular degeneration: Genetics and biology coming together**

**Citation:** Annual Review of Genomics and Human Genetics, August 2014, vol./is. 15/(151-171), 1527-8204;1545-293X (August 2014)  
**Author(s):** Fritsche L.G., Fariss R.N., Stambolian D., Abecasis G.R., Curcio C.A., Swaroop A.  
**Language:** English  
**Abstract:** Genetic and genomic studies have enhanced our understanding of complex neurodegenerative diseases that exert a devastating impact on individuals and society. One such disease, age-related macular degeneration (AMD), is a major cause of progressive and debilitating visual impairment. Since the pioneering discovery in 2005 of complement factor H (CFH) as a major AMD susceptibility gene, extensive investigations have confirmed 19 additional genetic risk loci, and more are anticipated. In addition to common variants identified by now-conventional genome-wide association studies, targeted genomic sequencing and exome-chip analyses are uncovering rare variant alleles of high impact. Here, we provide a critical review of the ongoing genetic studies and of common and rare risk variants at a total of 20 susceptibility loci, which together explain 40-60% of the disease heritability but provide limited power for diagnostic testing of disease risk. Identification of these susceptibility loci has begun to untangle the complex biological pathways underlying AMD pathophysiology, pointing to new testable paradigms for treatment. Copyright 2014 by Annual Reviews. All rights reserved.  
**Publication type:** Book Series: Review  
**Source:** EMBASE  
**Full text:** Available Annual review of genomics and human genetics at Annual Review of Genomics and Human Genetics

---

**4: Antimicrobial contact lenses and lens cases: A review**

**Citation:** Eye and Contact Lens, September 2014, vol./is. 40/5(312-324), 1542-2321;1542-233X (September 2014)  
**Author(s):** Dutta D., Willcox M.D.P.  
**Language:** English  
**Abstract:** Antimicrobial agents are being examined with the aim of developing antimicrobial contact lenses and new forms of antimicrobial lens cases. It is hoped that these developments will result in reduced contact lens-related microbial adverse events. In this review, we assess aspects of various antimicrobial strategies, such as cationic metals and peptides, selenium, quorum sensing inhibitors, and various biocidal and non-cidal agents. We highlight the historical challenges, the current scenario of this field, and recommendations for future antimicrobial strategies. Copyright Contact Lens Association of Ophthalmologists, Inc.  
**Publication type:** Journal: Review  
**Source:** EMBASE
5: Artificial tears potpourri: A literature review
Citation: Clinical Ophthalmology, July 2014, vol./is. 8/(1419-1433), 1177-5467;1177-5483 (31 Jul 2014)
Author(s): Moshirfar M., Pierson K., Hanamaikai K., Santiago-Caban L., Muthappan V., Passi S.F.
Language: English
Abstract: Numerous brands and types of artificial tears are available on the market for the treatment of dysfunctional tear syndrome. Past literature has focused on comparing the components of these products on patient’s clinical improvement. The wide array of products on the market presents challenges to both clinicians and patients when trying to choose between available tear replacement therapies. Different formulations affect patients based on etiology and symptomatic improvement, were analyzed. Fifty-one studies evaluating different brands of artificial tears, and their efficacy were identified. Out of the 51 studies, 18 were comparison studies testing brand name artificial tears directly against each other. Nearly all formulations of artificial tears provided significant benefit to patients with dysfunctional tear syndrome, but some proved superior to others. From the study data, a recommended treatment flowchart was derived. 2014 Moshirfar et al.
Publication type: Journal: Review
Source: EMBASE
Full text: Available Clinical Ophthalmology at Clinical Ophthalmology

6: Corneal biomechanical properties measured by the ocular response analyzer in acromegalic patients
Citation: Graefe’s Archive for Clinical and Experimental Ophthalmology, August 2014, vol./is. 252/8(1283-1288), 0721-832X;1435-702X (August 2014)
Author(s): Sen E., Tutuncu Y., Balikoglu-Yilmaz M., Elgin U., Berker D., Ozturk F., Guler S.
Language: English
Abstract: Purpose: To investigate the effect of acromegaly on corneal biomechanical parameters. Methods: This cross-sectional, comparative clinical study included 34 acromegalic patients and 30 age-matched and sex-matched healthy controls. Corneal hysteresis (CH), corneal resistance factor (CRF), Goldmann-correlated and corneal-compensated intraocular pressure (IOPg and IOPcc, respectively) were measured using the Ocular Response Analyzer. Central corneal thickness (CCT) was determined with the ultrasonic pachymeter. Results: The mean duration of disease for the acromegalic patients was 5.3 years. There was no significant difference between the groups regarding mean CH, CRF, IOPg and IOPcc values. The respective mean values in patients with acromegaly and controls were 10.3+2.2 and 9.5+1.5 mmHg (p=0.13) for CH; 10.5+2.4 and 9.7+1.7 mmHg (p=0.16) for CRF, 16.1+3.6 and 15.5+2.9 mmHg (p=0.49) for IOPg, 16.8+3.4 and 17.0+2.8 mmHg (p=0.82) for IOPcc, and 544.8+32.2 and 530.7+22.9 mum (p=0.05) for CCT. A significant moderate correlation was detected between the duration of acromegaly and IOPg OD (r=0.430, p=0.01). There was no significant correlation between other ocular parameters and levels of GH and IGF-1 at the time of diagnosis, the status of control, adenaoma type, radiotherapy treatment, and drug usage. Conclusions: In acromegalic patients, the duration of disease was correlated with IOPg OD level. Corneal biomechanical parameters and CCT values were not significantly different than those in age-matched and sex-matched healthy individuals. 2014 Springer-Verlag.
Publication type: Journal: Article
Source: EMBASE

7: Diabetes mellitus and risk of age-related macular degeneration: A systematic review and meta-analysis
Citation: PLoS ONE, September 2014, vol./is. 9/9, 1932-6203 (19 Sep 2014)
Author(s): Chen X., Rong S.S., Xu Q., Tang F.Y., Liu Y., Gu H., Tam P.O.S., Chen L.J., Brelen M.E., Pang C.P., Zhao C.
Language: English
Abstract: Age-related macular degeneration (AMD) is a major cause of severe vision loss in elderly people. Diabetes mellitus is a common endocrine disorder with serious consequences, and diabetic retinopathy (DR) is the main ophthalmic complication. DR and AMD are different diseases and we seek to explore the relationship between diabetes and AMD. MEDLINE, EMBASE, and the Cochrane Library were searched for potentially eligible studies. Studies based on longitudinal cohort, cross-sectional, and case-control associations, reporting evaluation data of diabetes as an independent factor for AMD were included. Reports of relative risks (RRs), hazard ratios (HRs), odds ratio (ORs), or evaluation data of diabetes as an independent factor for AMD were included. Review Manager and STATA were used for the meta-analysis. Twenty four articles involving 27 study populations were included for meta-analysis. In 7 cohort studies, diabetes was shown to be a risk factor for AMD (OR, 1.05; 95% CI, 1.00-1.14). Results of 9 cross-sectional studies revealed consistent association of diabetes with AMD (OR, 1.21; 95% CI, 1.00-1.45), especially for late AMD (OR, 1.48; 95% CI, 1.44-1.51). Similar association was also detected for AMD (OR, 1.29; 95% CI, 1.13-1.49) and late AMD (OR, 1.16; 95% CI, 1.11-1.21) in 11 case-control studies. The pooled ORs for risk of neovascular AMD (nAMD) were 1.10 (95% CI, 0.96-1.26), 1.48 (95% CI, 1.44-1.51), and 1.15 (95% CI, 1.11-1.21) from cohort, cross-sectional and case-control studies, respectively. No obvious divergence existed among different ethnic groups. Therefore, we find diabetes a risk factor for AMD, stronger for late AMD than earlier
stages. However, most of the included studies only adjusted for age and sex; we thus cannot rule out confounding as a potential explanation for the association. More well-designed prospective cohort studies are still warranted to further examine the association.

Publication type: Journal: Review
Source: EMBASE
Full text: Available ProQuest at PLoS ONE

8: Diabetes mellitus as a risk factor for open-angle glaucoma: A systematic review and meta-analysis
Citation: PLoS ONE, August 2014, vol./is. 9/8, 1932-6203 (19 Aug 2014)
Author(s): Zhou M., Wang W., Huang W., Zhang X.
Language: English
Abstract: Objective: To determine the association between diabetes mellitus (DM) and primary open-angle glaucoma (POAG). Methods: This is a systematic review and meta-analysis of case-control and cohort studies. The literature search included two databases (PubMed and Embase) and the reference lists of the retrieved studies. Separate meta-analyses for case-control studies and cohort studies were conducted using random-effects models, with results reported as adjusted odds ratios (ORs) and relative risks (RRs), respectively. Results: Thirteen studies - seven case-control studies and six population-based cohort studies - were included in this meta-analysis. The pooled RR of the association between DM and POAG based on the risk estimates of the six cohort studies was 1.40 (95% CI, 1.25-1.57). The pooled OR of the association between DM and POAG based on the risk estimates of the seven case-control studies was 1.49 (95% CI, 1.17-1.88). There was considerable heterogeneity among the case-control studies that reported an association between DM mellitus and POAG (P<0.001) and no significant heterogeneity among the cohort studies (P = 0.377). After omitting the case-control study that contributed significantly to the heterogeneity, the pooled OR for the association between DM and POAG was 1.35 (95% CI, 1.06-1.74). Conclusions: Individuals with DM have an increased risk of developing POAG. 2014 Zhou et al.
Publication type: Journal: Article
Source: EMBASE
Full text: Available ProQuest at PLoS ONE

9: Diabetic retinopathy: Current and future methods for early screening from a retinal hemodynamic and geometric approach
Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(431-442), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Leontidis G., Al-Diri B., Hunter A.
Language: English
Abstract: Diabetic retinopathy (DR) is a major disease and is the number one cause of blindness in the UK. In England alone, 4200 new cases appear every year and 1280 lead to blindness. DR is a result of diabetes mellitus, which affects the retina of the eye and specifically the vessel structure. Elevated levels of glucose cause a malfunction in the cell structure, which affects the vessel wall and, in severe conditions, leads to their breakage. Much research has been carried out on detecting the different stages of DR but not enough versatile research has been carried out on the detection of early DR before the appearance of any lesions. In this review, the authors approach the topic from the functional side of the human eye and how hemodynamic factors that are impaired by diabetes affect the vascular structure.
Publication type: Journal: Review
Source: EMBASE
Full text: Available ProQuest at PLoS One

10: Effect of age and other factors on macular pigment optical density measured with resonance Raman spectroscopy
Citation: Graefe’s Archive for Clinical and Experimental Ophthalmology, August 2014, vol./is. 252/8(1221-1228), 0721-832X;1435-702X (August 2014)
Author(s): Obana A., Gohto Y., Tanito M., Okazaki S., Gellermann W., Bernstein P.S., Ohira A.
Language: English
Abstract: Background: Macular pigment is a defense system against phototoxic damage of the retina by visible light. It is still under debate whether or not macular pigment optical density (MPOD) levels decline with age, because the age effect varied depending on the technique used to measure MPOD levels. Resonance Raman spectroscopy (RRS) is an objective method to measure MPOD, and studies using RRS showed a drastic age-related decline of MPOD levels; however, since RRS measurements are influenced by cataracts, it has been argued that the age-related decline of RRS measurements is an artifact from lens changes in aged subjects. In the present study, MPOD levels were measured with RRS in pseudophakic eyes, and the effects of age and other factors on MPOD levels were investigated. Methods: The subjects included 144 patients with no fundus disorders who received cataract surgery with untinted intraocular lens implantation. MPOD levels were measured in 144 eyes using integral RRS 1 day post surgery. Factors potentially associated with MPOD levels such as age, gender, smoking habits, body mass index, diabetes, glaucoma, axial length, pupil diameter, spherical equivalent refractive error, and foveal thickness were examined by multiple regression analysis. Results: The macular pigment RRS
levels ranged from 776 to 11,815 Raman counts, with an average level of 4,375+1,917 (standard deviation [SD]) Raman counts. Multiple regression analysis revealed that age and axial length were significantly correlated with low MPOD values (regression coefficient of -59 for age and -404 for axial length, respectively). No significant correlations were observed for other factors. Conclusions: After removing the potentially confounding effect of age-related lens yellowing on the RRS measurements, age remained a significant patient parameter for lowered MPOD levels. MPOD levels were found to decline by more than 10% each decade. Axial length was also a negative predictor of MPOD levels. Since the present study included only patients aged 50 years and older, the effects of age and other factors on MPOD levels for younger subjects remain unknown. 2014 Springer-Verlag.

**Publication type:** Journal: Article  
**Source:** EMBASE

**11: Effect of gestational age and birthweight on the risk of strabismus among premature infants**  
**Citation:** JAMA Pediatrics, September 2014, vol./is. 168/9(850-856), 2168-6203 (01 Sep 2014)  
**Author(s):** Gulati S., Andrews C.A., Apkarian A.O., Musch D.C., Lee P.P., Stein J.D.  
**Language:** English  
**Abstract:** Importance Strabismus causes irreversible vision loss if not detected and treated early. It is unclear whether birth weight (BW) and gestational age (GA) are risk factors for strabismus. Objective To estimate the effect of BW and GA on the likelihood of premature infants developing strabismus. Design, Setting, and Participants In this longitudinal cohort analysis, we monitored a group of premature children from birth to determine the proportion that developed strabismus and the timing of the first strabismus diagnosis. Multivariable Cox regression analyses assessed the relationships of BW and GA with the development of strabismus. Regression models were adjusted for other risk factors for strabismus, sociodemographic factors, and ocular comorbidities. The analysis included 38,055 otherwise healthy children born prematurely who were enrolled for more than 6 months in a nationwide US managed care network between 2001 and 2011 in communities throughout the United States. EXPOSURES Birth weight less than 2000 g or GA of 32 weeks or less. Main Outcomes and Measures Hazard ratios (HRs) for strabismus with 95%CIs. Results Of 38,055 otherwise healthy children who were born prematurely, 583 received a diagnosis of strabismus later in life. The cumulative incidence of strabismus was 3.0% at 5 years. Controlling for GA and other covariates, infants born with BW less than 2000 g had a 61% increased risk for strabismus (HR, 1.61; 95%CI, 1.22-2.13) of developing strabismus. Controlling for BW and other covariates, there was no significant association between strabismus and GA (HR, 0.98; 95%CI, 0.69-1.38). Among premature infants with BW of less than 2000 g, a GA of 32 weeks or less conveyed an additional increased risk for developing strabismus relative to infants born after 32 weeks (HR, 1.27; 95%CI, 0.86-1.88). In contrast, among infants with a GA of 32 weeks or less, BW of less than 2000 g conveyed a 14-fold increase in the risk of strabismus relative to BW of 2000 g or more (HR, 14.39; 95%CI, 1.99-104.14). Conclusions and Relevance Independent of GA, very low BW conferred a large increase in strabismus risk among premature infants. In contrast, independent of BW, GA did not significantly affect the risk of strabismus. Updates to existing guidelines in the pediatric and ophthalmic literature should be considered, highlighting the importance of BW rather than GA and alerting clinicians about the need for careful monitoring of premature infants with low BW for strabismus.  
**Publication type:** Journal: Article  
**Source:** EMBASE

**12: Efficacy and safety of pain relief medications after photorefractive keratectomy: Review of prospective randomized trials**  
**Citation:** Journal of Cataract and Refractive Surgery, October 2014, vol./is. 40/10(1716-1730), 0886-3350;1873-4502 (01 Oct 2014)  
**Author(s):** Faktorovich E.G., Melwani K.  
**Language:** English  
**Abstract:** The objective of this review was to provide a comprehensive overview and comparison of results from all prospective randomized trials published to date of medications used to treat pain after photorefractive keratectomy (PRK). A PubMed database search revealed 23 prospective and randomized studies. They included the following classes of medications: nonsteroidal antiinflammatory drugs (NSAIDs), anesthetics, opiates, acetaminophen, gabapentin, and pregabalin. The studies found that although the efficacy of drugs tended to be similar, tetracaine 1% and nepafenac 0.1% tended to have the most analgesic effect. Delayed corneal reepithelialization was a common side effect of both topical anesthetics and topical NSAIDs. Tetracaine 1% resulted in the most significant delay in reepithelialization when tested against placebo control compared with other topical medications tested against placebo. Concomitant use of topical NSAIDs and topical anesthetics, especially tetracaine, may have to be avoided to minimize the risk for delayed corneal healing.  
**Publication type:** Journal: Review  
**Source:** EMBASE  
**Full text:** Available [Journal of cataract and refractive surgery](https://www.jcri.org) at Salisbury District Hospital Healthcare Library
13: Efficacy and safety of tafluprost 0.0015% and timolol maleate 0.5% fixed combination in patients with ocular hypertension or open-angle glaucoma

Citation: Expert Opinion on Pharmacotherapy, October 2014, vol./is. 15/15(2255-2262), 1465-6566;1744-7666 (01 Oct 2014)

Author(s): Lorenz K., Pfeiffer N.

Language: English

Abstract: Introduction: Lowering intraocular pressure (IOP) is at present the only therapeutic approach to the treatment of glaucoma proven to be successful. The choice of therapy must take into account efficacy, tolerability, safety, quality of life, adherence and cost. Monotherapy fails to achieve a satisfactory IOP reduction in 40-75% of glaucoma patients after > 2 years of therapy. So far, three prostaglandin/timolol maleate 0.5% fixed combinations (FCs) are available. Areas covered: This review provides a background on the tafluprost-timolol FC (TTFC, Santen Oy) and its individual compounds. It summarizes the data on efficacy and safety, including comparative data with prostaglandin/timolol FCs already available. Expert opinion: Tafluprost is a preservative-free prostaglandin analog with a similar IOP efficacy when compared with other prostaglandin analogs. However, its improved adverse effect profile seems to be beneficial in patients sensitive to preservatives. The preservative-free TTFC has no market authorization yet. Only one Phase III trial was published so far, but results are promising in terms of efficacy, tolerability and safety. It is likely that the TTFC will play a role in the treatment of open-angle glaucoma and ocular hypertension.

Publication type: Journal: Review

Source: EMBASE

14: Efficacy of intravitreal dexamethasone implant for prostaglandin-induced refractory pseudophakic cystoid macular edema: Case report and review of the literature

Citation: Clinical Ophthalmology, July 2014, vol./is. 8/(1253-1257), 1177-5467;1177-5483 (02 Jul 2014)

Author(s): Sacchi M., Villani E., Gildaroni F., Nucci P.

Language: English

Abstract: Background: Macular edema is a known complication even after uneventful cataract surgery. The chronic use of prostaglandin analogs is a risk factor for the development of pseudophakic cystoid macular edema (CME). Nonsteroidal anti-inflammatory drugs (NSAIDs) are considered first-line therapy but refractory postsurgical CME represents a therapeutic challenge, as there is not an evidence-based treatment. Objective: To report the use of a single implant of intravitreal dexamethasone for tafluprost-associated pseudophakic CME refractory to NSAIDs and to sub-Tenon's corticosteroid injections. Case report: A 64-year-old female with ocular hypertension treated with tafluprost experienced decreased vision (visual acuity 20/60) and metamorphopsia 2 months after uneventful cataract extraction. Spectral domain optical coherence tomography (SD-OCT) revealed CME. After 1 month of topical and oral NSAIDs, CME was still evident on SD-OCT (visual acuity 20/50). Two sub-Tenon's betamethasone injections were performed at a 2-week interval. As CME was still present, 2 months after the diagnosis of CME (visual acuity 20/40), the patient underwent a single dexamethasone intravitreal implant. One month later, macular appearance was normal, and visual acuity increased to 20/30. This result was maintained throughout the 6 months of follow-up. Conclusion: In this report, a single implant of intravitreal dexamethasone successfully treated pseudophakic CME associated with the use of prostaglandin analogs unresponsive to NSAIDs and sub-Tenon's betamethasone. The results of this report need to be corroborated by powered, prospective, randomized trials. The need for repeated treatments as well as the retreatment interval in patients requiring more than a single injection are issues still needing further investigations. 2014 Sacchi et al.

Publication type: Journal: Article

Source: EMBASE

Full text: Available Clinical Ophthalmology at Clinical Ophthalmology

15: Efficacy of nonpenetrating glaucoma surgery in the treatment of open angle glaucoma: A systematic review

Citation: Academic Journal of Second Military Medical University, 2014, vol./is. 35/2(129-135), 0258-879X (2014)


Language: Chinese

Abstract: Objective To evaluate the intraocular pressure (IOP)-lowering effects achieved by nonpenetrating glaucoma surgery (NPGS) in patients with open angle glaucoma. Methods Randomized controlled trials evaluating patients with primary and secondary open angle glaucoma treated with NPGS were identified and were subjected to systematic review analysis. The main outcome measurements included the percentage of IOP reduction and the complete success rate. The pooled estimates were calculated using the random effect model by comprehensive meta-analysis software version 2. 0. Results Both deep sclerectomy (DS) and viscocanalostomy (VCO) were less effective than trabeculectomy (TE) in lowering IOP, with the of IOP reduction percent at 2 years being 35. 2% for DS, 30. 2% for VCO, and 45. 6% for TE. Intraoperative use of implants and mitomycin C (MMC) improved IOP-lowering effects of DS, with IOP reduction at percent 2 years being 41. 1% and 41. 7%, respectively. The complete success rates at 4 years were 35. 4% for DS and 22. 7% for VCO, lower than that of TE (47. 6%). The complete success rates of DS with implants and MMC were 64. 6% and 52. 1% at 4 years, respectively, both being higher than that of primary DS. NPGS caused less complications than TE. Conclusion Primary deep
sclerectomy and primary viscocanalostomy can significantly lower IOP and have less complication than TE. However, the IOP-lowering effect of NPGS is slighter than primary TE. The efficacy of DS can be improved by intraoperative use of implants and MMC.

**Publication type:** Journal: Article

**Source:** EMBASE

16: **Evolving trends in retinal detachment surgery**

**Citation:** Expert Review of Ophthalmology, October 2014, vol./is. 9/5(455-465), 1746-9899;1746-9902 (01 Oct 2014)

**Author(s):** Lee J., Huang S.

**Language:** English

**Abstract:** Successful management of retinal detachment is dependent on the underlying etiology, complexity of pathoanatomy and unique patient characteristics. A growing therapeutic armamentarium has led to more options for vitreoretinal surgery and a greater variety of surgeon choice. Recent advancements in technology and surgical equipment have led to changes in the practice patterns of vitreoretinal surgeons. This paper will review the major aspects of retinal detachment, the history of retinal detachment management and summarize the emerging trends and the preferred practice patterns of vitreoretinal surgeons in the management of retinal detachment.

**Publication type:** Journal: Review

**Source:** EMBASE

17: **Factors associated with lifetime risk of open-angle glaucoma blindness**

**Citation:** Acta Ophthalmologica Scandinavica, August 2014, vol./is. 92/5(421-425), 1755-375X;1755-3768 (August 2014)

**Author(s):** Peters D., Bengtsson B., Heijl A.

**Language:** English

**Abstract:** Purpose: To investigate factors associated with bilateral glaucoma blindness, particularly factors available at the time of diagnosis. Methods: Retrospective chart review of all patients with primary open-angle glaucoma (POAG) or pseudoexfoliative glaucoma (PEXG) followed at the Department of Ophthalmology or Low Vision Center of Skane University Hospital, Malmo, Sweden, who died between January 2006 and June 2010. Disease stage at diagnosis was defined by a simplified version of Mills' glaucoma staging system using perimetric mean deviation (MD) to define six stages of severity. Blindness was defined according to WHO criteria. We used logistic regression analysis to examine the association between risk factors and glaucoma blindness. Results: Four hundred and 23 patients were included; 60% POAG and 40% PEXG. Sixty-four patients (15%) became blind from glaucoma. Blind patients had significantly longer mean duration with diagnosed disease than patients who did not go blind (14.8 years + 5.8 versus 10.6 years + 6.5, p < 0.001). The risk of blindness increased with higher intraocular pressure (IOP) (OR 1.08, 95% CI 1.03-1.14) and with each stage of more advanced field loss at time of diagnosis (OR 1.80 95% CI 1.34-2.41). Older age at death was also associated with an increased risk of blindness (OR 1.09 95% CI 1.03-1.14), while age at diagnosis was unimportant. PEXG was not an independent risk factor for blindness. Conclusions: Higher IOP and worse visual field status at baseline were important risk factors, as was older age at death. 2013 Acta Ophthalmologica Scandinavica Foundation. Published by John Wiley & Sons Ltd.

**Publication type:** Journal: Article

**Source:** EMBASE

18: **Functional architecture of the retina: Development and disease**

**Citation:** Progress in Retinal and Eye Research, September 2014, vol./is. 42/(44-84), 1350-9462;1873-1635 (September 2014)

**Author(s):** Hoon M., Okawa H., Della Santina L., Wong R.O.L.

**Language:** English

**Abstract:** Structure and function are highly correlated in the vertebrate retina, a sensory tissue that is organized into cell layers with microcircuits working in parallel and together to encode visual information. All vertebrate retinas share a fundamental plan, comprising five major neuronal cell classes with cell body distributions and connectivity arranged in stereotypic patterns. Conserved features in retinal design have enabled detailed analysis and comparisons of structure, connectivity and function across species. Each species, however, can adopt structural and/or functional retinal specializations, implementing variations to the basic design in order to satisfy unique requirements in visual function. Recent advances in molecular tools, imaging and electrophysiological approaches have greatly facilitated identification of the cellular and molecular mechanisms that establish the fundamental organization of the retina and the specializations of its microcircuits during development. Here, we review advances in our understanding of how these mechanisms act to shape structure and function at the single cell level, to coordinate the assembly of cell populations, and to define their specific circuitry. We also highlight how structure is rearranged and function is disrupted in disease, and discuss current approaches to re-establish the intricate functional architecture of the retina. 2014 Elsevier Ltd.

**Publication type:** Journal: Review

**Source:** EMBASE
19: Guidelines for the management of neovascular age-related macular degeneration by the European Society of Retina Specialists (EURETINA)

**Citation:** British Journal of Ophthalmology, September 2014, vol./is. 98/9(1144-1167), 0007-1161;1468-2079 (September 2014)

**Author(s):** Schmidt-Erfurth U., Chong V., Loewenstein A., Larsen M., Souied E., Schlingemann R., Eldem B., Mones J., Richard G., Bandello F.

**Language:** English

**Abstract:** Age-related macular degeneration (AMD) is still referred to as the leading cause of severe and irreversible visual loss world-wide. The disease has a profound effect on quality of life of affected individuals and represents a major socioeconomic challenge for societies due to the exponential increase in life expectancy and environmental risks. Advances in medical research have identified vascular endothelial growth factor (VEGF) as an important pathophysiological player in neovascular AMD and intraocular inhibition of VEGF as one of the most efficient therapies in medicine. The wide introduction of anti-VEGF therapy has led to an overwhelming improvement in the prognosis of patients affected by neovascular AMD, allowing recovery and maintenance of visual function in the vast majority of patients. However, the therapeutic benefit is accompanied by significant economic investments, unresolved medicolegal debates about the use of off-label substances and overwhelming problems in large population management. The burden of disease has turned into a burden of care with a dissociation of scientific advances and real-world clinical performance. Simultaneously, ground-breaking innovations in diagnostic technologies, such as optical coherence tomography, allows unprecedented high-resolution visualisation of disease morphology and provides a promising horizon for early disease detection and efficient therapeutic follow-up. However, definite conclusions from morphologic parameters are still lacking, and valid biomarkers have yet to be identified to provide a practical base for disease management. The European Society of Retina Specialists offers expert guidance for diagnostic and therapeutic management of neovascular AMD supporting healthcare givers and doctors in providing the best state-of-the-art care to their patients.

**Publication type:** Journal: Review

**Source:** EMBASE

**Full text:** Available *The British journal of ophthalmology* at British Journal of Ophthalmology

20: Injection frequency and anatomic outcomes 1 year following conversion to aflibercept in patients with neovascular age-related macular degeneration

**Citation:** British Journal of Ophthalmology, September 2014, vol./is. 98/9(1205-1207), 0007-1161;1468-2079 (September 2014)

**Author(s):** Messenger W.B., Campbell J.P., Faridi A., Shippey L., Bailey S.T., Lauer A.K., Flaxel C.J., Hwang T.S.

**Language:** English

**Abstract:** Background/Aim: To evaluate the clinical, anatomic and functional effects of conversion to aflibercept following ranibizumab and/or bevacizumab in patients with neovascular age-related macular degeneration (AMD). Methods: A retrospective review of patients with neovascular AMD treated with intravitreal ranibizumab and/or bevacizumab who were switched to aflibercept was performed. The primary outcome was change in injection frequency in the year following the change. Secondary outcomes included change in central macular thickness (CMT) at 6 months and 1 year, presence of intraretinal and subretinal fluid at 6 months and visual acuity at 1 year. Results: A total of 109 eyes with neovascular AMD were switched to aflibercept and met inclusion criteria. Overall, aflibercept injection frequency was unchanged with patients receiving 7.4 antivascular endothelial growth factor (VEGF) injections the year prior to conversion compared with 7.2 aflibercept injections in the year following (p=0.47). However, the change to aflibercept was associated with improvement in CMT from 324 to 295 mum (p=0.0001) at 6 months and 299 mum (p=0.0047) at 1 year. There was no effect on visual acuity at 1 year. In a subgroup analysis, patients who had received >10 anti-VEGF injections in the year prior had fewer injections (11.1 to 8.4, p<0.0001) and clinic visits (13.9 to 9.6, p<0.0001) as well as a significant decrease in CMT (-35 mum, p=0.02). Conclusions: In our population, switching to aflibercept therapy was not associated with a change in injection frequency nor improved visual acuity, but was associated with improved CMT at 6 months and 1 year. In patients who received at least 10 anti-VEGF injections in the year prior, transitioning to aflibercept was associated with a reduced injection frequency and CMT, suggesting potential cost savings in this population.

**Publication type:** Journal: Article

**Source:** EMBASE

**Full text:** Available *The British journal of ophthalmology* at British Journal of Ophthalmology

21: Intracameral cefuroxime and moxifloxacin used as endophthalmitis prophylaxis after cataract surgery: Systematic review of effectiveness and cost-effectiveness

**Citation:** Clinical Ophthalmology, August 2014, vol./is. 8/(1515-1522), 1177-5467;1177-5483 (14 Aug 2014)

**Author(s):** Linertova R., Abreu-Gonzalez R., Garcia-Perez L., Alonso-Plasencia M., Cordoves-Dorta L.M., Abreu-Reyes J.A., Serrano-Aguilar P.

**Language:** English
Abstract: Postoperative endophthalmitis is one of the most serious potential complications of ocular lens surgery. Its incidence can be reduced by means of antibiotic prophylaxis. Although the prophylactic use of intracameral cefuroxime has been extended, other drugs, such as moxifloxacin, have arisen as alternatives. We performed a systematic literature review on the effectiveness and efficiency of intracameral cefuroxime and moxifloxacin for the prophylaxis of postoperative endophthalmitis after cataract surgery. Several bibliographic databases were searched up to October 2010 and were updated up to January 2013. Outcomes were the onset of endophthalmitis after surgery and the cost-effectiveness ratio of using both antibiotic prophylaxis alternatives. The following were included: a clinical trial reported in two papers, six observational studies, and an economic evaluation. All studies assessed cefuroxime compared with another antibiotic prophylaxis or no prophylaxis. The only randomized controlled trial performed by the European Society of Cataract and Refractive Surgery found that intracameral cefuroxime is significantly more effective than not using prophylaxis or the use of a topical antibiotic. The observational studies support these results. The economic evaluation compared different prophylaxis regimens and concluded that intracameral cefuroxime showed the best cost-effectiveness ratio. Both the observational studies and the economic evaluation have methodological limits that reduce their validity. This review confirmed that cefuroxime can prevent endophthalmitis after cataract surgery. Further randomized controlled trials, with large sample sizes, are required to compare different antibiotic prophylaxis regimens. 2014 Linertova et al.

Publication type: Journal: Review
Source: EMBASE
Full text: Available Clinical Ophthalmology at Clinical Ophthalmology

22: Intravitreal drug delivery in retinal disease: Are we out of our depth?
Citation: Expert Opinion on Drug Delivery, October 2014, vol./is. 11/10(1575-1590), 1742-5247;1744-7593 (01 Oct 2014)
Author(s): Thakur S.S., Barnett N.L., Donaldson M.J., Parekh H.S.
Language: English
Abstract: Introduction: With the ever-increasing global burden of retinal disease, there is an urgent need to vastly improve formulation strategies that enhance posterior eye delivery of therapeutics. Despite intravitreal administration having demonstrated notable superiority over other routes in enhancing retinal drug availability, there still exist various significant physical/biochemical barriers preventing optimal drug delivery into the retina. A further complication lies with an inability to reliably translate laboratory-based retinal models into a clinical setting. Several formulation approaches have recently been evaluated to improve intravitreal therapeutic outcomes, and our aim in this review is to highlight strategies that hold the most promise. Areas covered: We discuss the complex barriers faced by the intravitreal route and examine how formulation strategies including implants, nanoparticulate carriers, viral vectors and sonotherapy have been utilized to attain both sustained delivery and enhanced penetration through to the retina. We conclude by highlighting the advances and limitations of current in vitro, ex vivo and in vivo retinal models in use by researchers globally. Expert opinion: Various nanoparticle compositions have demonstrated the ability to overcome the retinal barriers successfully; however, their utility is limited to the laboratory setting. Optimization of these formulations and the development of more robust experimental retinal models are necessary to translate success in the laboratory into clinically efficacious outcomes.

Publication type: Journal: Review
Source: EMBASE

23: Keratoconus: Tissue Engineering and Biomaterials
Citation: Journal of Functional Biomaterials, 2014, vol./is. 5/3(111-134), 2079-4983 (2014)
Author(s): Karamichos D., Hjortdal J.
Language: English
Abstract: Keratoconus (KC) is a bilateral, asymmetric, corneal disorder that is characterized by progressive thinning, steepening, and potential scarring. The prevalence of KC is stated to be 1 in 2000 persons worldwide; however, numbers vary depending on size of the study and regions. KC appears more often in South Asian, Eastern Mediterranean, and North African populations. The cause remains unknown, although a variety of factors have been considered. Genetics, cellular, and mechanical changes have all been reported; however, most of these studies have proven inconclusive. Clearly, the major problem here, like with any other ocular disease, is quality of life and the threat of vision loss. While most KC cases progress until the third or fourth decade, it varies between individuals. Patients may experience periods of several months with significant changes followed by months or years of no change, followed by another period of rapid changes. Despite the major advancements, it is still uncertain how to treat KC at early stages and prevent vision impairment. There are currently limited tissue engineering techniques and/or "smart" biomaterials that can help arrest the progression of KC. This review will focus on current treatments and how biomaterials may hold promise for the future.

Publication type: Journal: Review
Source: EMBASE

24: Lacrimal gland amyloidosis: A clinicopathological correlation of a rare disorder and review of literature
Citation: Ocular Immunology and Inflammation, August 2014, vol./is. 22/4(300-305), 0927-3948;1744-5078 (August 2014)
Abstract: Purpose: To report a rare case of primary localized lacrimal gland amyloidosis and present a detailed review of the literature. Method: A 72-year-old woman presented with painless mass of 3 years’ duration in the supero-temporal left orbit arising from the lacrimal gland. The patient underwent an excision biopsy and a further systemic workup and was diagnosed to have a primary, localized lacrimal gland amyloidosis. Only 18 cases have been reported in the literature. Based on the published cases and the present case, the clinical profiles, radiological features, and outcomes of this infrequent entity are discussed. Conclusion: Lacrimal gland amyloidosis, although rare, should be a differential diagnosis for a lacrimal gland mass, especially in elderly females. Review of the literature provides a clearer understanding of the presentations and management. 2014 Informa Healthcare USA, Inc.

Publication type: Journal: Review
Source: EMBASE

Citation: Acta Ophthalmologica, September 2014, vol./is. 92(6)(571-576), 1755-375X;1755-3768 (September 2014)
Author(s): Ostri C., Lux A., Lund-Andersen H., La Cour M.
Language: English
Abstract: Retrospective review of patient files from a large diabetes centre between 1996 and 2010. Surgical history was obtained from the Danish National Patient Register. Follow-up intervals were 3 months and 1, 3, 5 and 10 years after surgery. Results In total, 167 patients had diabetic vitrectomy indicated for non-clearing vitreous haemorrhage (47%) and tractional retinal detachment (53%). The proportion of patients with visual acuity >0.3 increased from 29% before surgery to 60% after 3 months (p < 0.001, chi-square test). Median visual acuity increased from 0.06 before surgery to 0.3 after 3 months (p < 0.001, paired signed-rank test) and 0.4 after 1 year (p = 0.009) before stabilizing. No significant long-term prognostic factors were identified for non-clearing vitreous haemorrhage patients. For tractional retinal detachment patients, use of silicone oil was associated with low vision (visual acuity<0.3) after 3 months and 1, 3 and 5 years (all odds ratios >4 and p-values < 0.03, logistic regression). Of the 134 patients who were phakic after surgery, 43% and 29% were phakic after 5 and 10 years, respectively. Use of silicone oil increased the risk of cataract surgery (p = 0.009, log-rank test). Conclusions Most diabetic vitrectomy patients stand to gain visual acuity >0.3 after surgery and a stable long-term visual acuity after 1 year. The only consistent long-term predictor of low vision after surgery is use of silicone oil for endotamponade. About 2/3 of phakic patients will subsequently have cataract surgery the first 10 years after diabetic vitrectomy. 2013 Acta Ophthalmologica Scandinavica Foundation. Published by John Wiley & Sons Ltd.
Publication type: Journal: Article
Source: EMBASE

26: Macular hole surgery: A review of past, present and latest treatments for macular hole
Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(443-453), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Bhavsar A.R., Gomez J., Kelly N.E., Wendel R.
Language: English
Abstract: Macular holes are now a treatable condition. In the 21 years since the concept of macular hole surgery was introduced at the American Academy of Ophthalmology meeting in New Orleans, and the presenter (Neil Kelly) was laughed off the stage, the technique has progressed to the point that the authors have heard busy surgeons stand up in presentations and management. 2014 Informa Healthcare USA, Inc.
Publication type: Journal: Review
Source: EMBASE

27: Management of mydriasis and pain in cataract and intraocular lens surgery: Review of current medications and future directions
Citation: Clinical Ophthalmology, July 2014, vol./is. 8/(1281-1289), 1177-5467;1177-5483 (03 Jul 2014)
Author(s): Grob S.R., Gonzalez-Gonzalez L.A., Daly M.K.
Language: English
Abstract: The maintenance of mydriasis and the control of postoperative pain and inflammation are critical to the safety and success of cataract and intraocular lens replacement surgery. Appropriate mydriasis is usually achieved by topical and/or intracameral administration of anticholinergic agents, sympathomimetic agents, or both, with the most commonly used being cyclopentolate, tropicamide, and phenylephrine. Ocular inflammation is common after cataract surgery. Topical steroids and nonsteroidal anti-inflammatory drugs are widely used because they have been proved effective to control postsurgical inflammation and decrease pain. Topical nonsteroidal anti-inflammatory drugs have also been shown to help maintain dilation. However, use of multiple preoperative drops for pupil dilation, inflammation, and pain control have been shown to be time consuming, resulting in delays to the operating room, and they cause dissatisfaction among
perioperative personnel; their use can also be associated with systemic side effects. Therefore, ophthalmologists have been in search of new options to streamline this process. This article will review the current medications commonly used for intraoperative mydriasis, as well as pain and inflammation control. In addition, a new combination of ketorolac, an anti-inflammatory agent, and phenylephrine, a mydriatic agent has recently been designed to maintain intraoperative mydriasis and to reduce postoperative pain and irritation from intraocular lens replacement surgery. Two Phase III clinical trials evaluating this combination have demonstrated statistically significant differences when compared to placebo in maintaining intraoperative mydriasis (P<0.00001) and in reducing pain in the early postoperative period (P=0.0002). This medication may be of benefit for use in cataract and lens replacement surgery in the near future. 

**Publication type:** Journal: Review  
**Source:** EMBASE  
**Full text:** Available Clinical Ophthalmology at Clinical Ophthalmology

**28: Nitric Oxide (NO): An emerging target for the treatment of glaucoma**  
**Citation:** Investigative Ophthalmology and Visual Science, 2014, vol./is. 55/8(5005-5015), 0146-0404;1552-5783 (2014)  
**Author(s):** Cavet M.E., Vittitow J.L., Impagnatiello F., Ongini E., Bastia E.  
**Language:** English  
**Abstract:** The predominant risk factor for the progression of glaucoma is an increase in IOP, mediated via a reduction in aqueous outflow through the conventional (trabecular meshwork and Schlemm's canal) outflow pathway. Current IOP lowering pharmacological strategies target the uveoscleral (nonconventional) outflow pathway or aqueous humor production; however, to date no therapy that primarily targets the conventional pathway exists. Nitric oxide (NO) is an intracellular signaling molecule produced by endogenous NO synthases, well-known for its key role in vasodilation, through its action on smooth muscle cells. Under physiological conditions, NO mediates a multitude of diverse ocular effects, including maintenance of IOP. Nitric oxide donors have been shown to mediate IOP-lowering effects in both preclinical models and clinical studies, primarily through cell volume and contractility changes in the conventional outflow tissues. This review is focused on evaluating the current knowledge of the role and mechanism of action of endogenous NO and NO donors in IOP regulation. Data on key additional functions of NO in glaucoma pathology (i.e., ocular blood flow and effects on optic neuropathy) are also summarized. The potential for future therapeutic application of NO in the treatment of glaucoma is then discussed. The Association for Research in Vision and Ophthalmology, Inc.  
**Publication type:** Journal: Review  
**Source:** EMBASE  
**Full text:** Available Highwire Press at Investigative Ophthalmology and Visual Science

**29: Noninvasive assessment of retinal vascular oxygen content among normal and diabetic human subjects: A study using hyperspectral computed tomographic imaging spectroscopy**  
**Citation:** Retina, September 2014, vol./is. 34/9(1854-1860), 0275-004X;1539-2864 (September 2014)  
**Author(s):** Kashani A.H., Lopez Jaime G.R., Saati S., Martin G., Varma R., Humayun M.S.  
**Language:** English  
**Abstract:** PURPOSE:: This pilot study was aimed to demonstrate the clinical feasibility of using hyperspectral computed tomographic spectroscopy to measure blood oxygen content in human retinal vessels. METHODS:: All procedures were performed under a University of Southern California Institutional Review Board-approved protocol and after obtaining informed consent. Fifty-seven subjects with and without diabetic retinopathy were dilated for standard fundus photography. Fundus photographs and retinal vascular oxygen measurements (oximetry) were made using a custom-made hyperspectral computed tomographic imaging spectrometer coupled to a standard fundus camera. Oximetry measurements were made along arteries (Aox) and veins (Vox) within vessel segments that were 1 to 2 disk diameters from the optic disk. RESULTS:: For all control subjects (n = 45), mean Aox and Vox were 93 ± 7% and 65 ± 5% (P = 0.001), respectively. For all diabetic subjects (n = 12), mean Aox and Vox were 90 ± 7% and 68 ± 5% (P = 0.001), respectively. In subjects with proliferative diabetic retinopathy, Aox was significantly lower, and Vox was significantly higher than other groups (85 ± 4% and 71 ± 4%, respectively; P = 0.04, analysis of variance). There was a highly significant difference in the arteriovenous difference between subjects with proliferative diabetic retinopathy and those in the control group (14 vs. 26%, P = 0.003). CONCLUSION:: Hyperspectral computed tomographic spectroscopy is a clinically feasible method for measurement and analysis of vascular oxygen content in retinal health and disease. This study uses the techniques relevant to oximetry; however, the breadth of spectral data available through this method may be applicable to study other anatomical and functional features of the retina in health and disease. Copyright by Ophthalmic Communications Society, Inc.  
**Publication type:** Journal: Article  
**Source:** EMBASE  
**Full text:** Available Retina (Philadelphia, Pa.) at Retina

**30: Ocular manifestations of head injury and incidence of post-traumatic ocular motor nerve involvement in cases of head injury: A clinical review**
these strategies, however, is dependent on close monitoring and adherence to tightly defined re-

Conclusions To reduce treatment burden and provide a more individualized treatment strategy for n-

OCT qualitative and quantitative measures of disease activity did decrease injection burden while maintaining visual gains.

guided re-

monitoring with either VA

involving A

meta-

injection

anatomy, re-

patients treated with A

were grouped according to varying treatments, monitoring schedules, and re-

February 2013 involving A

AMD) patients. Data Sources Systematic reviews of biographic databas-

undertreating or overtreating patients, and drug

shown to be extremely variable. Therefore treating everyone on the same fixed or standard regimen has potential for

extre-

macular degeneration (AMD), the leading cause of blindness in older adults. Monthly intraocular injections however, are

mely burdensome to ophthalmologists, patients, and their families. Repeated injections also increase risks of

emcysis was found in 51.85 %, subconjunctival hemorrhage in 44.44 %, lid edema in 41.48 %, lacerated wound in 22.59
%

pupillary involvement in 21.04 %, ptosis in 6.73 %, cranial nerve palsy in 11.62 %, orbital fractures in 10.44 %, optic

nerve trauma in 4.04 %, and exposure keratitis in 4.21 %. Patients with bilaterally dilated or pinpoint fixed pupils had a 10
times higher risk of mortality than patients without pupillary involvement. Third nerve involvement was seen 2.85 times
more frequently in frontal and parietal region injuries compared to other sites of injury. The involvement of the sixth
nerve occurred 4.6 times more frequently in parietal region injuries compared to other sites of injury. 2014 Springer
Science+Business Media.

Publication type: Journal: Article
Source: EMBASE

31: Optical coherence tomography monitoring strategies for A-VEGF-Treated age-related macular degeneration: An evidence-based analysis

Citation: Ontario Health Technology Assessment Series, 2014, vol./is. 14/10(1-64), 1915-7398 (2014)
Author(s): Pron G.
Language: English
Abstract: Background New anti-angiogenesis pharmacotherapies have dramatically altered treatment of age-related macular degeneration (AMD), the leading cause of blindness in older adults. Monthly intraocular injections however, are extremely burdensome to ophthalmologists, patients, and their families. Repeated injections also increase risks of complications or adverse events. Although the pharmacokinetics of anti-vascular endothelial growth factor (A-VEGF) drugs are fairly well known, an individuals' AMD presentation and their pharmacodynamics or response to the drug has been shown to be extremely variable. Therefore treating everyone on the same fixed or standard regimen has potential for undertreating or overtreating patients, and drug costs are not trivial. Objectives To review monitoring strategies and to evaluate the role of optical coherence tomography (OCT) in guiding management of A-VEGF-treated neovascular AMD (n-AMD) patients. Data Sources Systematic reviews of biographic databases for studies published between 2008 and February 2013 involving A-VEGF-treated n-AMD patients monitored in longitudinal follow-up. Review Methods Studies were grouped according to varying treatments, monitoring schedules, and re-treatment protocols reported for n-AMD patients treated with A-VEGF. Several outcomes were evaluated across strategies including visual acuity (VA), retinal anatomy, re-treatment criteria and frequencies of clinical follow-up, OCT imaging investigations, and intravitreal injections. Results were summarized qualitatively, as heterogeneity in study objectives and methods precluded formal meta-analysis. Results A systematic review identified 18 randomized controlled trials (RCTs) and 20 observational studies involving A-VEGF treatment employing various monitoring and as-needed (PRN) re-treatment protocols. Several maintenance strategies were unsuccessful, resulting in lower VA gains and stabilization than monthly injections in A-VEGF-treated n-AMD. These included fixed quarterly treatment; fixed quarterly monitoring and PRN re-treatment; and monthly monitoring with either VA-guided re-treatment or quantitative-only VA/OCT- (central retinal thickness [CRT] > 100 mum) guided re-treatment. PRN re-treatment strategies with A-VEGF on the basis of monthly follow-up and rigorous reviews of OCT qualitative and quantitative measures of disease activity did decrease injection burden while maintaining visual gains. Gains in VA obtained with PRN re-treatment in usual clinical practice, however, were not as high as gains in clinical trials. Conclusions To reduce treatment burden and provide a more individualized treatment strategy for n-AMD patients, OCT/VA-guided PRN treatment strategies have become the preferred and the dominant maintenance strategy. Success of these strategies, however, is dependent on close monitoring and adherence to tightly defined re-treatment criteria.
Queen's Printer for Ontario, 2014.
Publication type: Journal: Article
Source: EMBASE

32: Progesterone as a potential neuroprotective treatment in the retina

Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(375-385), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Allen R.S., Stein D.G.
Diseases and injuries that affect the eye and cause vision loss are a serious problem worldwide, both in terms of economic impact and patient quality of life. Few effective treatments currently exist to address this significant unmet need. The authors review research on progesterone treatment in traumatic brain injury and stroke showing that this pleiotropic hormone is a successful neuroprotective treatment in a variety of animal models. The authors also describe the ocular disorders that they think are the best candidates for progesterone treatment, other treatments currently available, research relevant to bringing progesterone treatment to the eye, including evidence of progesterone and its receptors in the eye, the overlap between mechanisms involved in retinal diseases and mechanisms modulated by progesterone and research on progesterone in the eye so far. Progesterone's pleiotropic properties and its success in pre-clinical models of traumatic brain injury and stroke make it an attractive candidate as a therapy for some disorders affecting the retina. This review discusses progesterone as a potential neuroprotective treatment in the retina and optic nerve.

**Publication type:** Journal: Review  
**Source:** EMBASE

### 33: Proton beam irradiation for non-AMD CNV: 2-Year results of a randomised clinical trial

**Citation:** British Journal of Ophthalmology, September 2014, vol./is. 158/3(544-550.e1), 0007-1161;1468-2079 (September 2014)  
**Author(s):** Chen L., Kim I.K., Lane A.M., Gauthier D., Munzenrider J.E., Gragoudas E.S., Miller J.W.  
**Language:** English  
**Abstract:** Aims: To evaluate safety and visual outcomes after proton beam irradiation (PBI) therapy for subfoveal choroidal neovascularisation (CNV) secondary to causes other than age-related macular degeneration (AMD). Methods: This study is a prospective, unmasked and randomised clinical trial using two dosage regimens, conducted in the Massachusetts Eye and Ear Infirmary. The study included 46 patients with CNV secondary to non-AMD and best-corrected visual acuity of 20/320 or better. Patients were randomly assigned to receive 16 or 24 cobalt gray equivalents (CGE) of PBI in two equal fractions. Complete ophthalmological examinations, fundus photography and fluorescein angiography were performed at baseline and 6, 12, 18 and 24 months after treatment. Results: At 1 year after treatment, 82% and 72% lost fewer than 1.5 lines of vision in the 16 CGE and in 24 CGE groups, respectively. At 2 years after therapy, 77% in the lower dose group and 64% in the higher dose group lost fewer than 1.5 lines of vision. Mild radiation complications such as radiation vasculopathy developed in 17.6% of patients. Conclusions: PBI is a safe and efficacious treatment for subfoveal CNV not due to AMD. The data with respect to visual outcomes and radiation complications trend in favour of the 16 CGE group, although differences do not reach statistical significance. PBI may be considered as an alternative to current therapies.

**Publication type:** Journal: Article  
**Source:** EMBASE  
**Full text:** Available *The British journal of ophthalmology* at British Journal of Ophthalmology

### 34: Reasons for discontinuation of intravitreal vascular endothelial growth factor inhibitors in neovascular age-related macular degeneration

**Citation:** Retina, September 2014, vol./is. 34/9(1774-1778), 0275-004X;1539-2864 (September 2014)  
**Author(s):** Vaze A., Fraser-Bell S., Gillies M.  
**Language:** English  
**Abstract:** BACKGROUND:: This study was aimed to identify the reasons for discontinuing intravitreal anti-vascular endothelial growth factor therapy in neovascular age-related macular degeneration. METHODS:: This study is a retrospective chart review of a single Australian private practice. Analysis included patients who discontinued treatment from March 2006 to June 2012. RESULTS:: Of 248 patients who commenced treatment, 105 (42.3%) had discontinued by June 2012. The reasons for discontinuation were available for 102 of the 105 (97.1%) patients. In 9 (3.6%) patients of the entire cohort, the doctor stopped the treatment as the lesion became inactive, whereas further treatment was thought to be futile in 27 (10.9%) patients. Twenty-six (10.5%) patients declined further treatment with 2 (0.8%) because of excessive treatment visits, 2 (0.8%) because of difficulty in attending, 2 (0.8%) because of the expense, 3 (1.2%) because of pain/discomfort, 6 (2.4%) thought that the treatment was not beneficial, and 11 (4.4%) had other medical conditions that were more severe. Treatment was discontinued in 40 (16.1%) patients for other reasons such as moving to another region in 27 (10.9%) and death in 11 (4.4%). CONCLUSION:: These results indicate that the burden of intravitreal anti-vascular endothelial growth factor injections was a reason for treatment discontinuation in only a small minority of patients.

**Copyright** by Ophthalmic Communications Society, Inc.  
**Publication type:** Journal: Review  
**Source:** EMBASE  
**Full text:** Available *Retina (Philadelphia, Pa.)* at Retina

### 35: Refractive changes after lens-sparing vitrectomy for rhegmatogenous retinal detachment

**Citation:** American Journal of Ophthalmology, September 2014, vol./is. 158/3(544-549.e1), 0002-9394;1879-1891 (September 2014)
Author(s): Okamoto Y., Okamoto F., Hiraoka T., Oshika T.

Language: English

Abstract: Purpose To evaluate refractive changes after lens-sparing vitrectomy for rhegmatogenous retinal detachment (RD). Design Retrospective case series. Methods A retrospective chart review was conducted in 66 eyes of 66 patients (50.0 + 9.9 years old) who had undergone lens-sparing vitrectomy for rhegmatogenous RD. Spherical equivalent refractive power was evaluated before and 1, 2, 3, 6, 9, 12, and 15 months after vitrectomy. The relation between refractive changes and several parameters was investigated, such as axial length, presence of preoperative hemorrhage, preoperative spherical equivalent, retinal tear size, logMAR best-corrected visual acuity, number of laser photocoagulations, occurrence of postoperative vitreous hemorrhage, and degree of postoperative inflammatory reaction. Surgical parameters examined included operative time, wide-angle viewing system use, intraoperative adjuvant and gas tamponade use, vitrectomy system gauge, and surgeon. Results Significant and continuous myopic shift was observed after vitrectomy throughout the study period. Spherical equivalent was not significantly different between the operated eyes and the fellow control eyes until 3 months after vitrectomy, but the operated eyes were significantly more myopic at 3 months and later postoperatively (P < .05). Of the 58 eyes finally included (8 patients lost to follow-up), 27 (47%) underwent cataract surgery after vitrectomy. Patients who underwent cataract surgery were significantly older than those who did not (P < .05); no other examined parameter was significantly different between groups. Conclusions A significant myopic progression occurred in eyes after lens-sparing vitrectomy for rhegmatogenous RD. A considerable amount of anisometropia occurred, even in the early postoperative period. Patient age was the only risk factor with the potential to advance the nuclear sclerotic cataract progression after vitrectomy. 2014 by Elsevier Inc. All rights reserved.

Publication type: Journal: Article
Source: EMBASE

36: Reticular pseudodrusen in age-related macular degeneration

Citation: Optometry and vision science : official publication of the American Academy of Optometry, August 2014, vol./is. 91(8)(854-859), 1538-9235 (Aug 2014)

Author(s): Hogg R.E.

Language: English

Abstract: Historically, drusen, which are recognized as the hallmark of age-related macular degeneration (AMD), have been described in terms of size, margins, and texture, and several studies have emphasized the importance of large soft drusen particularly when combined with focal pigmentary irregularities in determining the risk of progression to neovascular AMD. However, recent developments in imaging over the past decade have revealed a further distinct phenotype strongly associated with the development of late AMD, namely, reticular pseudodrusen (RPD) or reticular drusen. Reticular pseudodrusen appear as yellowish interlacing networks in the fundus and, although visible on color photography, are better visualized using infrared imaging or spectral domain optical coherence tomography. Studies correlating spectral domain optical coherence tomography and confocal scanning laser ophthalmoscopy have shown that RPD are subretinal deposits located internal to the retinal pigment epithelium in contrast to traditional drusen, which are located external to the retinal pigment epithelium. As multiple longitudinal studies have revealed RPD are strong predictors for progression to both neovascular AMD and geographic atrophy, the interest in understanding the role that RPD play in the pathogenesis of AMD has grown. This review focuses on the current literature concerning RPD and considers what is currently known regarding their epidemiology, risk factors, appearance in both retinal imaging and histology, impact on visual function, relationship to other AMD lesions, and association with the development of late AMD.

Publication type: Journal: Review
Source: EMBASE

37: Retinal vascular oximetry during ranibizumab treatment of central retinal vein occlusion

Citation: British Journal of Ophthalmology, September 2014, vol./is. 98/9(1208-1211), 0007-1161;1468-2079 (September 2014)

Author(s): Traustason S., La Cour M., Larsen M.

Language: English

Abstract: Purpose: To investigate the effect of intravitreal injections of the vascular endothelial growth factor inhibitor ranibizumab on retinal oxygenation in patients with central retinal vein occlusion (CRVO). Methods: Retinal oxygen saturation in patients with CRVO was analysed using the Oxymap Retinal Oximeter P3, before and during 6 months of treatment with intravitreal injections of ranibizumab. Results: At presentation, retinal venous oxygen saturation was lower in eyes with CRVO than in the healthy fellow eyes (32+13% vs 59+10%, respectively, p=0.001) whereas retinal arterial saturation was higher in eyes with CRVO than in the fellow eyes (95%+8% and 91%+3%, p=0.04). Mean visual acuity increased from 51+24 letters ETDRS at baseline to 66+24 and 69+20 letters ETDRS, respectively, at 3 months and 6 months treatment (mean+SD, p<0.0001, repeated measures analysis of variance) and central retinal thickness was reduced from 697+139 mum to 368 +113 mum and 340+96 mum, respectively, from baseline to 3 months and 6 months treatment (p<0.0001). Venous saturation increased during treatment (from 35.5%+13.8% at baseline to 43.1%+10.8% and
38. Review of the latest local treatments for uveitis
Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(401-412), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Bhat P.V., Goldstein D.A.
Language: English
Abstract: There have been many recent advances in local therapeutic options for uveitis, both corticosteroid and non-
corticosteroid. Long- and short-acting steroid implants are now available, with new ones being developed. There are also
new locations for drug delivery (suprachoroidal space) and new non-corticosteroid options. This paper reviews the data
on the currently available local treatment options, as well as those currently under investigation. The choice of local therapy
depends on whether or not there is systemic inflammatory disease also requiring treatment, if the disease is unilateral or
bilateral, expected disease duration, patient preference and co-existing ocular and systemic comorbidities. For chronic
disease without systemic manifestations, long-term steroid releasing implants are a good option, whereas for
breakthrough inflammation and cystoid macular edema, short-term intravitreal therapy, initially with corticosteroids then
with alternative agents is considered.
Publication type: Journal: Review
Source: EMBASE

39. Review of the latest treatments for proliferative diabetic retinopathy
Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(413-424), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Stroman W.R., Gross J.G.
Language: English
Abstract: Chronic hyperglycemia leads to the development of the neurovascular disease known as diabetic retinopathy.
Proliferative diabetic retinopathy (PDR) is the most advanced stage of diabetic retinopathy and is diagnosed with the
onset of neovascularization (NV). Understanding the pathophysiology of NV and monitoring the disease using advanced
diagnostic instruments is essential in providing timely treatment. While the standard treatment for PDR is panretinal
photocoagulation, new pharmaceutical approaches, such as anti-VEGF treatments, may promote rapid regression of NV.
Recent enhancements in vitrectomy techniques have improved post-operative recovery and overall surgical outcomes for
the late complications of PDR. This article is a comprehensive review of the latest treatments for the management of PDR.
Publication type: Journal: Review
Source: EMBASE

40. Review of the latest treatments for retinal vein occlusions: Emphasis on pharmacologic therapy
Citation: Expert Review of Ophthalmology, October 2014, vol./is. 9/5(361-374), 1746-9899;1746-9902 (01 Oct 2014)
Author(s): Stewart M.W.
Language: English
Abstract: Retinal vein occlusions (central and branch) are the second most common retinal vascular disorders. Affected
patients lose vision due to retinal non-perfusion, vitreous hemorrhage, traction retinal detachments and neovascular
glaucoma, but the most common cause of vision loss is macular edema. Animal models and human studies show that
breakdown of the blood-retinal barrier results from overexpression of various cytokines and chemokines with
upregulation of VEGF being critically important. Laser photocoagulation decreases macular edema due to branch retinal
vein occlusion and reduces the overall ischemic drive but resultant improvements in visual acuity are modest (1.5 lines vs
0.3 lines with observation). Laser decreases macular edema in central retinal vein occlusion but does not improve visual
acuity better than observation. Numerous surgical treatments have been proposed but none are of proven benefit.
Monthly intravitreal injections of drugs that bind diffusible VEGF improve visual acuity and decreases macular edema in
most patients. After an initial regimen of intensive monthly therapy, the treatment burden appears to decrease and many
patients are ultimately able to discontinue therapy. Corticosteroids (triamcinolone and the dexamethasone delivery
system) also restore the blood-retinal barrier but due to high incidences of cataracts and glaucoma, they are generally
used as second-line therapy. Ongoing trials are focusing on combination therapy (anti-VEGF, corticosteroids and laser
photocoagulation) to optimize visual recovery and decrease treatment burden.
Publication type: Journal: Review
Source: EMBASE

41: Strabismus surgery for children with developmental delay
Purpose of Review: To describe recent evidence regarding the surgical approach of strabismus in children with various forms of developmental delay. Recent Findings: There remains variability in surgical outcomes with or without dose adjustment in strabismus surgery for children with developmental delay. However, this should not deter one from performing surgery - even early surgery, as fusional potential remains possible, which can especially impact the quality of vision and quality of life in developmentally delayed children. Future prospective, comparative, long-term studies with larger sample sizes for strabismus surgery in children with developmental delay are still needed. Summary: Strabismus is one of the most common ophthalmologic findings in children with developmental delay. Surgical correction of strabismus in children with developmental delay is well tolerated and effective, although it remains slightly less predictable, which can depend on the specific type of delay or underlying neurological deficit. Careful consideration of types and severity of developmental delay and attempts to measure binocular potential can help guide the timing, dosage, and type of treatment. Reoperations tend to be more frequently encountered in this population, and this higher degree of variability should be addressed in the consent process. Considering adjusting the surgical dosage in this population, taking careful preoperative measurements, and checking for fusional potential should be taken into account when managing children with developmental delay.

2014 Wolters Kluwer Health | Lippincott Williams & Wilkins.

**Publication type:** Journal: Review

**Source:** EMBASE

---

The association of blood pressure and primary open-angle glaucoma: A meta-analysis

Citation: American Journal of Ophthalmology, September 2014, vol./is. 158/3(615-627.e9), 0002-9394;1879-1891 (September 2014)

Author(s): Zhao D., Cho J., Kim M.H., Guallar E.

Language: English

Abstract: Purpose To conduct a systematic review and meta-analysis of the association between blood pressure levels and hypertension with primary open-angle glaucoma and intraocular pressure endpoints. Design Systematic review with quantitative meta-analysis. Methods Studies were identified by searching the PubMed and EMBASE databases. Inverse-variance weighted random-effects models were used to summarize relative risks. Subgroup analyses and meta-regression were used to explore potential sources of heterogeneity across studies. Results Sixty observational studies were included. The pooled relative risk for primary open-angle glaucoma comparing patients with hypertension to those without hypertension was 1.16 (95% CI = 1.05-1.28), with modest heterogeneity across studies (I² 34.5%). Virtually all studies reported a positive association between blood pressure and intraocular pressure (IOP). The pooled average increase in IOP associated with a 10 mm Hg increase in systolic blood pressure was 0.26 mm Hg (95% CI 0.23-0.28, I² <sup>2</sup> 30.7%), and the average increase associated with a 5 mm Hg increase in diastolic blood pressure was 0.17 mm Hg (95% CI 0.11-0.23, I² <sup>2</sup> 90.5%). Conclusions In this meta-analysis, hypertension was associated with increased intraocular pressure. The association between hypertension and primary open-angle glaucoma was stronger in cross-sectional compared with case-control and longitudinal studies. Our findings support a role of increased blood pressure in elevated intraocular pressure and possibly in the development of glaucoma. 2014 by Elsevier Inc. All rights reserved.

**Publication type:** Journal: Article

**Source:** EMBASE

---

The current research status of normal tension glaucoma

Citation: Clinical Interventions in Aging, September 2014, vol./is. 9/(1563-1571), 1176-9092;1178-1998 (16 Sep 2014)

Author(s): Mi X.-S., Yuan T.-F., So K.-F.

Language: English

Abstract: Normal tension glaucoma (NTG) is a progressive optic neuropathy that mimics primary open-angle glaucoma, but lacks the findings of elevated intraocular pressure or other mitigating factors that can lead to optic neuropathy. The present review summarized the causes, genetics, and mechanisms underlying NTG in both animal models and human patients. We also proposed that the neurovascular unit is a therapeutic target for NTG management.

**Publication type:** Journal: Review

**Source:** EMBASE

**Full text:** Available Clinical interventions in aging at Clinical Interventions in Aging

---

Trilateral retinoblastoma: A systematic review and meta-analysis

Citation: The Lancet Oncology, September 2014, vol./is. 15/10(1157-1167), 1470-2045;1474-5488 (September 2014)

Author(s): de Jong M.C., Kors W.A., de Graaf P., Castelijns J.A., Kivela T., Moll A.C.

Language: English
**Abstract:** Background: About 5% of children with retinoblastoma from germline mutation of the RB1 gene are at risk of developing trilateral retinoblastoma-intraocular retinoblastoma combined with a histologically similar brain tumour, most commonly in the pineal gland. We aimed to provide a systematic overview of published data for trilateral retinoblastoma, and to analyse how survival has changed. Methods: We searched Medline and Embase for scientific literature published between Jan 1, 1966, and April 14, 2014, that assessed trilateral retinoblastoma cases. We undertook a meta-analysis of survival with the Kaplan-Meier method and Cox proportional hazards regression, stratified on the basis of the original study, to account for between-study heterogeneity. Findings: We included 90 studies, with 174 patients with trilateral retinoblastoma. 5-year survival after pineal trilateral retinoblastoma increased from 6% (95% CI 2-15) in patients diagnosed before 1995, to 44% (26-61; p=00001) in those diagnosed from 1995 onwards. Before 1995, no patients with non-pineal trilateral retinoblastoma survived, but from 1995 onwards, 5-year survival was 57% (30-77; p=0035). Hazard ratios (HR) adjusted for the presence of leptomeningeal metastases and trilateral retinoblastoma location, suggested that both conventional (HR 0059, 95% CI 0016-0226; p=00001) and high-dose chemotherapy with stem-cell rescue (0013, 0002-0064; p<00001) most strongly contributed to this improvement. Absence of leptomeningeal metastases (HR 213, 95% CI 098-460; p=0055) were associated with improved survival. Non-pineal trilateral retinoblastomas were larger than pineal tumours (median 30 mm [range 6-100] vs 22 mm [7-60]; p=0012), but both had similar outcomes since 1995. Interpretation: Our results suggest that improvements in overall survival are attributable to improved chemotherapy regimens and early detection of pineal trilateral retinoblastoma. As such, successful treatment of trilateral retinoblastoma should include screening at least at the time of retinoblastoma diagnosis and chemotherapy, which would preferentially be a high-dose regimen with autologous stem-cell rescue. Funding: None. 2014 Elsevier Ltd.

**Publication type:** Journal: Article

**Source:** EMBASE

---

**45: Visual-function tests for self-monitoring of age-related macular degeneration**

**Citation:** Optometry and vision science : official publication of the American Academy of Optometry, August 2014, vol./is. 91/8(956-965), 1538-9235 (Aug 2014)

**Author(s):** Liu L, Wang Y.Z., Bedell H.E.

**Language:** English

**Abstract:** Age-related macular degeneration (AMD) is one of the leading causes of severe visual impairment in the United States. Changes in lifestyle can slow the progression of AMD, and new therapies that arrest choroidal neovascularization can preserve vision in patients who progress to the neovascular form of advanced AMD. Appropriate timing is required for these interventions to be optimally effective, which, in turn, depends critically on early diagnosis. Because annual or semiannual eye examinations may not be sufficient to ensure an early diagnosis, the preferred practice for AMD management must include self-monitoring by patients for disease onset or progression. In this review, we discuss a number of visual functions that have been shown to be impaired in eyes with AMD and specify desirable characteristics of visual-function tests that can be used for self-monitoring by populations at risk for AMD.

**Publication type:** Journal: Review

**Source:** EMBASE

---

**46: What are the psychosocial outcomes of treatment for thyroid eye disease? A systematic review**

**Citation:** Thyroid, September 2014, vol./is. 24/9(1407-1418), 1050-7256;1557-9077 (01 Sep 2014)

**Author(s):** Wickwar S., McBain H.B., Ezra D.G., Hirani S.P., Rose G.E., Newman S.P.

**Language:** English

**Abstract:** Background: Thyroid eye disease (TED) causes a number of esthetic and visual problems, and its treatment requires close clinical assessment, often for several years. There is evidence to suggest that clinical factors are poor indicators of patient-reported outcomes after treatments that aim to improve appearance, vision, or both. Psychosocial factors can impact on both adjustment to living with TED and also patients’ perceptions of their improvements after treatment. There has been growing recognition that it is essential to evaluate treatment efficacy in terms of psychosocial outcomes, but, to date, there has been no review that has systematically evaluated psychosocial outcomes following a variety of treatments for TED. Summary: Fifteen studies were included in the review, and six were randomized controlled trials. The studies varied greatly in methodological rigor; whilst major treatments such as surgery do improve quality of life outcomes, other noninvasive treatments such as intravenous steroids can have a similar impact and show long-term benefits. Only three studies reviewed orbital decompressive surgery, which showed better psychosocial outcomes than other types of surgery. Conclusions: The effect of some treatments remains unclear due to poor methodology and poor reporting of results. Clinicians need to be aware when planning rehabilitative treatments such as surgery of the influence of psychosocial factors on quality of life outcomes and the lack of a relationship with clinical factors such as disease severity. Mary Ann Liebert, Inc.

**Publication type:** Journal: Review

**Source:** EMBASE

---

**47: Williams syndrome: Ophthalmological examination and review of systemic manifestations**
Purpose: To evaluate the frequency and severity of ophthalmic manifestations and associated diseases, as well as the epidemiological data in patients with Williams syndrome.

Methods: The authors prospectively studied 30 patients clinically diagnosed as having Williams syndrome as confirmed by the fluorescence in situ hybridization test. Patient history included gender, age, race, education level, previous illnesses, and surgeries. The ophthalmologic examination included best-corrected visual acuity, dynamic and static refraction, extraocular motility test, stereopsis test (Titmus and Lang), and direct and indirect fundoscopy.

Results: Thirty patients were included in this study. The mean age was 14.5 ± 1.38 years (range: 7 to 26 years). Fifty percent of the patients were male and 50% were female. Among the children examined, 77% had a refractive error. Hyperopia and astigmatism were noted in 67% and 20% of the patients, respectively, and myopia in 7%. Only one case of amblyopia was noted. On external examination, 23% of children had epicanthus; via biomicroscopy, 3 children with stellate patterns of the irides were observed. Eleven patients (36.6%) had measurable strabismus, 9 (82%) had esotropia, and 2 (18%) had exotropia. Binocular vision was abnormal in 43% of patients. Diffuse arteriovenous tortuosity on funduscopy was observed in 27% of patients.

Conclusions: Williams syndrome is rare and is associated with multiple phenotypes and diseases that are susceptible to treatment. Multidisciplinary clinical management is critical, and in some cases, surgical intervention is required.

Publication type: Journal: Article
Source: EMBASE
Full text: Available ProQuest at Salisbury District Hospital Healthcare Library
Full text: Available ProQuest at Journal of Pediatric Ophthalmology and Strabismus

News

NHS Choices

Stem cells used to improve low vision
Wednesday Oct 15 2014
"Embryonic stem cells transplanted into eyes of blind restore sight," The Daily Telegraph reports, covering a study where human stem cells were transplanted into the eyes of people with visual impairment...

Scientists look into regenerating retinal cells
Thursday Oct 2 2014
'Scientists ... have discovered stem cells in the human eye which can be transformed into light sensitive cells and potentially reverse blindness' The Daily Telegraph reports. The research is still at a very early stage but does show promising potential...

Viagra 'may cause visual disturbance' in some men
Wednesday Oct 1 2014
"Viagra may permanently damage vision in some men, study finds," reports The Guardian. But the news is, in fact, based on research in mice. This research suggests the medication may not be suitable for men who carry a gene mutation...

New Library Resources

New Books

New books available from Healthcare Library. To search the library catalogue visit www.swims.nhs.uk

Moorfields manual of ophthalmology.
Shelfmark: WW100

Disclaimer and Feedback

This current awareness bulletin contains a selection of information which is not intended to be exhaustive, and although library staff have made every effort to link only to reputable and reliable websites, the information
contained in this bulletin has not been critically appraised by library staff. It is therefore the responsibility of the reader to appraise this information for accuracy and relevance.

This bulletin was produced by Caroline Thomas, Librarian, Salisbury NHS Foundation Trust Healthcare Library. If you have any comments to make about this bulletin please contact Caroline.Thomas@salisbury.nhs.uk.