
The authors presented the results of a retrospective, cross-sectional study of 76 patients with intermittent or constant exotropia to determine if the timing of surgical management affects postoperative sensory results. Bi-fixation on the Titmus stereacuity test was considered a successful sensory outcome, while monofixation was considered a sensory failure. The average age at surgery was 9.3 ± 11.9 years. The mean follow-up was 5.9 ± 5.5 years following surgery. Results showed those patients with a history of strabismus of less than 5 years had a significantly lower frequency of monofixation. Surgical correction at less than 7 years of age was also significantly associated with bi-fixation. Postoperative bi-fixation was overwhelmingly more common in patients with a history of intermittent exotropia, than in constant exotropia. The authors concluded that superior sensory outcome is more likely following “early” surgery. Delaying surgical intervention in order to prevent monofixation may actually increase its probability of occurring postoperatively.


The authors wanted to test the hypothesis that patients with acquired, chronic, bilateral ophthalmoplegia have abnormal retinal image slippage during head movements that would result in abnormal thresholds for visual perception of motion. Five patients with ophthalmoplegia were included in the study. The etiology of ophthalmoplegia was myasthenia gravis (n = 2), chronic progressive external ophthalmoplegia (n = 2), and chronic idiopathic orbital inflammation (n = 1). Visual motion detection thresholds were assessed using horizontal and vertical gratings (spatial frequency) set at thresholds for visibility. The grating was then accelerated at 0.09 deg/s². The subject’s task was to detect the drift direction of the stimulus. They
found that the difference in values for both horizontal and vertical motion detection were statistically significant when compared with age matched controls; $P < 0.023$ for horizontal motion and $P < 0.07$ for vertical motion (two tailed $t$ test). The authors concluded that patients with ophthalmoplegia have abnormally raised visual motion thresholds. This may represent a centrally mediated adaptive mechanism to ignore excessive retinal slip and thus avoid oscillopsia during head movements.

JF Acheson, Department of Neuro-Ophthalmology, National Hospital for Neurology and Neurosurgery, Queen Square, London WC1N 3BG, UK. e-mail: jacheson@uclh.org.


Visual perception information is important in psychomotor development. This article describes visual perception and coordination tests, spatial tests, cognitive and attention tests, to stress the importance of a close collaboration between orthoptists and psychomotor therapists in the evaluation and management of children.

Jean-Michel Albaret, Institut de Formation en Psychomotricité, Faculté de Médecine-133 route de Narbonne, 31062 Toulouse cedex, France. e-mail: albaret@cict.fr


This study investigates a group of nine patients with homonymous hemianopia with or without neglect, treated by prism adaptation of short duration, and “low vision” training. The etiology of the hemianopia was a CVA in eight patients and an operated craniopharyngioma in one patient. Before adaptation, all patients had difficulties ambulating, reading, and with conjugate eye movements. After adaptation, one of two patients without neglect improved. In six of seven patients with neglect, reading speed remained unchanged, but neglect was no longer present. Prism adaptation was followed by orthoptic exercises in six patients; reading improved in five, ambulating in one, and conjugate eye movements in all.

Nadine Antoine, Orthoptiste, Sevice Professeur Vighetto Hopital Neurologique, 59 Boulevard Pinel, 69003 Lyon, France.


The author examined the records of 89 patients to determine the reliability of the amblyopia diagnosis based on the fix-follow-maintain method. They found that amblyopia was later definitively diagnosed on the E-chart in 32.6% of the 52 eyes that were estimated to have a significant lower acuity than the fellow eye with the fix-follow-maintain method. Sensitivity of the fix-follow-maintain method in diagnosing amblyopia was found to be 53% and the specificity was 38.5%. The author concludes that the reliability of the fix-follow-maintain fixation pattern test to diagnose amblyopia is unreliable and there is a need to make a more universally available sophisticated preverbal vision test. The authors also conclude that amblyopia treatment should not be initiated solely on the basis of the fix-follow-maintain method of testing.

Dr. Atilla, Mahatma, Gandi, Cad, Mesa, Ufuk-151/17, 06700 GOP, Ankara, Turkey.


A one-and-a-half syndrome is a rare manifestation in myasthenia gravis. The authors discuss a patient who initially presented with signs consistent with a unilateral left INO disorder. Variable, fluctuating dissociated nystagmus was also noted. Two days later the patient’s symptoms changed to having difficulty in the opposite gaze as well. The motility pattern now included a right gaze paresis. MRI imaging at this time showed no cerebellum or brainstem abnormalities so IV edrophonium chloride was given. There was complete resolution of the eye movement anomalies. Further studies showed no signs of generalized myasthenia. The patient responded to pyridostigmine. The authors note that the fluctuating nystagmus when first seen was a sign of the myasthenia.

Fabio Bandini, MD, Laboratorio di Neuro-oftalmologia, Dipartimento di Scienze Neurologiche e della Visione, Universita di Genova, Via A. Toni 5, 16132 Genova, Italy. e-mail: fbandini@neurologia.unige.it

ABSTRACTS

Paula Coutinho, MD, PhD, Division of Neurology, Department of Medicine, Hospital de São Sebastião, 4520-211 Santa Maria Da Feira, Portugal; e-mail: pcoutinho@hospitalfeira.min-saude.pt


The authors examined 427 three-year-old children with the Nikon Retinomax hand held autorefractor without cycloplegia. The purpose of the study was to assess non-cycloplegic screening for unknown and untreated amblyopia under realistic screening conditions with several examiners. They found screening sensitivity was 0.80, specificity 0.58, accuracy 0.58, and the likelihood ratio 1.89. The authors concluded that non-cycloplegic refractive screening with the Retinomax led to many false positive referrals due to instrument myopia and “inconclusive” results. Therefore, screening of refractive amblyopia should be compared with the visual impairment associated with amblyopia (age permitting). Finally, they could not recommend the use of a monocular autorefractor (like the Retinomax) for non-cycloplegic screening for refractive amblyopia at the age of three.

Dr. JC Barry, Department of Ophthalmology II, Schliechstrasse 12-16, 72076 Tübingen, Germany. e-mail: jc.barry@med.uni-tuebingen.de


The authors studied the influence of stereoscopic depth perception on automobile driving performance. Ten patients with strabismus and defective stereopsis were compared with ten healthy controls with respect to their performance in a series of automobile driving manoeuvres. The two groups were individually matched as to age, annual miles driven, years of license holding and type of vehicle owned. Following an ophthalmologic examination the subjects in each group performed the following series of driving tests: (1) stopping in front of an obstacle, (2) reversing into a parking space, (3) driving through a slalom course, (4) estimating the relative position of the two cars. All tests were performed binocularly and monocularly (with the non-dominant eye covered). The authors found that only in the slalom test did the normal subjects perform significantly better than the stereo-deficient subjects (odds ratio 10.5; P < 0.01). In estimating position, normal subjects actually performed significantly worse (odds ratio 0.091; P < 0.01). A significant distance ratio of 2.5 (95% CI 1.1–5.5; P = 0.033) of the monocular with respect to the binocular performance of the normal subjects was found for the stopping task only, while the subjects with defective stereopsis showed no difference between their monocular and binocular performance. Conclusively, this study found stereopsis had a positive effect on driving performance only in dynamic situations at intermediate distances.

Bauer A, University Eye Hospital Tübingen, Department of Pathophysiology of Vision and Neuro-Ophthalmology, Germany.


Amblyopia is a developmental deficit. Every therapy must be aimed at reducing it with the least effort and without disrupting the visual development of
the sound eye. Earliest possible treatment is mandatory. Appropriate visual stimulation, including the elimination of visual impairment and correction of refractive errors as well as high motivation of parents and children, are essential for successful amblyopia treatment. Occlusion therapy has been established as the gold standard. Treatment of relative amblyopia can achieve amazing functional results. The results are better than what would be expected from anatomical changes seen (macular scarring or central colobomas).

Universitäts-Augenklinik, Mathildenstr. 8, 80326 München, Germany.


The author describes her management of oculomotor palsies.

Monique Bongrand, Orthoptiste, Service du Professeur Vighetto, Hopital Neurologique, 59 Boulevard Pinel, 69003 Lyon, France.


The author reviews physiologic and pathologic binocular diplopia, and briefly describes its medical treatment.

Docteur Myriam Bourron Madignier, 70, Avenue de Saxe, 69003 Lyon, France.


The purpose of this study was to ascertain utility values associated with varying degrees of legal blindness. Utility values quantitate patient preferences and provide an objective measure of the degree of disability imposed upon a patient by a disease process. The authors performed a cross sectional study on three groups of patients. There were: (1) 15 patients with complete absence of vision (no light perception) in at least one eye who were asked to assume a scenario of no light perception in the second eye as well; (2) 17 patients with light perception to counting fingers in the better seeing eye; and (3) 33 patients with 20/200-20/400 vision in the better seeing eye. The authors found that patients in the first group were willing to trade almost 3 out of every 4 years of remaining life in return for perfect vision in each eye. Those in the second group would trade approximately 1 of 2 remaining years and those in the third group would trade approximately 1 of 3 remaining years. They concluded that there was a wide range of utility values associated with legal blindness. The utility value decreases dramatically with perceived total loss of vision compared with counting fingers to light perception vision, indicating that the preservation of even small amounts of vision in patients with legal blindness is critically important to their wellbeing and functioning in life.

Melissa M. Brown, Center for Evidence-Based Health Care Economics, Suite 210, 1107 Bethlehem Pike, Flourtown, PA 19031. e-mail: Lissa1011@aol.com


Six and a half percent of the 292 participants failed the Lang1 stereo test. Strabismus, anisometropia and reduced visual acuity (<6/12) were associated with failure.

Ms. Brown, Royal Australian and New Zealand College of Ophthalmologists, 94-98 Chalmers Street, Surry Hills, NSW 2010, Australia.


The authors present the case of a 23 year-old woman who presented with the acute onset of diplopia and an abduction deficit. A CT scan was performed that showed an extensive lesion involving the sinuses. At biopsy, the lesion was found to be malignant and histology was felt to be consistent with olfactory neuroblastoma. The tumor was felt to be inoperable so the patient was treated with chemotherapy. At the end of treatment, there was resolution of the ocular signs with the exception of a slight abduction deficit.

The authors note that olfactory neuroblastoma is rarely included in the differential diagnosis of malignant lesions of the sinuses. They stress that it should be considered and that appropriate therapy can result in significant recovery.

Peter Cackett, BSc, MBBS, MRCOphth, Tennent Institute of Ophthalmology, Gartnavel General Hospital, Glasgow, G12 OYN, Scotland. e-mail: pdcackett@hotmail.com

ABSTRACTS

The authors emphasize the superiority of the Tangential scale over the Lancaster as a diagnostic tool in mild and/or asymmetric bilateral superior oblique palsies. The authors present four cases to illustrate the advantages of the Tangential scale, which are: all positions of gaze are measured at the same degree of eccentricity, and the angle of deviation and the torsion can be measured simultaneously.

V. Capart, D. Lassale, H. Tessier, A Pechereau, Clinique Ophthalmologique Universitaire, C.H.R. 44093 Nantes Cedex 1, France.


Internuclear ophthalmoplegia is a rare result of a closed head injury with only 13 documented cases. The author presents a 32 year-old man who sustained head trauma with loss of consciousness from an assault. There was orthophoria in the primary position however there was no adduction of the right eye and abduction nystagmus to left gaze. A thorough medical work-up failed to reveal any etiology. Over the course of the next six months there was almost complete recovery of all ocular signs. The authors suggest that a shear injury associated with angular acceleration of the head may lead to stretching of the fascicular fibers or tearing of arterial supply to the MLF.

Jane W. Chan, MD, Department of Internal Medicine, Division of Neurology, University of Nevada School of Medicine, 2040 W. Charleston Blvd., Suite 300, Las Vegas, NV 89102. e-mail: worjun@aol.com


Seven hundred six myopic children were prescribed full cycloplegic spectacle corrections with photochromic lenses and +2.25 diopter reading adds in each eye. Both eyes were treated with Atropine 1% drops weekly. The authors report the annual change in cycloplegic refractions of the right eyes. Seventy percent of the patients reported full compliance with the treatment regimen. The mean rate of myopic progression was significantly less in patients who were fully compliant with atropine therapy and bifocals than in patients who were partially compliant with the treatment regime. No serious adverse effects were associated with atropine therapy. The mean rate of progression of myopia in the completely compliant group was 0.23 diopters per year. The authors conclude that full compliance with topical atropine therapy and bifocal spectacles was associated with decreased progression of myopia compared to partial compliance with treatment. For each of the treated groups, the mean rate of myopic progression was significantly less than the mean annual rates of myopic progression published for the pediatric population.

Dr. Repka, Wilmer, 233, Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21287-9028.


The Meares-Irlen syndrome is said to exist when there is discomfort with reading that may be accompanied by perceptual disturbances. The Pulfrich phenomena is the apparent elliptical movement path that a swinging object may have. It has been noted to occur with optic nerve conduction disturbances.

The author relates the case of a 48 year-old woman with an 18-year history of visual perception problems and difficulty reading. Attempts to treat her small phoria with prisms gave no relief. Initial treatment was rose-tinted glasses with rose-tinted overlay for reading. When the Pulfrich phenomena was diagnosed a neutral density filter was placed into distance glasses. The patient’s symptoms resolved.

Mrs. J. Clark, North Glasgow Trust, Department of Ophthalmology, Queen Elizabeth Building, Glasgow Royal Infirmary, Alexandra Parade, Glasgow G31 2ER, UK.


This was a prospective study to determine the characteristics and causes of excessive blinking in children and to determine outcomes after treatment. Ninety-nine children less than 16 years of age were included in the study. Excessive blinking was present in 89% of the children. Boys were affected more than girls, with a ratio of nearly 2:1. Etiology of the excessive blinking consisted of lid abnormalities in 37%, habit tics in 23%, uncorrected refractive errors in 14%, intermittent exotropia in 11%, and psychogenic blepharospasm in 10%. Vision threatening disease was found in 6% and life threatening disease in 4% of the children.

Dr. Coats, 1102 Bates, Suite 300 (MC3-2700), Houston, TX 77030.
Monofixation syndrome (MFS) has been described in the literature as a defective form of binocular vision that presents with a manifest horizontal deviation of about 8 to 10 prism diopters and peripheral fusion. There is no evidence of any clinical study to determine the vertical deviation range associated with MFS. It is the aim of this investigative report to estimate the vertical deviation range in patients with MFS. It is the aim of this investiga-tive report to estimate the vertical deviation range in patients with MFS. The maximum hypertropic angle found was at most 6 prism diopters. It was also unexpectedly dis-covered that monofixation was maintained in pa-tients with DVD up to 14 prism diopters. This is possi-\[\text{bly explained by the intermittent nature of DVD.}\\

Dr. Sherwin J. Isenberg, Department of Oph-thalmology, Jules Stein Eye Institute, 100 Stein Plaza, UCLA, Los Angeles, CA 90095-7000. e-mail: isenberg@ucla.edu


Convergence insufficiency exotropia consists of an esodeviation which is greater at near than distance and presents with asthenopic symptoms and re-duced convergence amplitudes. Orthoptic treat-ment is usually successful for this type of patients. How-ever, there are some who do not respond. As a result, strabismus surgery is indicated. In this study surgical results of medial rectus resection(s) with adjustable suture for intermittent exotropia of the convergence insufficiency type. J AAPOS 2001; 5:13–17.

Dr. Arthur Rosenbaum, Department of Ophthal-mology, Jules Stein Eye Institute, 100 Stein Plaza, UCLA, Los Angeles, CA 90095-7000. e-mail: rosenbaum@ucla.edu


The purpose of this study was to examine ocular findings and calcarine activation in the case of am-blyopes, and to evaluate differences in the response patterns between anisometropic and strabismic am-blyopes. The authors studied 14 amblyopes (eight anisometropic and six strabismic) with functional magnetic resonance imaging (fMRI) using stimuli of checkerboards of various checker sizes and temporal frequencies. They found that amblyopic eyes showed reduced calcarine activation compared with contra-lateral sound eyes in fMRI in all subjects. The cal-carine activation from amblyopic eyes in anisometropic amblyopes was more suppressed at higher spatial frequencies, while that from amblyopic eyes in strabismic amblyopes was more suppressed at lower spatial frequencies. The authors conclude that the calcarine activation is abnormal in both types of amblyopia and that the neurophysiological mecha-nisms, which underlie the development of these conditions are quite different. These results suggest that fMRI is a useful tool for the study of amblyopia in humans.

Young Suk Yu, MD, Department of Ophthalmology, College of Medicine, Seoul National University, 28 Yeongun-Dong, Chongro-Ku, Seoul 110-744, Korea. e-mail: ysu@snu.ac.kr


An animal study was performed to assess the ef-fect of a gel consisting of a polyglycan ester in a gela-tin matrix (ADCON-L) in preventing postoperative adhesions after strabismus surgery. The authors performed bilateral superior rectus muscle resec-tions on 16 rabbits. ADCON-L was applied beneath and over the superior rectus in the right eyes of all rabbits, while the operative fields in the left eyes were irrigated with a balanced salt solution (BSS). They found that the length of adjustment was longer and the force of the adjustment was less in the ADCON-L group than in the BSS treated group at 4 and 7 days postoperatively. A significant reduction in the degree of adhesion was noted in eyes treated with ADCON-L. Histopathological evaluation of the muscle revealed decreased fibrosis of perimuscular connective tissue in eyes treated with ADCON-L at three weeks postoperatively. The authors conclude that ADCON-L helps to prevent postoperative adhe-sion in rabbits and enables adjustment twice within 7 days postoperatively without complications.

Dr. Mi Young Choi, Department of Ophthalmology, College of Medicine, Chungbuk National University Hospital 62 Kaeshin-Dong, Heungduk-Gu, Cheong-gu, Chungbuk, 361-240, Korea. e-mail: mychoi@med.chungbuk.ac.kr


An animal study was performed to assess the ef-fect of a gel consisting of a polyglycan ester in a gela-tin matrix (ADCON-L) in preventing postoperative adhesions after strabismus surgery. The authors performed bilateral superior rectus muscle resec-tions on 16 rabbits. ADCON-L was applied beneath and over the superior rectus in the right eyes of all rabbits, while the operative fields in the left eyes were irrigated with a balanced salt solution (BSS). They found that the length of adjustment was longer and the force of the adjustment was less in the ADCON-L group than in the BSS treated group at 4 and 7 days postoperatively. A significant reduction in the degree of adhesion was noted in eyes treated with ADCON-L. Histopathological evaluation of the muscle revealed decreased fibrosis of perimuscular connective tissue in eyes treated with ADCON-L at three weeks postoperatively. The authors conclude that ADCON-L helps to prevent postoperative adhe-sion in rabbits and enables adjustment twice within 7 days postoperatively without complications.

Dr. Mi Young Choi, Department of Ophthalmology, College of Medicine, Chungbuk National University Hospital 62 Kaeshin-Dong, Heungduk-Gu, Cheong-gu, Chungbuk, 361-240, Korea. e-mail: mychoi@med.chungbuk.ac.kr


The purpose of this study was to examine ocular findings and calcarine activation in the case of am-blyopes, and to evaluate differences in the response patterns between anisometropic and strabismic am-blyopes. The authors studied 14 amblyopes (eight anisometropic and six strabismic) with functional magnetic resonance imaging (fMRI) using stimuli of checkerboards of various checker sizes and temporal frequencies. They found that amblyopic eyes showed reduced calcarine activation compared with contra-lateral sound eyes in fMRI in all subjects. The cal-carine activation from amblyopic eyes in anisometro-pic amblyopes was more suppressed at higher spatial frequencies, while that from amblyopic eyes in strabismic amblyopes was more suppressed at lower spatial frequencies. The authors conclude that the calcarine activation is abnormal in both types of amblyopia and that the neurophysiological mecha-nisms, which underlie the development of these conditions are quite different. These results suggest that fMRI is a useful tool for the study of amblyopia in humans.

Young Suk Yu, MD, Department of Ophthalmology, College of Medicine, Seoul National University, 28 Yeongun-Dong, Chongro-Ku, Seoul 110-744, Korea. e-mail: ysu@snu.ac.kr

American Orthoptic Journal 131

Strabismus is common in patients with craniofacial dysostosis. V-pattern horizontal strabismus is the most seen ocular motility problem. Surgical management and outcome is reviewed. This was a retrospective study with some limitations due to some unavailable data. Strabismus in craniofacial dysostosis remains complex and difficult to cure with surgery. This is probably due to a combination of several anatomical anomalies. It is believed that absent or anomalous superior oblique tendons are often contributing factors in the poor results. None of the surgical approaches described worsened the strabismus; however, neither did they normalize.

Dr. David K. Coats, Texas Children’s Hospital, 1102 Bates, #300, Houston, Texas 77030. e-mail: dcoats@bcm.tmc.edu


The author describes a modified adjustable suture technique that is recommended for patients who are poor candidates for standard adjustable sutures. This modification allows for an all-or-nothing adjustment, requiring minimal postoperative manipulation of the globe through a release of an adjunct suture. The author reports the results of this technique in twelve patients, six of whom required an adjustment. The ripcord suture was left in place and tolerated well by the six patients who did not require adjustment. Five of the six adjusted patients had a successful outcome. The one failure was the patient adjusted more than 48 hours after surgery. The author recommends the ripcord technique for small under- or over-corrections in patients who can not tolerate postoperative manipulation of the globe.

David K. Coats, MD, Cullen Eye Institute, Departments of Ophthalmology and Pediatrics, Baylor College of Medicine, Texas, Children’s Hospital, Houston.


The authors evaluated 310 children diagnosed as amblyopic between the years of 1994–2001. Of these 37.5% were younger than 4 years when detected with amblyopia, and 49 of this subgroup were referred by a pediatrician. Parental compliance with patching was found to be 53%, whereas the “baby” group had a compliance of 59%. The authors consider an open-minded and confident relationship between the patients/parents and therapists mandatory for sustaining long-term amblyopia treatment.

Dr. A. Cordey, Univ.-Augenklinik, Alleestr. 6, 65812 Bad Soden, Germany.


The authors reviewed the charts of 172 subjects with Graves ophthalmopathy who underwent orbital decompression, strabismus surgery, or orbital radiation treatment. The authors found that in a selected subgroup of patients, orbital decompression and strabismus surgery resulted in a significant reduction in intraocular pressure in the early postoperative period.

Dr. Danesh-Meyer, Neuro-ophthalmology Service, Wills Eye Hospital, 900 Walnut Street, Philadelphia, PA 19107.


In France, the majority of low-vision children are able to attend regular schools. The orthoptist in charge of improving their visual function, needs an in-depth knowledge of the child’s global development. The authors present a medical-pedagogical form to be used by medical and teaching staff.

C Dauxerre, Service de compensation du handicap visuel et sensoriel, Institution nationale des Invalides, 6 Boulevard des invalides, 75700 P 07 SP, France.

C Corbe CPEMPN, HIA Percy, 92141 cedex, France.


The authors describe a case of retinitis pigmentosa with 10-degree fields and an intermittent exotropia with diplopia. This patient was treated with prisms and orthoptic exercises and was able to comfortably use the CCTV.

ABSTRACTS


The author utilized the Biomechanical Model of Ocular Motility (Orbit 1.8, Gaze Mechanics Simulation) to simulate different amounts of recession of the superior oblique muscle along three different and commonly used axes of recession. The effects of the simulated recession proved to be effective in changing the main actions of the muscle in all gaze positions analyzed. The author discusses the specific changes in actions for the simulated recession at each axis.

Dr. DeMolina-Castenara, Freixa 5, 08021 Barcelona, Spain.


The authors report six cases of apparent isolated inferior oblique palsy. Though the three-step test suggested inferior oblique palsy in each case, the ocular torsion was opposite to which would be expected. All patients had evidence of posterior fossa pathology. The authors suggest that these patients had an ocular tilt reaction secondary to a lesion of the posterior semicircular canal ipsilateral to the hyotropic eye, rather than an inferior oblique palsy. Ocular tilt reaction is a type skew deviation characterized by vertical strabismus, bilateral ocular torsion, and head tilt. The authors recommend quantifying ocular torsion in all vertical deviations to rule out ocular tilt reaction, and to determine the proper management of these motility problems.

Sean P. Donahue, MD, PhD, 8000 Medical Center East, Nashville, TN 37232-8808. fax: (615) 936-1540. e-mail sean.donahue@mcmail.vanderbilt.edu


In a retrospective study, the authors analyzed the visual acuities in 39 amblyopic children who were admitted to a pediatric ophthalmic ward for 5 days of supervised intensive occlusion therapy. Each child had documented evidence of failure to respond adequately to outpatient occlusion. During the five days of admission, 26 children (67%) gained at least one line of acuity in their amblyopic eye and five (13%) gained three or more lines. The acuities of both the amblyopic and fellow eyes subsequently improved with continuing part time patching as an outpatient, including in nine of the children who did not respond during admission. At the last recorded visit, at a median time of 14 months after discharge, 13 (33%) of the patients has an acuity of at least 6/12 in their amblyopic eye. The authors conclude that the acuity of amblyopic eyes did not improve without effective treatment. Subsequent supervised inpatient occlusion therapy was effective in the majority of the children.

Miss G.G.W. Adams, Strabismus and Paediatric Service, Moorfields Eye Hospital, City Road, London EC1V 2PD, UK. e-mail: gill@tayloradams.freeserve.co.uk


The prevalence of myopia has been associated with close work, male gender, myopia of both parents and a high AC/A ratio. Overcorrection should be avoided by using cycloplegia, progressive lenses can reduce myopic progression or atropine 0.5% in combination with a near addition can significantly slow myopic progression and should be considered in children with a very rapid increase in myopia.

Dr. Anja Eckstein, Univ.-Augenklinik, Sehschule, Hufelandstr. 55, 45122 Essen, Germany.


The author compares the sensitivity and specificity of refraction with cycloplegia vs. without cycloplegia using retinoscopy and auto-refractors. They found that lack of cycloplegia and not the choice of technical equipment is responsible for the poor sensitivity and specificity in screening for refractive errors. Every 5th child with refractive risk for amblyopia is missed without cycloplegia, and nearly 30% of results are false positive. Screening for a refractive error should be done with cycloplegia.

Dr. O. Ehrt, Universitäts-Augenklinik, Mathildenstr. 8, 80326 München, Germany.


This was a retrospective chart review undertaken to determine if graded anterior placement of a transposed inferior oblique muscle is beneficial for treating variable amounts of dissociated vertical deviation. Fifty-five patients (106) eyes, underwent inferior oblique anterior transposition for DVD. The authors...
conclude that the study did not demonstrate increased correction of DVD with graded inferior oblique anterior transposition versus standard inferior oblique anterior transposition and do not recommend placement of the inferior oblique muscle anterior to the inferior rectus muscle insertion.

Dr. Young, Division of Ophthalmology, Children’s Hospital of Philadelphia, 34th Street and Civic Center Boulevard, Philadelphia, PA 19104-4399.


Secondary implantation of an intraocular lens (IOL) can be the most successful treatment for correction of aphakia in children after removal of a congenital or traumatic cataract. This study offers the possibility of an alternate technique for implanting intraocular lenses in children who lack capsular support for traditional lens implantation. Posterior chamber intraocular lenses (PCIOLs) implanted in the ciliary sulcus provide a superior option to anterior chamber intraocular lenses (ACIOLs) for correction of childhood aphakia in children with poor capsular support.

Dr. K. David Epley, Eye Associates Northwest, 1101 Madison No. 600, Seattle, WA 98104. e-mail: kde@eanw.net


Adjustable suture strabismus surgery has a success rate between 90% and 94%. Some patients return with an unwanted result within the first week after surgery. This article describes an alternate method of reoperation in the first week of the original repair with the use of local anesthesia in a clinical setting. This approach is safe and successful in obtaining good surgical outcome. In addition, it can prevent any future reoperations.

Dr. H. Sprague Eustis, Ochsner Clinic, 1514 Jefferson Hwy, New Orleans, LA 70121. e-mail: sgarret@ochsner.org


The authors describe their experience in the treatment of five patients who had complete unrecovered sixth nerve palsy. Each patient underwent full vertical rectus transposition combined with botulinum toxin chemodenervation of the ipsilateral medial rectus muscle. The average preoperative distance alignment was 52∆ (range 25∆ to 80∆). Vertical rectus transposition combined with botulinum toxin injection resulted in an average distance alignment change of 66∆ (range 50∆ to 82∆) of exo/shift. The average final deviation was 1∆ of esotropia (range 4∆ of esotropia to 6∆ of exotropia). Average abduction improved from −6 (range −3 to −8) preoperatively to −1.7 (range −1 to −2) postoperatively. Normal vertical eye movements were preserved in all patients. A total field of single binocular vision was created in all patients, which averaged 55° (range 30° to 75°) in the horizontal meridian. The field of single binocular vision from primary position into abduction averaged 23° (range 15° to 28°). The authors conclude that temporal transposition of the vertical rectus muscles combined with perioperative botulinum toxin injection of the ipsilateral medial rectus muscle to be a reliable and effective way of restoring functional binocular vision in patients with complete unrecovered sixth nerve palsy.

Dr. Michael Flanders, 4095 Tupper St., Westmount PQ H3Z 3E5 Canada. fax:(514) 889-7204; e-mail: mfland@pe-box.mcgill.ca


A mother and two of her children, all with congenital fibrosis of the extraocular muscles, underwent detailed clinical examinations and neuroradiologic studies. All three subjects showed dilation of the left lateral ventricle secondary to hypoplasia of the body and tail of the ipsilateral caudate nucleus. In addition, there was fusion of an enlarged caudate nucleus head with the underlying putamen. Both children showed wide spread bilateral cortical dysplasia. Genetic analysis of the family was inconclusive, but consistent with linkage to the congenital fibrosis of the extraocular muscle 1 locus on chromosome 12. The subjects did not have deletion of chromosome 12.

Dr. Flaherty, Department of Ophthalmology, New Children’s Hospital, West Mead 2145, Sydney, Australia.


Sarcoidosis is a systemic disease, which also has ocular implication. Prevalence is to occur in African American populations. Ocular manifestations of sarcoidosis include iritis, anterior uveitis, posterior uveitis, optic neuritis, and orbital sarcoidosis. The authors report 22 cases of sarcoidosis with eye involvement at the Massachusetts Eye and Ear Infirmary. The median age was 40 (range 14–80) years. There were 18 females and 4 males. Anterior uveitis was presented in 17 eyes, bilateral in 11 eyes, and posterior uveitis in 7 eyes. The authors conclude that sarcoidosis is a systemic disease, which also has ocular implication. Prevalence is to occur in African American populations.
The aim of this study was to determine whether reflexive saccades and the quick phases of optokinetic nystagmus (OKN) are indeed identical, and whether OKN quick phases would have a clinical role in identifying patients with slow saccades. OKN quick phases were recorded from ten healthy adults using an infrared limbus eye tracker and bitemporal DC electro-oculography simultaneously. The authors found that OKN quick phases tended to have a longer duration compared to saccades, but these differences were not significant. OKN quick phases had a slightly lower peak velocity compared to saccades, which was statistically significant ($P < 0.05$). They concluded that the main sequence for duration is the same for reflexive saccades and OKN quick phases. The main sequence for peak velocity is slightly faster for reflexive saccades than OKN quick phases, but the difference is unlikely to be of clinical significance. Recording OKN may be a simple clinical means for approximating the main sequence.

Siobhan Garbutt, Department of Ophthalmology, Great Ormond Street Hospital, Great Ormond Street, London WC1N 3JH, UK. e-mail: s.garbutt@ich.ucl.ac.uk


There are many possible causes of blurring of vision with reading. The authors investigated whether changes in corneal topography in three symptomatic patients (monocular blurred vision) and nine asymptomatic individuals could explain their symptoms. All patients had thorough ophthalmic examinations including corneal topography followed by re-evaluation after 15 or 30 minutes of reading. Non-presbyopic individuals were asked to read in a downgaze position. An index of corneal uniformity (CU index) and predicted corneal acuity (PC) values are reported.

The patients who initially presented with symptoms with reading showed a decline in their PC and a significant change in their CU index. Changes of a smaller magnitude were found in the controls. Symptoms were relieved once the patients were fit with full-field reading glasses, which allowed reading to be performed in the primary position. The authors postulate that eyelid forces on the eye while in the downgaze position were responsible for the changes.

Karl C. Golnik, MD, 10494 Montgomery Rd., Cincinnati, OH 45242. e-mail: k golnik.cwest@worldnet.att.net (no reprints available)


Fifty-two patients with Graves ophthalmopathy were enrolled in this study in which one randomly selected orbit was treated with 20Gy of external beam therapy. Six months later, the contralateral
orbit was treated. The authors found that there was no beneficial therapeutic effect with respect to muscle volume, proptosis, range of extraocular muscle rotation, area of diplopia fields, lid fissure width, or fat.

Dr. Gorman, Division of Endocrinology, Mayo Clinic, 200 First Street Southwest, Rochester, MN 55905.


Ten adult myopic contact lens wearers were evaluated first after wearing their lenses for four hours and secondly after wearing their spectacles for a similar time period. Parameters investigated included refractive error, visual acuity, muscle balance, vergence amplitudes, the AC/A ratio, and accommodative amplitude. No clinically significant changes in visual function were found under the two conditions. Slightly lower AC/A ratios were found while wearing contact lenses than spectacles. The authors state that an accurate refraction can be obtained immediately following contact lens removal.

Jon Whittle, University of Sheffield Department of Ophthalmology and Orthoptics, Royal Hallamshire Hospital, Sheffield S10 2JF, UK. e-mail: j.whittle@sheffield.ac.uk


Eighty-two volunteer experts were asked to mimic their office routine in measuring one subject in primary position, horizontal gazes and vertical gazes. The volunteer subjects consisted of 69 pediatric ophthalmologists, seven orthoptists, four international members of the American Association for Pediatric Ophthalmology and Strabismus and two members in training. Years in practice averaged 11.5. The authors found that the range of head posture measurements for horizontal gaze ranged from 10 to 50-de-
degrees. For vertical gaze, the head posture ranged from 4 to 58 degrees. For head tilts, the tilt ranged from 20 to 50 degrees. There was no substantial difference between initial and repeat measurements. The authors conclude that there is a high degree of variability amongst expert observers in defining standard gaze positions. They further conclude that these results may explain some of the inconsistent outcomes noted in the strabismus literature.

Dr. Granet, Department of Ophthalmology, University of California, San Diego, 9415 Campus Point Drive, LaJolla, CA, 92037-0946.


The occurrence of a third nerve palsy with meningitis is unusual. The author reports on the course of a 29 month-old child with pneumococcal meningitis. Eye findings at the time of presentation included an esotropia, slight ptosis, and mild limitation of extraocular movements consistent with a third nerve paresis. Treatment consisted of occlusion therapy while the paresis resolved. A second episode of meningitis occurred which lead to obtaining a CT scan. The scan revealed a cochlea/mastoid anomaly and deafness of the affected side. The anomaly allowed CSF to enter the inner ear where infection occurred. A repair of this defect stopped further recurrences.

Rebecca Groom, Orthoptic Department, Royal Berkshire Hospital, London Road, Reading, Berks RG1 5AN, UK.


Congenital nasolacrimal duct obstruction often resolves spontaneously or with medical management. This study compares balloon dacryocystoplasty (DCP) to probing in the treatment of congenital nasolacrimal duct obstruction (CNLDO) as the initial procedure in children older than 18 months. Results showed that primary probing still stands as the most successful approach for the treatment of these patients.

Dr. Kammi B. Gunton, Department of Pediatric Ophthalmology, Wills Eye Hospital, 900 Walnut Street, Philadelphia, PA 19107.


This paper reports on 32 children with angles of squint between 40 and 60 degrees who were operated on between their 13th and 30th month. Most of these cases underwent a recession of both medial rectus muscles of 4 mm in combination with a myopexia of 14 mm. Most of them had an alignment in the first 2 weeks. This effect became worse in the following 3 years, so that 15 children had to undergo a second operation. In the end, 76% had a microstrabismus with an angle between 10° esotropia and 10° exotropia, 14% had larger angles.

Dr. med. Gutzeit, Bayerischer Platz 9, 10779 Berlin, Germany.


This study reports the various treatments, their effectiveness and side effects in the management of retinoblastoma.

Dr. Brenda Gallie, Hospital for Sick Children, # 555 University Avenue, Toronto, Ont M51X8 Canada.


In a longitudinal study, the refractive errors and accommodative abilities of 60 children with Down syndrome were followed for two years or more. Refractive errors were determined using cycloplegic retinoscopy and accommodation was assessed with dynamic retinoscopy. The authors defined three main categories: (1) stable hypermetropia with less than 1.5D difference between the first and last visit (n = 34); (2) increasing hypermetropia of more than 1.5D difference (n = 11); (3) decreasing hypermetropia/development of myopia with greater than a 1.5D shift difference (n = 9). Patients with anisometropia (n = 6) were evaluated separately. The authors found an accommodation weakness in 55% of the children. Accommodation weakness was significantly less frequent in the first group (22%) than in all the other groups (P = 0.008). The frequency of astigmatism of greater than 1D at the last visit was 57%, the direction of the axis being predominantly "with the rule". All the eyes with oblique astigmatism had a side specific direction of axis; the right eyes belonging to the 135° axis group and the left eyes to the 45° axis group. The authors conclude that a stable, low-grade hypermetropia was significantly correlated with a normal accommodation. Accommodation weakness may be of etiological importance to the high frequency of refractive errors encountered in patients with Down syndrome. Fi-
nally, a striking right-left specificity in the oblique astigmatic eyes suggests that mechanical factors on the cornea from the upward slanting palpebral fissures may be a major etiological factor in the astigmatism.

Olav H Haugen, Department of Ophthalmology, Haukeland University Hospital, N-5021 Bergen, Norway. e-mail: ohha@haukeland.no


It is unusual to examine contralateral concurrent cranial nerve palsies. These authors present two cases of fourth nerve palsy with contralateral sixth nerve palsy.

Mrs. Veronica Henshall, Department of Orthoptics, Christopher Home Eye Unit, Royal Albert Edward Infirmary, Wigan Lane, Wigan WN1 2NN, UK. Tel: (01942)822310. Fax: (01942) 822251.


Vision plays an important role in communication, learning and motor control. The management of visually impaired patients requires a global approach, in which orthoptists and occupational therapists must work together. The authors evaluate different functions (motor, multisensorial, cognitive) in two patients during a game of scrabble.


This study was undertaken to investigate stereo acuity levels in patients with unilateral idiopathic macular hole and after surgical intervention. In 31 consecutive patients with a unilateral macular hole and 46 consecutive patients who underwent successful unilateral macular hole surgery, complete ocular examinations, including orthoptic examinations and microperimetry using the scanning laser ophthalmoscope, were performed. The findings displayed a significantly positive correlation between VA and stereo acuity (r = 0.87, P < 0.01). After successful surgery, stereo acuity also correlated with the presence or absence of absolute and/or relative scotoma, and was best in eyes without scotomata. Patients with unilateral idiopathic macular hole, suppression and symptom duration of 24 months or longer had no stereoscopic vision. The results indicated that in patients with unilateral idiopathic macular hole and after surgery, stereo acuity correlated with VA. The authors conclude patients with unilateral macular hole should be operated upon as early as possible resulting in better VA and better stereo acuity.

Hikichi T, Department of Ophthalmology, Ashahikawa Medical College, 2-1 Higashi-Kaguraoka, Ashahikawa 078-8510, Japan. e-mail: hikichi@ashahikawa-med.ac.jp


Twenty-nine patients with acquired anophthalmia were examined clinically and with high resolution computed tomography. The purpose of the study was to analyze the extent of bony orbital reduction after enucleation in humans. Bony orbital volumes were reduced in all patients with long-standing anophthalmia. However, the authors found that the volume reduction was smaller than generally assumed. They found that the greatest reduction of the anophthalmic orbit compared with the fellow orbit was 14.5%. Previous reports had calculated volume reduction between 19.5% and 50%. The authors found some evidence of a correlation between orbital volume reduction and age at enucleation (rho = 0.36, P = 0.09) and a statistically significant correlation between volume reduction and time interval since enucleation (rho = −0.5, P = 0.003). The authors conclude that their data provides strong evidence that enucleation both in children and adults is associated with a reduction of bony orbital volume and that this decrease in volume is associated with increasing time. However, the reduction is smaller than generally assumed and does not cause obvious facial asymmetry. It is more related to the time interval since enucleation than the age at enucleation, which makes a mechanism of volume adaptation more likely than just retardation of growth.

Dr. C. Hintschich, Department of Ophthalmology, Ludwig-Maximilians-Universität, Mathildenstrasse 8, D-80336 München, German. e-mail: c.hintsch@ak-i.med.uni-muenchen.de

HOLMES JM, HOHBERGER GG, LESKE DA: Photographic and clinical techniques for outcome as-

The authors investigated inter-examiner reliability and reproducibility of clinical assessment of ductions and alignment in 23 patients with unilateral sixth nerve palsy and three control subjects. In addition, the authors investigated photographic methods for assessing abduction deficits. The authors found there was excellent inter-examiner agreement of their new photographic abduction assessment and of masked clinical measures.

Dr. Holmes, Ophthalmology, W7, Mayo Clinic, Rochester, MN 55905.


Prism adaptation and augmented surgery have been used as preoperative tools to determine the surgical target angle of patients with acquired esotropia. This study establishes a comparison between motor and sensory one-year surgical results in patients with hypermetropic esotropia, managed with either augmented surgery based on the average of the near deviation with and without correction or preoperative prism adaptation. Prism responders were defined as those who demonstrated fusion and nonresponders as those who failed to develop fusion response after completing the prism adaptation test. In summary, there were no significant differences in the surgical outcomes between each group.

Dr. Byung-Moo Min, Department of Ophthalmology, Chungnam National University, 640 Daessa-dong, Jung-gu, Taegon 301-040, Korea. e-mail: bmmin@hanbat.chungnam.ac.kr


The authors report the case of a 15 year-old girl with the rare finding of Apkarians nondecussating retinal-fugal fiber syndrome. Clinical findings included decreased visual acuity in each eye consistent with the patient's nystagmus, horizontal nystagmus, normal pupillary, reactions in each eye, absence of iris transillumination, and normal appearance of the posterior pole. Visual field testing revealed concentric constriction without change across the vertical meridian. Electrophysiologic testing (ERG and VEP) was performed and the responses were normal. On the MRI, it was observed that the optic nerves did not show cross over indicative of absence of the optic chiasm.

Two previous cases of isolated absence of the optic chiasm have been reported. In those cases the nystagmus was of a see-saw nature whereas in this patient, the pattern remained horizontal. This case is also unusual in that no other midline structural defects existed. Additionally, there was no iris transillumination or foveal hypoplasia. The authors conclude this to be a case of true agenesis of the chiasm.

Dr. Nomdo M. Jansonius, Dept. Ophthalmology, University Hospital Groningen, PO Box 30.001, 9700 RB Groningen, The Netherlands. e-mail: n.m.jansonius@ohk.azg.nl


The authors describe how, when, and which conditions to treat with prisms.

N Jeanrot, 12 Bd Camot 81100 Castres, France.


Good visual acuity outcomes can be accomplished in children treated early for congenital unilateral cataract. This study intends to compare the efficacy of intensive versus reduced occlusion regimen on binocular sensory results, visual acuity, and the occurrence of strabismus in children after surgery for congenital unilateral cataract. Rigorous occlusion allows only a small period when both eyes may be used together during the onset and development of binocular sensory function in normal infants. The overall results showed that increasing the amount of binocular experience in children treated for congenital unilateral cataract would encourage a good level of binocular sensory function. Furthermore, the outcome also suggested a reduced prevalence of strabismus without compromising the possibility of a good visual outcome.

Dr. Brett G. Jeffrey, Retina Foundation of the Southwest, 9900 N Central Expressway, Suite 400, Dallas, TX 75231. e-mail: bjjeffrey@retinafoundation.org


Two cases of penetrating ocular trauma in children resulting from ninja stars are described. In the first case, despite a scleral laceration, loss of iris tis-
ABSTRACTS

sue, and a vitreous hemorrhage the child had a good result with a final best corrected visual acuity of 20/20. Unfortunately, the child in the second case did not fare as well. In this case, the child suffered a large corneal laceration and traumatic cataract. He ultimately required a penetrating keratoplasty, and is currently undergoing treatment for amblyopia, strabismus, and elevated intraocular pressures. His best corrected visual acuity is 20/70.

BH Jeng, Cole Eye Institute, Cleveland Clinic Foundation, Ohio.


The purpose of this retrospective study was to determine the incidence of persistent vertical strabismus following cataract surgery. Of 17,531 consecutive cataract operations at a single surgery center over a 5-year period, 32 had persistent vertical strabismus for an overall incidence of 0.18%. All cases of persistent diplopia were associated with retrobulbar, rather than topical anesthesia, and were more common in less experienced anesthetists. Left eye involvement was three times more common than right eye involvement, and all individuals who administered retrobulbar blocks were right-handed. The authors concluded that the wrist of the right-handed anesthetist must be more significantly dorsiflexed and adducted when addressing a left eye in order to angle the needle toward the apex of the orbit, bypassing the inferior rectus muscle.

David A. Johnson, MD, PhD, Grene Vision Group, 655 North Woodlawn, Wichita, Kansas 67208. fax: 316-681-1005; e-mail: dajecwped@aol.com.


The authors examine three groups of six patients. Those that had no binocular single vision, those with binocular single vision, and those with binocular single vision with one eye occluded. Following two spatial visual awareness tasks, binocular single vision patients were able to complete tasks more quickly than monocular patients.

Mr Steve Joy, Orthoptic Department, Royal Berkshire Hospital, Reading, Berks RG1 5AN, UK. Tel: (0118) 9877683. e-mail: joy_boy4@hotmail.com


RAMSES is a seven-year follow-up study that evaluated the effectiveness and efficiency of screening for amblyopia in the Dutch child healthcare system in the first two years of life. A total of 4,072 children were screened at the age of 9, 14, and 24 months. Children with a positive test result were referred to their general practitioner (n = 160), who was asked to arrange a definitive referral to an ophthalmological center (n = 101). The authors found that for amblyopia, the predictive value of a positive test result followed by an effective referral as 0.42. They concluded that the referral procedures after a positive test result in the Dutch child healthcare-screening program for amblyopia needs to be improved. The Dutch screening test used to detect amblyopia (the VOV screening test) exhibited a relatively favorable positive predictive value.

R E Juttman, Department of Public Health, Erasmus University Rotterdam, PO Box 1738, 3000 DR Rotterdam, Netherlands. e-mail: juttmann@mgz.fgg.eur.nl


The author discusses the impact that visual impairment has on children with multiple handicaps. The visual system is very important for motility and motor development. Early support intervention for visually handicapped and blind children can prevent secondary delays and facilitates differentiation from other causes of developmental retardation.

Dr. Barbara Käsmann-Kellner, Uni.-Augenklinik, Kirrbergerstr. 1, 66421 Homburg, Germany.


Acquired sixth nerve palsies in childhood are often the result of brain tumors. Recovery rate for this condition is very low (5%). Botulinum toxin injection has been effective in improving the recovery rate in patients with sixth nerve palsy from all causes. This particular study reviews the results of botulinum toxin injection given to children who had developed a sixth nerve palsy or paresis from brain tumors. Outcomes revealed that these patients did not show a permanent reduction in esotropia. This is probably due to persistent loss of lateral muscle function.

Dr. Natalie C. Kerr, University of Tennessee, Department of Ophthalmology, 956 Court Avenue,
Children with congenital ptosis have a greater chance of developing significant astigmatism in the ipsilateral eye and are known to have an increased prevalence of strabismus and amblyopia. The reason for this study was to analyze refractive error changes in children with previously uncorrected unilateral congenital ptosis who underwent unilateral levator resection. Results demonstrated major cylindrical change in eyes that underwent the mentioned procedure. Proper postoperative refractive evaluation is required to prevent development or reappearance of amblyopia.

Dr. Bradley V. Davitt, Cardinal Glennon Children’s Hospital, 1465 South Grand Blvd, St Louis, MO 63104. e-mail: davittb@slu.edu


The purpose of this study was to correlate the types of dysarthria with neuropathological changes in patients with progressive supranuclear palsy (PSP). The authors examined the speech disorders of 14 patients with PSP who later underwent autopsy. They correlated the severity of the specific components of the dysarthria with the neuropathological changes in structures that have been associated with dysarthria in other neurological diseases. Correlation and linear regression analysis were used to correlate the severity of the hypokinetic, spastic, and ataxic components with the degree of neuronal loss and gliosis in predetermined anatomical sites. They found that all patients had hypokinetic and spastic dysarthria, and nine also had ataxic components. The severity of the hypokinetic components was significantly correlated with the degree of neuronal loss and gliosis in the substantia nigra pars compacta (r = 0.61, P = 0.02) and pars reticulata (r = 0.64, P = 0.01) but not in the subthalamic nucleus (r = 0.51, P = 0.07) or the striatum or globus pallidus. The severity of the spastic and ataxic components was not significantly correlated with the neuropathological changes in the frontal cortex (r = 0.20, P = 0.50) and cerebellum (r < 0.34, P > 0.20). The authors conclude that the hypokinetic dysarthria of PSP may result from degenerative changes in the substantia nigra pars compacta and pars reticulata and not from changes in the striatum or globus pallidus.

Karen J. Kluin, MS, CCC, BC-NCD, Department of Speech-Language Pathology, University of Michigan Health System, 1D203 University Hospital, 1500 E Medical Center Dr, Ann Arbor, MI 48109-0043.
of severe visual impairment and blindness in children attending schools for the visually handicapped in the Czech Republic. The authors examined 229 children aged 6–15 years who attended one of ten primary schools for the visually handicapped. They found that the most affected parts of the eye were the retina (124, 54.2%), optic nerve (35, 15.3%), whole globe (25, 10.9%), lens (20, 8.7%), and uvea (12, 5.2%). The major cause of visual impairment was retinopathy of prematurity (ROP) (96, 41.9%), followed by abnormalities of unknown timing of insult (97, 42.4%) and hereditary disease (21, 9.2%). It was estimated that 127 children (56%) suffer from visual impairment caused by potentially preventable and/or treatable conditions (for example, ROP, cataract, and glaucoma). The authors recommend the formation of a study group for comprehensive evaluation of causes of visual handicap in children in the Czech Republic, as well as detailed analysis of present practice of screening for ROP.

I Kocur, Charles University, University Eye Clinic, Srobarova 50, 100 34 Prague, Czech Republic. e-mail: ivokocur@ti.cz


This preliminary article reports on early vs. late surgery investigates the degree of binocular vision, angle of strabismus, refractive error and visual acuity of the worse eye in two groups of children. It is a prospective, non-randomized, multi-center trial.

Universitäts Augenklinik, Im Neuenheimer Feld 400, 69120 Heidelberg, Germany.


The authors preformed early surgery (20 months old) with a bilateral myopexia (faden) of the medial rectus muscles on 59 patients with infantile esotropia. Of the 59, 56 underwent an additional recession. These patients had a mean angle of 70 to 80°. They found the mean angle of strabismus to be 8° of esotropia for these patients, the angle remained stable in a three year follow-up. The authors recommend visual examinations often to prevent amblyopia. They do not recommend early surgery for patients with 40° esotropia or less.

Dr. med. H. Kaufmann, Univ.-Augenklinik für Schielbehandlung und Neuroophthalmologie Friedrichstr. 18, 35385 Gießen, Germany.

KUBOTA N, TAKAHASHI H, HAYASHI T, SAKAUE T, MARUO T: Outcome of surgery in 124 cases of Duane’s retraction syndrome (DRS) treated by intraoperatively graduated recession of the medial rectus for esotropic DRS, and of the lateral rectus for exotropic DRS. Binoc Vis Strabismus Q 2001; 16:15–22.

This is a retrospective review of the results of surgery for Duane syndrome with the goal of improving the binocular alignment in primary position and improving any abnormal head posture. Results showed that both the primary position and the abnormal head posture were satisfactorily improved in 89% of cases after surgery with a residual deviation of 7 degrees or less of abnormal head posture. The authors conclude that recession of the appropriate horizontal rectus muscle is a safe and effective procedure for both the primary position deviation and abnormal head posture in all types of Duane syndrome.

Dr. Kubota, Department of Ophthalmology, Teikyo University School of Medicine. 2 Kaga, Itabashiku, Tokyo 173-8605, Japan.
Anterior transposition of the inferior oblique muscle is a popular option for treating dissociated vertical divergence (DVD) when associated with inferior oblique muscle overaction. An unfavorable result of this procedure has been named the anti-elevation syndrome. It has been suggested that the anti-elevation syndrome is caused by an excessive anti-elevating effect of the transposed inferior oblique muscle. This study demonstrated that patients who develop the anti-elevation syndrome after inferior oblique anterior transposition have significantly more extorsion after surgery than those who do not develop that limitation.

Dr. Burton J. Kushner, Department of Ophthalmology & Visual Sciences, 2870 University Avenue, Suite 206, Madison, WI 53705. e-mail: bkushner@facstaff.wisc.edu.


Prism adaptation was developed as a method for assessing fusion potential and determining the preoperative angle of deviation that should be corrected to obtain the best possible result. Preoperative prism adaptation for esotropia with a distance-near disparity remains controversial. The goal of this study was to evaluate the surgical outcome for patients who were prism adapted for esotropia with a distance-near disparity and decide whether both preoperative sensory and motor fusion are necessary to determine surgical success. Responders to prism adaptation had an improved surgical result compared with non-responders. In summary, prism adaptation provides very useful information in the surgical management of patients with esotropia and distance-near disparities.

Pamela J. Kutschke, CO, University of Iowa Hospitals and Clinics, Department of Ophthalmology and Visual Sciences, 200 Hawkins Drive, Iowa City, IA 52245-1091. e-mail: Pamela-kutschke@uiowa.edu


Intraocular lenses have become more popular to correct aphakia in children after cataract surgery. Theoretically, an intraocular lens implant is better than a contact lens because it simulates the optics of the crystalline lens. However, infants’ eyes change shape quickly, making difficult the implantation of an appropriate IOL that will focus the eye during the immediate postoperative period and later in life. The only advantage of correcting aphakia after unilateral congenital cataract surgery with primary IOL implantation was improved visual outcome. Unfortunately, it showed a higher incidence of reoperations.

Dr. Scott R. Lambert, Emory Eye Center, 1365-B Clifton Road, NE, Atlanta, GA 30322.


Any child with infantile esotropia should be given the chance of early surgery around the first birthday. The paper details the advantages and disadvantages of early (ca. 12 months) vs. late (ca. 3–5 years) surgery.

Dr. med. Lange, Geigelsteinstr. 26, 83209 Prien, Germany.


Albinism is a group of inherited disorders that show reduced or absent melanin production. Ocular albinism primarily involves the eyes. Even though, the most common clinical features of ocular albinism include nystagmus, reduced visual acuity, and iris transilluminaton, they are not present in all patients. This study establishes a comparison of two groups of patients. One group of patients have albinism with fine or gross stereopsis, and another group of patients have albinism without stereopsis. Both groups had similar visual acuities and binocular alignment. In conclusion, atypical albinism presents good visual acuity, stereovision, melanin in the macula, rudimentary foveal development, and reduced or absent nystagmus.

Dr. C. Gail Summers, Department of Ophthalmology, Medical School, Mayo Mail Code 493, 420 Delaware Street SE, Minneapolis, MN 5545. e-mail: summe001@umn.edu


This was a prospective observational case series of 54 patients who were treated for unilateral amblyopia by occlusion therapy in childhood. The children
ABSTRACTS

t were followed up to the age of 9 years and were re-evaluated in 1984 for long-term results with an average of 6.4 years after cessation of treatment. The patients were again evaluated in 1999. At the final evaluation, 87% of the patients were found to have maintained or improved visual acuity relative to the acuity at the end of their therapy.


The authors emphasize the usefulness of this software in the evaluation and rehabilitation of near visual function in children and adults. This software can be adapted to the needs of each patient by vary-


The authors examined 114 twin pairs (53 monozygotic and 61 dizygotic) to estimate the heritability for ocular refraction and its determiners in a population based cohort of 20-45 years old twins. They checked refraction with cycloplegia and measured eye dimensions with ultrasound. The heritability was estimated employing etiological model fitting. Evidence of gene-environment interaction was analyzed. Finally, correlations between intrapairwise differences in educational length and in refraction were evaluated. The results indicate a high heritability for ocular refraction and its determiners and thus suggest that environmental impact on refraction is not significant. However, the epidemiological association between educational length (near work) and myopia, the evidence of increasing myopia prevalence within a few generations and the theory of gene-environment interaction imply that some individuals might be genetically liable to develop myopia if exposed to certain environmental factors.

Niels Lyhne, Department of Ophthalmology, Odense University Hospital, Odense, 5000 C, Denmark. e-mail: n_lyhne@hotmail.com


The aim of this study was to assess the feasibility of providing a stock of ready-made spectacles for correction of refractive error in the general population. Data was collected in the Visual Impairment Project, a population based survey of Victorian residents aged 40 years or older in randomly selected urban and rural sample areas. This included a refractive eye examination and the proportion of subjects with hypermetropia, emmetropia and myopia documented in the 40–60 year age group. A total of 516 participants had a refractive error which was deemed suitable for correction by “off the shelf” spectacles. This represented 19.9% of all participants between 40 and 60 years of age. Provision of spectacles in 0.50D increments would provide suitable stock spectacles for 85.5% of a −3.00 to +3.00D range or 89.2% of a −3.50 to +3.50D range. The authors concluded that ready-made “off the shelf” spectacles could significantly alleviate visual morbidity due to refractive error in up to 20% of an urban population in Australia. This approach may also be useful in developing countries with poor access to optometric services.

Dr. J Keeffe, Centre for Eye Research Australia, University of Melbourne, 32 Gisborne Street, East Melbourne, Victoria 3002, Australia. e-mail: jillek@ unimelb.edu.au

While the advances in surgery have reduced the incidence of blindness in the world, the aging of the population has increased the incidence of low vision. In order to determine the treatment and follow-up of these patients around the world, the authors sent a questionnaire to various ophthalmologists, orthoptists, and specialized centers. Their results show that the rehabilitation of these patients is well established in Europe, and in the process of being established in the United States and Canada. In Africa, however, efforts are geared towards prevention and treatment of avoidable causes of blindness.

Anne Marty, Orthoptiste, Cabinet Dr Claudine Labro-Leredde, 5, rue Frédéric Petit, 31600 Muret, France.


The authors reported the clinical findings and surgical outcome in 17 cases of unilateral fibrosis of the inferior rectus muscle. All cases showed hypotropia with restricted eye elevation. All cases had resistance to forced-duction testing. The affected eye was amblyopic in the majority of cases and binocular vision was absent in 15 of the 17 cases. All cases received either recession or free tenotomy of the inferior rectus muscle. Resection of the ipsilateral superior rectus muscle was additionally performed to correct residual hypotropia. Fibrosis of the inferior rectus muscle was present intraoperatively in all 17 cases. Restoration of satisfactory binocular alignment was obtained postoperatively in all 17 cases.

Dr. Maruo, Department of Ophthalmology, Teikyo University School of Medicine, 2 Kaga, Itabashiku, Tokyo 173-8605 Japan.


The authors reviewed 666 cases of patients having undergone surgery for intermittent exotropia. Outcome was evaluated at one month and at four years postoperatively. Orthotropia or microtropia was achieved in 60% of patients one month after surgery. Of those patients, half showed orthotropia or microtropia four years postoperatively while the other half became exotropic. The rate of orthotropia or microtropia was higher when patients were operated before three years and after eleven years of age. With success defined as improvement of appearance with exotropia of less than or equal to 20 prism diopters after four years, success was achieved in 95% of patients following bilateral lateral rectus resections and in 80% of patients following unilateral recession-resection procedures. There was no statistically significant difference between the two groups with regard to overall success.

Dr. Maruo, Department of Ophthalmology, Teikyo University School of Medicine, 2 Kaga, Itabashiku, Tokyo 173-8605 Japan.


This is a case report of orbital rhabdomyosarcoma in an 11-year-old female. The authors describe the radiotherapy induced cataract and the treatment of the cataract and associated strabismus with extraction, IOL implant and botulinum toxin.

Bernadette McCary, Orthoptic Department, Moorfields Eye Hospital, City Road, London EC1V 2PD, UK. Tel: (020) 7566 2161. e-mail: Bernadette. mccary@moorfields.nthames.nhs.uk


The Melbourne Visual Impairment Project was a population based study of the distribution and determinants of age related eye disease in a representative sample of Melbourne residents aged 40 years and older. The purpose of this study was to identify the predictors of five-year mortality in the cohort of non-institutionalized adults. Of the original 3271 participants, 2594 (85%) participated in the study and 231 (7.1%) were reported to have died in the intervening five years. Multivariate logistic regression analyses were used to identify independent predictors of participation and five-year mortality. The authors found that the best corrected visual acuity <6/12 (adjusted odds ratio (OR) = 2.34) was associated with a significantly increased risk of mortality, as were increasing age (OR = 1.09), male sex (OR = 1.62), increased duration of cigarette smoking (OR = 2.06 for smoking >30 years), increased duration of hypertension (OR = 1.51 for duration >10 years), increased duration of diabetes (OR = 2.34 for duration >10 years), increased duration of any liver disease (OR = 2.18), and increased duration of smoking (OR = 2.18 for duration >10 years).
ABSTRACTS

and arthritis (OR = 1.42). They conclude that even mild visual impairment increases the risk of death more than twofold. Finally, the authors recommend further research to determine why decreased visual acuity is associated with increased risk of mortality.

Cathy McCarty, Centre for Eye Research Australia, University of Melbourne, Royal Victorian Eye and Ear Hospital, 32 Gisborne Street, East Melbourne, Vic 3002, Australia. e-mail: cathy@cera.unimelb.edu.au.


A historical review of the accommodative spasm is presented. The symptoms, differential diagnosis, etiology, and therapeutic options are discussed with a case presentation.

Ann McIntyre, Orthoptic Department, Moorfields Eye Hospital, City Road, London EC1V 2PD, UK.


The case of a six-year-old with bilateral six nerve palsies and a clival tumor is presented. The esotropia and six nerve palsies remained after neurosurgery. Reprints not available.


Acquired nonaccommodative esotropia in childhood is rare and is usually associated with neurologic or neoplastic disease. The purpose of this study is to verify the frequency and clinical characteristics of this type of childhood esotropia. A group of 221 children with esotropia were prospectively studied during a 3-year period. The occurrence of acquired nonaccommodative esotropia (ANAET) found in this cohort of patients was nearly twice as prevalent as congenital esotropia. This study concluded that ANAET happens more often than congenital esotropia, contrary to previous reports. This type of strabismus appears between the ages of 1 and 5 years and is seldom associated with underlying disease. It presents a small but progressive angle of deviation and early surgical intervention may accomplish bifoveal fixation.

Dr. Brian G. Mohney, East Tennessee State University College of Medicine, Department of Surgery, Box 70575, Johnson City, TN 37614. e-mail: mohney@etsu.edu.


The author collected demographic and clinic data on all esotropic children younger than 11 years of age presenting from 1 August 1995 through 31 July 1998. Two hundred twenty-one children were included in this report. Fifty-three percent of the children had some form of accommodative esotropia, 17% had esotropia associated with congenital or acquired abnormalities of the central nervous system. Ten percent displayed acquired nonaccommodative esotropia, 7% had esotropia resulting from ocular sensory defects, 5% had confirmed congenital esotropia and 3% had paralytic esotropia. Four percent had an unverified age at onset, preventing an accurate categorization.

Dr. Mohoney, Department of Surgery, East Tennessee State University College of Medicine, Box 70575, Johnson City, TN 37614.


Duane retraction syndrome (DRS) is a spectrum of eye motility disorders in which the common features are retraction of the globe and narrowing of the lid fissure, both occurring on attempted adduction of the involved eye. These patients often present anomalous face turns toward the affected eye to maintain binocular single vision. This study is conducted to evaluate the effectiveness of lateral rectus resection with medial rectus recession in the affected eye of patients with DRS. It was discovered that ipsilateral recession-resection procedures in patients with DRS with esotropia was very beneficial. Abduction was improved and compensatory face turns were eliminated.

Dr. Stephen P. Kraft, Department of Ophthalmology, The Hospital for Sick Children, 555 University Ave, Toronto, ON, Canada M5G 1X8. e-mail: Stephen.kraft@sickkids.on.ca.


This is a retrospective analysis of the surgical results for surgery for superior oblique paresis with mild to moderate inferior oblique overaction. Surgery consisted of a standard fixed 10mm inferior oblique recession with or without vertical rectus recession in visually mature patients. Twenty-four patients were included in this study. Criteria for a successful outcome included hyperdeviation of 5 prism dipters or less in primary position, elimination of
any compensatory head posture, and elimination of diplopia in the central 30 degrees of the binocular field. Of the 16 cases that had inferior oblique recession alone, 88% were successful. Eight cases had either contralateral inferior rectus recession or ipsilateral superior rectus recession. Seventy-five percent of those eight cases were successful. Inferior oblique recession alone led to an average reduction of 9.1 prism diopters of hypertropia in primary position. The results also showed that inferior oblique recession alone was especially successful if patient's had a low to moderate inferior oblique overaction with a hypertropia under 20 prism diopters in primary position and up to 25 prism diopters in the contralateral gaze field. All 14 patients meeting these limited criteria were asymptomatic postoperatively. The authors conclude that a standard upgraded 10mm inferior oblique recession, as a primary weakening procedure for cases of unilateral superior oblique palsy is effective.

Dr. Kraft, Department of Ophthalmology, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8.


The authors recommend using contact lenses, soft, rigid, toric or even multifocals to treat amblyopia by correcting the amblyopic eye or suppressing the leading eye.

Dr. med. W. Lange, Geigelsteinstr. 26, 83209 Prien, Germany.


Isolated inferior rectus palsies are very rare and result in diplopia, head posture, and squint. The reasons are myasthenia gravis, Graves disease, or microinfarction of the subnucleus of the oculomotor nerve. Case reports are given, but even then it may be difficult to differentiate the causes.

Dr. Birte Neppert, Uni Augenklinik Lübeck, Ratzeburger Allee 160, 23538 Lübeck, Germany.


This is a case presentation of a seventy-seven year-old woman with progressive esotropia. The etiology of dolichoectasia of the intracavernous carotid artery is discussed.

Reprints are not available.


The authors review the reading difficulties found in very low birth weight babies with normal IQ. The brain lesions affecting pre-term babies as well as the saccadic changes and visual changes are then related to reading problems.

David Newsham, Division of Orthoptics, Department of Allied Health Professions, Thompson Yates Building, Quadrangle, Brownlow Hill, Liverpool L69 3GB, UK. Tel: (0151) 7945731. Fax: (0151) 7945781. e-mail: D. Newsham@liverpool.ac.uk


Oculomotor nerve palsy in infancy and childhood is rare. This retrospective review presents five cases of acquired, isolated oculomotor nerve palsy in children younger than 3 years, previously believed to be idiopathic in nature and subsequently determined to be due to a neuroma. Infants and young children presenting the above characteristic should be highly suspicious for neuroma. Magnetic resonance imaging (MRI) with coronal views must be performed on all these patients for best diagnosis.

Dr. R. Michael Siatkowski, 608 Stanton L. Young Blvd, Oklahoma City, OK 73104. e-mail: rmichael-siatkowski@ouhsc.edu


The authors report on a patient with a congenital elevation deficit caused by a surplus muscle-like band in the retrobulbar space. Most authors that report on extra ocular muscles think that it could represent the so-called musculus retractor bulbi, a muscle that was lost during evolution.

BIRGIT NÜßLE, UNI. Augenklinik Tübingen, Schleichstr. 12-16, 72076 Tübingen, Germany.


The authors initiate a prospective study of low birth weight children at 10 to 12 years of age to reveal any link between the level of education and oph-
ABSTRACTS

Hiroshi Ohtsuki, MD, Department of Ophthalmology, Okayama University Medical School, 2-5-1 Shi-kata-cho, Okayama-Shi, 700, Japan. fax: 086 222 5139.


In a prospective study, the authors used the prism adaptation test in 128 consecutive exotropic patients prior to surgery to determine the influence of vergence aftereffect on the 3-year surgical outcome. The authors describe “vergence aftereffect” as the mechanism responsible for the superior alignment at near fixation in patients with pseudo-divergence excess. As described in the article, vergence aftereffect is synonymous with Kushner’s tenacious proximal fusion. Of 128 patients enrolled, 66% were of the basic type, 4% were pseudo-divergence excess type, and 30% were convergence insufficiency type. All of the pseudo-divergence excess types were prism responders. Following PAT, 14 basic types were reclassified as convergence insufficiency (pseudo-basic), and 10 convergence insufficiency types were reclassified as basic (pseudo-convergence insufficiency). Regardless of the original classification of exodeviation, patients who demonstrated any vergence aftereffect on the PAT (the pseudo-types) had a significantly better surgical outcome. The authors propose that the vergence aftereffect is responsible for hiding an exodeviation such that a rapid cover test would not detect a residual postoperative phoria.

Hiroshi Ohtsuki, MD, Department of Ophthalmology, Okayama University Medical School, 2-5-1 Shi-kata-cho, Okayama-Shi, 700, Japan. fax: +81 866 222 5139.


The authors present two sets of monozygotic twins with mirror image myopic anisometropia. The first set were two boys aged one year eight months. There was a right eye myopic anisometropia in one twin, and a left eye myopic anisometropia in the other. The differences in refractive power between both eyes were 11.6 and 7.6 dpt, respectively (spherical equivalent). Exotropia was recognized in three cases. The authors conclude that monozygotic twins with mirror image myopic anisometropia are extremely rare with only two such sets previously reported.

F Okamoto, Department of Ophthalmology, Tsukuba University Hospital, Tsukuba, Japan. e-mail: fumiki@tea.att.ne.jp.


The purpose of this study was to document the incidence and the severity of the ocular morbidity associated with intraventricular hemorrhage (IVH) in premature infants and to compare the morbidity between low grade and high grade IVH. The authors examined 68 consecutive preterm infants with IVH with a mean gestational age of 28.1 weeks. Of these infants, retinopathy of prematurity occurred in 33 (48.5%) (13 had low grade IVH and 20 had high grade IVH). Strabismus developed in 30 infants (44.1%) (14 had low grade IVH and 16 had high grade IVH). Infants with high grade IVH were at a significantly greater risk than infants with low grade IVH for the development of optic atrophy (31.5% versus 16.6%) and hydrocephalus (57.8% versus 10%). The authors conclude that this study highlights the serious significance of all grades of IVH with the higher incidence of optic atrophy and hydrocephalus with high grade IVH.

Michael O’Keefe, National Children’s Eye Centre, The Children’s Hospital, Temple Street, Dublin 1, Ireland. e-mail: mokeefe@materprivate.ie


Stereo tests are attractive to use in screening situations. However, their unreliability has been reported in the literature. This study’s objective was to compare the different stereo tests’ abilities to detect amblyopia and strabismus with visual acuity testing and cover testing. It is important to remember that monocular clues have been found in all stereo tests used in this study. In summary, none of the five stereo tests studied were appropriate for screening for amblyopia or strabismus.

Dr. Josefin Ohlsson, Department of Ophthalmology, SU/Molndal, SE 431 80 Molndal, Sweden. e-mail: josefin.ohlsson@oft.gu.se

Asymptomatic uveitis has become a common cause of decrease vision in children with juvenile rheumatoid arthritis. Hence, it is crucial for these patients to have routine periodic visits to a pediatric ophthalmologist for thorough evaluation. This study concluded that screening guidelines for uveitis for children with JRA should be reevaluated.

Dr. John W. Simon, Department of Ophthalmology, Albany Medical College, 35 Hackett Blvd, Albany, NY 12208.


Chorioretinitis sclopetaria presents a characteristic pattern of choroidal and retinal changes caused by a high velocity projectile passing into the orbit, in close proximity to the globe. The authors state that while it is unlikely that a patient should completely forget the trauma causing such damage, preserved or compensate visual function may blur the patient’s memory of these events over time. Characteristic physical findings help to clarify the antecedent history. Despite the lack of an acknowledged history of ocular trauma or surgery, in this case, the characteristic ocular findings discovered at presentation allowed for the recognition of the underlying etiology. Because of good visual function, the patient had completely forgotten about the trauma that had occurred 12 years earlier. Strabismus surgery was performed for the presenting symptomatic diplopia. The authors conclude that pathognomonic findings in chorioretinitis sclopetaria are invaluable in correctly diagnosing this condition, especially when a history of ocular trauma is unavailable.

CS Otto, Department of Ophthalmology, Madigan Army Medical Center, Tacoma, Washington 98431. e-mail: Clifton.Otto@nw.amedd.army.mil


A prospective study was performed using a questionnaire to the families of amblyopic children. Questions were directed toward determining any behavioral changes observed in the child who was patching and the level of compliance with occlusion. This was related to the level of the visual acuity. Children with dense to moderate amblyopia were found to have greater resistance to therapy and more behavioral problems than those with lower levels of amblyopia. However, no children were reported to be without all behavioral change.

Lois Parkes, Orthoptic Department, The Guest Hospital, Tipton Road, Dudley, West Midlands DY14SE, UK


The authors report on the risk of diplopia in 144 patients operated in adulthood for childhood strabismus. Diplopia and/or confusion, lasting 24 hours after surgery, occurred in 40 patients (ET = 34, XT = 6). Transient diplopia was present in 13 patients (ET = 4, XT = 9). These patients experienced diplopia for an average of 51 days after surgery (range 10–120). No patient experienced persistent postoperative diplopia. The authors conclude that the risk of persistent postoperative diplopia is minimal.

Clinique d’Ophtalmologie de l’Université de Verona, Italy; Service d’Ophtalmologie, Hôpital S. Bortolo, Vicenza, Italy.


The orthoptic practice benefits from good lighting conditions. The luminance levels must be sufficient without being excessive, and be adjustable to take into account the ocular condition being evaluated or treated.


The authors evaluated the visual improvement obtained in ARMD patients with bilateral central scotomas after 3 months of treatment with prisms. The base of the prism was placed perpendicular to the new fixation axis, with the same orientation in both eyes. Distance acuity, reading ability, contrast sensitivity and subjective visual comfort were analyzed in 26 patients with a mean age of 78 years. The results show that while distance acuity and reading ability remained unchanged, prismatic treatment improved contrast sensitivity and visual comfort.
ABSTRACTS

C Pesenti, S Vettard, M Mauguet-Faysse, Centre Ophtalmologique d’Imagerie Laser et de Rééducation de la Basse Vision, 14, Rue Rabelais, 69003 Lyon, France.


The purpose of this study was to examine regional cerebral dopaminergic function and glucose metabolism in members of two large kindreds with familial progressive supranuclear palsy (PSP) to identify subclinical cases. The authors scanned three clinically affected members from the two PSP kindreds with both 18F-dopa and l8fluorodeoxyglucose (18FDG) positron emission tomography (PET). All three clinically affected PSP patients showed a significant reduction in caudate and putamen 18F-dopa uptake along with a significant reduction in striatal, lateral, and medial premotor area and dorsal prefrontal cortex glucose metabolism. The authors then scanned 15 asymptomatic first-degree relatives with 18F-dopa PET; ten of them also underwent a second PET study with 18FDG. In four of the 15 asymptomatic relatives, caudate and putamen 18F-dopa uptake was 2.5SDs lower than the normal mean. These four subjects and a fifth asymptomatic relative with normal 18F-dopa uptake showed a significant reduction in cortical and striatal glucose metabolism. The authors concluded that 18F-dopa and 18FDG PET allowed identification of five cases with subclinical metabolic dysfunction among 15 subjects at risk for PSP. They suggest this approach for characterizing the pattern of aggregation in PSP kindreds.

Paola Piccini, MRC Clinical Science Center, Cyclotron Unit, Hammersmith Hospital, DuCane Road, W12 ONN London, England. e-mail: paola.piccini@csc.mrc.ac.uk


The authors describe the symptoms, pathophysiology, and the problems with therapy regarding pseudotumor cerebri. Pseudotumor cerebri consists of increased intracranial pressure with papilledema with normal results seen on MRI and CT scans. Symptoms include headaches, problems with vision, sixth nerve palsies, visual field defects, or loss of vision.

Ulla Pink, Uni-Augenklinik Köln, Joseph-Stelzmannstr 9, 50931 Köln, Germany.


The authors studied the molecular genetic defect of X-linked congenital nystagmus associated with macular hypoplasia in three white males of a three-generation family with clear features of ocular albinism in only one of them. They found a novel mutation (816del14bp) in the OA1 gene. Based on their research, they conclude that the mutated OA1 causes late budding and may lead to increased melanosome size (macromelanosomes), which accumulate at the site of their origin owing to impaired budding signals. The authors propose a model of OA1 that allows increase of pigmentation with age. They hypothesize that macular hypoplasia in all forms of albinism depends on the extracellular DOPA level during embryogenesis, and that in OA1 postnatal normalization of the extracellular DOPA level due to delayed distribution and membrane budding/fusion of melanosomes in melanocytes results in increasing pigmentation. Finally, the authors note that the lack of hypopigmentation may impede the recognition of OA1 in some older patients. Careful searching for additional signs such as macular hypoplasia and albinos misrouting should be done.

Dr. Markus Preising, Department of Paediatric Ophthalmology, Strabismology, and Ophthalmogenetics, University of Regensburg, 93042 Regensburg, Germany. e-mail: markus.preising@klinik.uni-regensburg.de


Anterior transposition of the inferior oblique is a common surgical approach for dissociated vertical deviation. This study compares standard anteriorization to anteriorization with a 7mm resection, in the treatment of dissociated vertical deviation. J AAPOS 2000; 4:348–353.

Anterior transposition of the inferior oblique is a common surgical approach for dissociated vertical deviation. This study compares standard anteriorization to anteriorization with a 7mm resection. It was established that there was absolutely no benefit to add a resection to the anterior transposition of the inferior oblique muscle surgery.

Dr. Alex V. Levin, Department of Ophthalmology, M158, the Hospital for Sick Children, 555 University Avenue, Toronto, ON, M5G 1X8, Canada.

Previous research had reported that appropriate follow-up examination for patients with accommodative esotropia was between three to six months. This article studies the possibility of stretching the gap between examinations of this type of patient. Extension of the time between examinations is desirable if it does not compromise care. Results demonstrated that decompensation is unlikely to take place in fewer than twelve months after control of accommodative esotropia is initially established. Some exceptions included patients with associated problems such as amblyopia, inferior oblique overaction, or dissociated vertical deviation who would probably necessitate closer attention.

Dr. Edward L. Raab, Department of Ophthalmology, 1 Gustave L. Levy Place, Box 1183, New York, NY 10029. e-mail: eraabmdjd@aol.com


The authors recalculated the table they originally published in 1977 for aid in fitting Fresnel prisms for correction of combined horizontal and vertical deviations. A new table is presented, with the changes highlighted.

Robert D. Reinecke, MD, Wills Eye Hospital, 900 Walnut Street, Philadelphia, PA 19107. fax: 215 592 0685.


The authors report a case of an epithelial-lined cyst that led to bleb failure with elevated IOP, strabismus, and proptosis in a teenage patient with a history of congenital glaucoma, microcornea, and cataracts secondary to Rubella. Though encapsulated blebs are not uncommon following surgery for pediatric glaucoma, this case is unique in that the mass contained a true cystic structure, lined with cells consistent with conjunctival epithelium. The authors proposed that the epithelial cells gained access to the capsule of the reservoir during the initial surgery.

Donald L. Budenz, MD, Bascom Palmer Eye Institute, University of Miami School of Medicine, 900 NW 17th St, Miami, FL 33136. e-mail: dbudenz@med.miami.edu


A retrospective study of 187 patients with distance exotropia who underwent various treatments is presented. Of the 187 patients, 115 were managed with observation only or observation and convergence therapy (two patients). At the final outcome 102/115 had persistent distance exotropia. There were 72 patients treated with surgery. Initially 46% of these patients were found to have binocular single vision for distance and near. The surgical patients were further subdivided into early vs. late surgery. Overall results were better in the late group with regard to fusion and control. The author recommends delaying surgery until after 6 years of age.

Sarah Richardson, Orthoptic Department, Claremont Wing, Royal Victoria Infirmary, Newcastle upon Tyne NE1 4LP, UK. e-mail: srichar718@aol.com


The authors report on 20 patients with unilateral congenital superior oblique palsy, who became symptomatic at the age of presbyopia. All patients responded well to prisms, but were unable to use multi or bifocal lenses. One patient responded well to surgery. They conclude that ocular motility disorders occur at the age of presbyopia because of reduced fusional amplitudes.

Dottor Anna Maria Rosato, Via Crocefisso 36 Reggio cal Reggio de Calabre, ITALIE. e-mail: Annamaria.Rosato@libero.it or liani@tiscalinet.it


During assessment of vertical deviations it is often necessary to perform the cross-cover test in the lower oblique fields of gaze. To facilitate ones view particularly of small deviations, it is common to lift the upper eye lids while performing the cross-cover test. The authors had noted an effect on the muscle balance with this maneuver.

A prospective study was performed on 100 patients whose ocular muscle balance was normal (no significant phoria) or history of an extraocular muscle problem. The cross-cover test was performed in the inducted fields both with and without manual elevation of the upper lids. In 84% of their patients, a phoria developed in at least one field of gaze with lid elevation. Vertical phoria were more common than horizontal phorias.

The authors suggest that elevation of the lid might change the tone of the vertical and horizontal recti by changing the system of the orbital soft tissues and...
fibroelastic pulleys. They caution against using lid elevation to evaluate ocular alignment where the induction or alteration of a small vertical phoria could mislead or change the interpretation of motility disorders such as skew deviations.

Michael L. Rosenberg, MD, Director of Neuro-Ophthalmology, Seton Hall University, Department of Neuroscience, New Jersey Neuroscience Institute, JFK Medical Center, 65 James Street, Edison, NJ 08818. e-mail: mrosenberg@solarishs.org

ROSSER DA, LAIDLAW DAH, MURDOCH IE: The development of a “reduced logMAR” visual acuity chart for use in routine clinical practice.

The authors hypothesized that a logMAR chart with a reduced number of letters per line would allow measurements to be made in a clinically acceptable period of time, and with greater precision and reliability than is possible with Snellen charts. They developed three different prototype charts (“reduced logMAR” or “RLM” charts A, B, and C). They compared these charts in terms of test-retest variability (TRV) and measurement time, with that of the Snellen chart, as well as the ETDRS (Early Treatment Diabetic Retinopathy Study) logMAR chart, which acted as the gold standard. They found that all charts produced acuity data that agreed well with those of the ETDRS chart. “Single letter” acuity measurements using the prototype RLM charts were completed in approximately half the time of those taken using the ETDRS and Snellen charts. Of the three prototypes, the RLM-A offered the most acceptable level of TRV when compared with the gold standard, while reducing the measurement time in half. The authors concluded that, by allowing a faster, less variable acuity measurement than the Snellen chart, the RLM-A chart could bring the benefits of logMAR acuity to routine clinical practice. Further investigations need to be done to optimize the chart design in terms of letter spacing, line spacing, and the presence of crowding bars.

D A Rosser, Optometry Department, Moorfields NHS Trust, City Road, London EC1V 2PD, UK. e-mail: dan@drosser.freeserve.co.uk


The authors stress the usefulness of the binocular visual field test in assessing diplopia, particularly in legal cases. They suggest that this reproducible test should be used more often by orthoptists.

Benoit Rousseau, Orthoptiste: 16, rue du Chateau, 77300 Fontainebleau, France. e-mail: webmestre@orthoptie.net

Agnès Joly, Orthoptiste: Hopital du Val-de-Grace Service d’Ophtalmologie, 74 Boulevard de Port Royal, 75005 Paris, France. e-mail: agnes.joly@wanadoo.fr


Five cases of convergence insufficiency with underlying superior oblique weakness are presented. Unsuccessful orthoptic treatment, and Fresnel Prisms led to successful treatment of the hyperdeviation with surgery.

Dr Fiona Rowe, PhD, DBO, Division of Orthoptics, Thompson Yates Building, Brownlow Hill, Liverpool L69 3GB, UK. Tel: (0151)794 5732. Fax: (0151) 7945781. e-mail: rowef@liverpool.ac.uk


A cross-sectional study was conducted on 1001 children in two Singapore schools to examine the role of nighttime lighting and myopia. Cycloplegic refraction and A-scan biometry measurements were made in both eyes. The parents completed a detailed questionnaire so the authors could obtain information on night time lighting, near work activity, educational and demographic factors. The authors found that there was no difference in myopia prevalence rates in children exposed to night time light (33.1%) compared with children who slept in the dark (31.4%) before the age of two years. In addition, vitreous chamber depth was not related to night-light (P = 0.58) before the age of two years. These results remained even after controlling for near work. The authors conclude that myopia is not associated with night-light in Asian populations.

Dr. Seang-Mei Saw, Department of Community, Occupation and Family Medicine, National University of Singapore, 16 Medical Drive, Singapore 117597, Republic of Singapore. e-mail: cofsawsm@nus.edu.sg


The authors conducted a cross-sectional study on 429 Singapore military conscripts. Non-cycloplegic
reduction in the pathogenesis but a role for close up work activity remains indeterminate.

Dr. Seang-Mei Saw, Department of Community, Occupational and Family Medicine, National University of Singapore, 16 Medical Drive, Singapore 117597, Republic of Singapore. e-mail: cfosawsm@nus.edu.sg


The authors propose that the Cüppers procedure (synonym: myopexia or faden operation) should be the gold standard for the surgical treatment of infantile esotropia. It is still debatable if the Cüppers procedure should be combined with recession/resection in case of static squint angle. The authors performed a prospective trial, following two groups of 25 children with infantile esotropia and a minimum angle of 20 pdpt. Age, sex, refraction, and distribution of the preoperative squint angle were comparable. In Group One, a bilateral myopexia was performed on both medial rectus muscles. In Group Two, myopexia was combined with an additional recession of the medial rectus. The one year follow-up showed an under correction in most of the children from Group One, only 33% ranged between 0 and 10 pdpt. of esotropia. On the other hand, in Group Two, 62% ranged between 0 and 10 pdpt. of esotropia. The standard deviation of the results of Group One was much higher. To minimize the quantity of cases requiring reoperation in infantile esotropia, the authors recommend an additional recession of the medial rectus muscle in the case of static squint.

Augen-und Poliklinik rechts der Isar der Technischen Universitäten München, Ismaningerstr. 22, 816735 München, Germany.


The clinical characteristics of familial and sporadic acquired accommodative esotropia are compared. No significant difference was found between the clinical characteristics (error of refraction, stereoacuity, and need for strabismus surgery) of patients with familial and nonfamilial acquired accommodative esotropia. In summary, study results suggest homogeneity among patients with familial and nonfamilial accommodative esotropia with onset after the first year of life.

Dr. Elias I. Traboulsi, Cole Eye Institute, 133, 9500 Euclid Avenue, Cleveland, OH 44195. e-mail: traboule@c-cf.org


The authors describe the eye movement findings in five young children with manifest jerk nystagmus, which spontaneously reversed in the direction of beat when they were placed in the dark. Three patients were blind on one eye and were diagnosed as having a manifest latent nystagmus (MLN), and two patients had strabismus and congenital nystagmus (CN). Eye movements were recorded using DC electro-oculography with simultaneous video recording, including infrared recording in total darkness. The authors found that four patients had decelerating velocity slow phase jerk nystagmus when recorded under natural lighting conditions; the fifth case had accelerating velocity and linear slow phase jerk nystagmus. Under absolute darkness, nystagmus reversed in direction of beat with a mixture of linear and decelerating velocity slow phase waveforms. One child with unilateral anophthalmos could willfully reverse the beat direction of his nystagmus by trying to look with his blind eye in the light and dark. The authors conclude that these observations support the theory that LN/MLN beat direction is determined by the “presumed” viewing eye and may be consciously controlled. The spontaneous reversal of beat direction in the dark suggests eye dominance is pre-determined. Eye movement recordings identified mixed nystagmus waveforms indicating that CN (accelerating velocity slow phases) and LN/MLN (linear/decelerating velocity slow phases) coexist in these subjects.

Dr. Shawkat, Department of Ophthalmology, Great Ormond Street Hospital for Children NHS Trust; London WC1 N 3JH, UK. e-mail: fatima@gordon-reid.net
ABSTRACTS


The purpose of this study was to determine the binocular function in patients with longstanding asymmetric keratoconus. The authors examined 20 adult patients with longstanding asymmetric keratoconus managed with a scleral contact lens. Each patient had a full clinical and orthoptic assessment with and without the scleral contact lens in the poorer eye. All 20 patients had a corrected acuity of at least 6/9 in their better eye. With the scleral lens in situ the acuity of the poorer eye ranged from 6/6 to 6/60 and without the lens from 6/18 to hand movements. The authors found that without the contact lens, all patients had a small exotropia and all showed suppression, with the exception of one patient who had a right hypertropia with diplopia. With the scleral lens in situ 12 patients had an exophoria or esophoria, six had a microexotropia and two had a manifest exotropia with suppression. The authors conclude that binocular function breaks down in some adult patients with longstanding asymmetric keratoconus. This is probably caused by longstanding unilateral visual deprivation. Even when anomalous binocular function has developed it is clear that even a limited improvement in acuity in the poorer eye from using a scleral lens can have a substantial impact on the overall visual function of a patient.

Mr J Sloper, Strabismus and Paediatric Service, Moorfields Eye Hospital, City Road, London EC1V 2PD, UK. e-mail: john.sloper@dial.pipex.com


Congenital or infantile esotropia has been defined in the literature as an esodeviation with onset before the age of six months. Spontaneous resolution of infantile esotropia has been the subject of brief comment but has never been reported with photographic documentation. This report presents three patients in which the angle of infantile esotropia lessens without any treatment. The cases reviewed showed poor stereoaucity, dissociated vertical deviation, and inferior oblique overactions. In the case of very early surgical intervention, the rare possibility of spontaneous resolution should be taken into consideration.

Dr. Jeong-Min Hwang, Department of Ophthalmology, Seoul Municipal Boramse Hospital affiliated with Seoul National University Hospital, 385, Sin-
daebang-2-dong, Dongjak-ku, Seoul 156-012, Korea. e-mail: hjm@snu.ac.kr


A comparison was conducted among three different color vision tests, the Mollon-Reffin Minimalist (M-R M), the American Optical Hardy Rand Rittler (HRR), and the Pease-Allen (PACT). The study's objective was to determine how successfully young children can perform the mentioned tests. It was demonstrated that the M-R M test was very valuable and effective in evaluating and monitoring acquired color vision defects in youngsters.

Dr. Rosalyn Shute, School of Psychology, Flinders University, GPO Box 2100, S. Australia 5001. e-mail: ros.shute@flinders.edu.au


The authors report on a 3 year-old boy. The patient complained of stomach and eye pains, but the general practitioner did not find any gross abnormalities and blood tests were normal. The patient presented to the ophthalmology department with an elevation deficit without ptosis or pupillary involvement. Miller-Fischer syndrome was suspected and antibodies against the ganglioside GQ1b were found, confirming the syndrome. Complete ophthalmoplegia can have many causes. A unilateral ophthalmoplegia can be caused by a cavernous sinus or superior orbital fissure lesion. A bilateral ophthalmoplegia can be caused by brain stem ischemia, encephalitis, Lyme borreliosis, or myasthenia gravis.

Brigitte Simonz, Kantonsspital, Haus -09, Abteilung für Schielbehandlung, CH-9007 St. Gallen, Switzerland.


The authors explore the effect of Lorazepam on binocular vision, visual acuity and accommodation. Twenty-four healthy volunteers were randomly assigned to one of two parallel groups of 12 subjects with one group receiving a placebo, the other receiving 0.038 mg per kg of Lorazepam. The results showed that there was no effect on visual acuity at distance or near. An esophoria was ob-
served after the intake of Lorazepam. Lorazepam decreased both fusional convergence and fusional divergence amplitudes. Lorazepam also impaired the near point of convergence, but did not affect accommodation.

Dr. Speeg-Schatz, Clinique Ophtalmologique Des Hopitaux Universitaires De Strasbourg, Ecole D'Orthoptie, 1 Place De L'Hopital BP426, 67091 Strasbourg, Cedex, France.


The author states that within the past 20 years the developmental milestones of children have been defined through the infant's interaction with the environment and not through reflexes and reactions. The article outlines these developmental milestones and tries to apply them to developmental retardation.

Dr. Hans-Michael Straßburg, Univ.-Augenklinik, Josef-Schneiderstr. 2, 97080 Würzburg, Germany.


The authors present a case of ocular palatal myoclonus following a left cerebellar and brain stem infarct. The patient demonstrated left-sided cerebellar signs, left sixth and seventh nerve palsies, left internuclear ophthalmoplegia, skew deviation, and oscillopsia.

Lesley Stuart, Orthoptic Department, Princess Alexandra Eye Pavilion, Chalmers Street, Edinburgh EH3 9HA, UK. Tel: (0131) 5363763.


The authors treated fifteen myopic children with daily atropine 1% solution bilaterally for a mean of 23 months with a range from 3 to 96 months. The results with respect to progression of myopia, change of glasses, patient demographics and any side effects or complaints were recorded and compared to a group of 15 unrelated similar myopic patients. The mean annual myopic progression in the atropine group was .05 diopters. The mean annual myopic progression in the control group was .84 diopters. The mean number of months that vision remained 20/30 or better using the same pair of glasses was 25 months for the atropine group and 13.5 months for the control group. Mean followup was 29 months for the atropine group and 42.6 months for the control group. There were no statistical differences between the two groups regarding sex, age or age at first glasses. The authors also found that after using the atropine for two weeks, the myopic correction was less than the prior short acting cycloplegic retinoscopy using cyclopentolate by a mean of .4 diopters. There were no cases of allergy or other adverse systemic effects. Despite the use of tinted spectacles, one-third of the atropine subjects complained initially of some photophobia but adapted to the increased light levels. Two of the fifteen children in the atropine group initially complained of occasional headaches, which resolved within the first three months. All children in the atropine group were able to read well with their bifocals. Authors conclude that the data suggests that atropine barely halted myopic progression in their investigation.

Dr. Isenberg, Jules Stein Eye Institute, 100 Stein Plaza, UCLA Medical Center, Los Angeles, CA 90095.


The author treated three children with central motor deficits using the BRUNET-LEZINE psychomotor stimulation method. These exercises develop shape-background discrimination, physical and visual coordination, spatial orientation, perceptive constancy and visual memory. The results show a substantial improvement in psychomotor development in all three children.

Mme Martine Taillefer, Orthoptiste, Résidence de la Gaité, 7 rue du Foirail, 03100 Montluçon, France.


The author suggests that children suffer more longstanding and permanent motility disturbances than adults, especially in connection with isolated blow-out fractures. The elasticity of the orbital floor may be mainly responsible for the entrapment of the orbital tissue. A lesion of the oculomotor nerve may also be the cause of an elevation deficit. Artificial materials used to close the fracture may cause more inflammation and scarring in children. Earlier surgical intervention may reduce the chance of permanent motility damage.
ABSTRACTS

Dr. H. Thaller-Antlanger, Müllner Hauptstr. 48, A-5020 Salzburg, Austria.


The authors report on the psychological impact of occlusion therapy in 55 unilateral cataracts treated between birth and 10 years of age (0–1 year, n = 23; 1–10 years, n = 32). Their results show a visual acuity of 4/10 in 40% of patients treated by age 1 year and in 70% of patients treated between age 1 and 10 years. The psychological evaluation and follow-ups were found to be beneficial with respect to compliance treatment and success of treatment as perceived by the family.

Dr D Thouvenin, 76, allées Jean Jaurès, 31000 Toulouse, France.


This is a report of three children with intracranial tumors. Two patients diagnosed with medulloblastoma, presented with VI nerve palsies, and one patient diagnosed with neuroblastoma presented with exophthalmos. In children, medulloblastomas represent 30 to 50% of posterior fossa tumors. The authors emphasize the role of the orthoptist within a multidisciplinary team in the assessment and follow-up of these children.

C Tournier, CHU J. Minjoz, 25030 Besançon cédex, France.


Gradenigo syndrome is characterized by otitis media, facial pain, and abducens paresis. The author presents the course of a 4 year-old child who presented initially with an ear infection. Despite initial treatment this progressed and required hospitalization with intravenous antibiotics. Following admission, a convergent strabismus was noted with limitation of abduction. Upon recovery from the otitis, the esotropia persisted and inferior oblique overaction was noted to develop. Ultimately the patient required surgical intervention and post operative prism therapy but did well with a return to fusion.

Sally Turner, Orthoptic Department, Clinic 8, Lincoln County Hospital, Greetwell Road, Lincoln LN 2 5 QY, UK


Retrieval of a lost or transected muscle is a challenging task that frequently results in muscle transposition surgery in an attempt to replace function in the field of action of the missing muscle. These muscles are frequently not accessible by conventional strabismus surgical approaches. A combined procedure of preoperative orbital imaging of extraocular anatomy and function and anterior orbitotomy along the orbital wall may be a valuable and successful approach for retrieval of a lost or transected muscle.

Dr. Jerald P. Underdahl, Children’s Eye Care Center, 4845 E. Thunderbird Road, Suite 1, Scottsdale, AZ 85254.


This study was designed to reassess the role of the central retina in the generation of optokinetic nystagmus (OKN) in a large group of patients with age related macular degeneration. The authors examined four groups of 20 patients: a control group without scotoma and three groups with absolute central scotomas measuring 1°–10°, 11°–20°, and 21°–30°. OKN was elicited with black and white stripes moving nasally to temporally or temporally to nasally on a screen subtending 54° × 41° at four velocities (15, 30, 45, and 60°/second). OKN gain was measured using infrared oculography. The authors found no significant difference in OKN gain between the control group and those with scotomas of 1°–10° and 11°–20°. A significant difference in OKN gain was found between the group with scotomas of 21°–30° and all other groups at stimulus velocities of 30, 45, and 60°/second (P < 0.05). OKN gain significantly dimin-
ished with increasing stimulus velocity ($P < 0.05$).
No statistically significant difference was found in OKN gain between stimuli moving temporally to nasally and nasally to temporally. The authors conclude that abnormalities of OKN gain were noted only in patients with large scotomas. An intact macula is therefore not necessary for the generation of OKN.

Dr. C. Valmaggia; Department of Ophthalmology, Katonsspital, CH-9007 St Gallen, Switzerland. e-mail: valmaggia@freesurf.ch


The authors describe the neuro-ophthalmic findings found in the setting of head trauma. A total of 326 patients were gleaned in a retrospective chart review of patients with a diagnosis of "head trauma".

59.8% of patients sustained their head trauma secondary to motor vehicle accident. 185 or 56.7% of patients did have abnormal neuro-ophthalmic findings. Efferent pathway defects were found in 109/185 patients with 51.2% being superior oblique palsy. Gaze palsy, dorsal midbrain syndrome, and convergence insufficiency were also noted. The authors also note that the presence of intracranial hemorrhage was significantly associated with specific neuro-ophthalmic abnormalities.

Nancy J. Newman, MD, Neuro-Ophthalmology Unit, Emory Eye Center, 1365-B Clifton Rd, Atlanta, GA 30322. e-mail: ophtnjn@emory.edu


The authors present the case report of a 53-year-old white woman with bilateral pupil-sparing third nerve palsy as the presenting sign of systemic sarcoidosis. Although the exact pathogenesis of their patient's bilateral third nerve palsy was not entirely clear, they discuss the possible mechanisms of sarcoidosis-related cranial neuropathies. The authors conclude that a systemic evaluation for sarcoidosis might be warranted in patients with progressive third nerve palsy or idiopathic cranial polyneuropathies without evidence of other central nervous system abnormalities.

Dr. M. Tariq Bhatti, Department of Ophthalmology, Box 100284, University of Florida, Gainesville FL 32610-0284. fax: (352) 392-8554; e-mail: tbhatti@eye1.eye.ufl.edu


The use of adjustable sutures in strabismus surgery has improved the rate of surgical success. It remains debatable among strabismus surgeons as to what the optimum timing for postoperative adjustment after strabismus surgery should be. Major concerns when considering postoperative adjustment soon after general anesthesia include patient cooperation, vasovagal response, ease of suture adjustment, and pain during adjustment. When performing an early adjustment, the surgeon should be prepared to control nausea and vomiting. According to this study, it is the surgeon's judgment as to the best timing for performing the adjustable suture.

Dr. Sherwin J. Isenberg, 100 Stein Plaza, UCLA, Los Angeles, CA 90095. e-mail: isenberg@ucla.edu


This is a short review of developmental dyslexia. The deficit, which affects mainly temporal processing of visual information, suggests a specific dysfunction in the magnocellular system. The deficits in visual perception, visual attention and in oculomotor...
control, which tend to be associated with a magnocellular deficit, may play an important role in some forms of dyslexia. The author concludes that a multidisciplinary approach is required in the evaluation of patients with developmental dyslexia.

Monika Warmuth-Metz, MD, Department of Neuroradiology, Hopital Neurologique P Wertheimer, 59 Boulevard Pinel 69003 Lyon, France. Fax: 04 72 35 73 51 e-mail: alain.vighetto@chu-lyon.fr


In a retrospective review, the authors measured the anteroposterior diameters of the suprapontine midbrain, the pons and the collicular plate in 50 patients with various Parkinsonian syndromes. Of these patients, 20 with Parkinson disease (PD), 16 with progressive supranuclear palsy (PSP), 14 with multiple-system atrophy of striatonigral type and 12 age-matched healthy control subjects were examined by means of axial T2-weighted magnetic resonance images. While no differences in midbrain diameter were found between patients with PD (mean, 18.5 mm) and control subjects (mean, 18.2 mm), patients with PSP had significantly lower midbrain diameters (mean, 13.4 mm) than patients with PD and control subjects (P < 0.001), without any overlap between these two groups. However, midbrain diameters of patients with multiple-system atrophy were also significantly lower than those of control subjects and patients with PD, with individual values showing overlap with the PSP, PD and control groups. Pontine and collicular plate diameters did not contribute additional information. The authors conclude that measurement of anteroposterior diameter of the midbrain on axial T2-weighted magnetic resonance images to be a reliable means to differentiate patients with PSP from those with PD and should be incorporated into the diagnostic criteria for PSP.

Monika Warmuth-Metz, MD, Department of Neuroradiology, Josef-Schneider-Str 11, D-97080 Wurzburg, Germany. e-mail: warmuth@neuroradiologie.uni-wuerzburg.de


In a retrospective review, the authors measured the anteroposterior diameters of the suprapontine midbrain, the pons and the collicular plate in 50 patients with various Parkinsonian syndromes. Of these patients, 20 with Parkinson disease (PD), 16 with progressive supranuclear palsy (PSP), 14 with multiple-system atrophy of striatonigral type and 12 age-matched healthy control subjects were examined by means of axial T2-weighted magnetic resonance images. While no differences in midbrain diameter were found between patients with PD (mean, 18.5 mm) and control subjects (mean, 18.2 mm), patients with PSP had significantly lower midbrain diameters (mean, 13.4 mm) than patients with PD and control subjects (P < 0.001), without any overlap between these two groups. However, midbrain diameters of patients with multiple-system atrophy were also significantly lower than those of control subjects and patients with PD, with individual values showing overlap with the PSP, PD and control groups. Pontine and collicular plate diameters did not contribute additional information. The authors conclude that measurement of anteroposterior diameter of the midbrain on axial T2-weighted magnetic resonance images to be a reliable means to differentiate patients with PSP from those with PD and should be incorporated into the diagnostic criteria for PSP.

Monika Warmuth-Metz, MD, Department of Neuroradiology, Josef-Schneider-Str 11, D-97080 Wurzburg, Germany. e-mail: warmuth@neuroradiologie.uni-wuerzburg.de


Accommodative esotropia describes an esodeviation which occurs from accommodation that clears the visual images associated with uncorrected hypermetropic refractive error or from excessive convergence associated with normal accommodation at near, or both. It is the intention of this study to investigate if anisometropia plays a significant role in the development of accommodative esotropia with hypermetropia. This research has shown that anisometropia (≥1 D) increases the relative risk for the development of esotropia in hypermetropic individuals, especially in those with lower hypermetropia (> +3.00). Anisometropia also adds the possibility of an accommodative esotropia poorly controlled with proper correction.

Dr. David R. Weakley, Jr., Department of Ophthalmology, UT Southwestern Medical Center, 5323 Harry Hines Blvd, Dallas, TX 75390-9057.


The authors studied 31 infants with clear ocular media and normal fundi who were visually unresponsive by clinical examination. Full clinical examinations included Teller acuity cards and developmental assessment. Infants with reduced acuities and/or developmental delay underwent pattern visual evoked potential testing and brain neuroimaging studies. Eye movement recordings were done in individual infants. The authors conclude that the infant who is visually unresponsive on a cortical basis has either visual inattention or cortical visual impairment. They further conclude that infants with ocular motor apraxia can also seem to be visually unresponsive. The authors state that these disorders can be delineated in infancy on the basis of developmental status and a unique set of responses to visual acuity, visual evoked potentials and ocular motor testing.

Dr. Weiss, Department of Ophthalmology, CH-61, Children’s Hospital and Regional Medical Center, 4800 Sand Point Way NE, Seattle, WA 98105.


In a retrospective review, the authors examined the clinical records of 27 patients with onset of myasthenia gravis after the sixth decade of life. Twenty patients (74%) were men. Of the 16 patients who underwent testing for anti-acetylcholine receptor antibodies, 11 (69%) were seropositive. Concurrent thyroid disease was found in seven patients (26%), including five of the seven women. No patient had thymoma. Sixteen patients (59%) manifested gener
alized symptoms during follow-up; 12 did so within one year of disease onset. Patients responded well to both anticholinesterase and corticosteroid therapy. At the most recent follow-up visit 18 patients (67%) were clinically improved, and no patient was clinically worse. From this study, the authors characterize myasthenia gravis by a male predominance, high rate of concurrent thyroid disease, high rate of progression to mild generalized symptoms, absence of thymoma, good response to medical therapy and minimal life-threatening complications. Clinicians should consider the diagnosis of myasthenia gravis in an older patient presenting with diplopia or ptosis.

Dr. Andrew G. Lee, Department of Ophthalmology and Visual Sciences, University of Iowa Hospitals and Clinics, 200 Hawkins Dr. PFP, Iowa City IA 52242-1091. fax: (319) 353-7996; e-mail: andrew-lee@uiowa.edu


Uncorrected diplopia may hinder a person’s ability to safely operate a motor vehicle. This study was conducted to explore the impact of stable, chronic diplopia on simulated driving ability as a first step toward predicting more accurately whether patients with diplopia can safely operate motor vehicles. Results affirm that although response times were slower in subjects with poor binocular single vision scores, stimulus recognition were not appreciably different. Since stimulus recognition is more relevant to driving performance, it was concluded that chronic diplopia does not represent a contraindication for driving a motor vehicle.

K. L. Diedrich-Closson, BSOT, BSPE, Department of Physical Medicine and Rehabilitation, Saskatoon City Hospital, 701 Queen Street, Saskatoon, SK, S7K 0M7 Canada.


Intraocular lens implantation remains debatable for most children undergoing cataract surgery. It has been reported in the literature that most of the eye’s axial growth happens during the first two years of life. There are more than a few complications encountered in the implantation of intraocular lens in children. Hence, this procedure performed in infants is still controversial.

Dr. M. Edward Wilson, Department of Ophthalmology, Medical University of South Carolina, 167 Ashley Avenue, Charleston, SC 29425. e-mail: wilson-me@musc.edu


Pupil-sparing third nerve palsy is felt to be generally associated with ischemic causes. This report is that of a 68 year-old woman who was seen three days after the onset of ptosis and diplopia. At that time, the diagnosis was made of pupil-sparing third nerve paresis. However, on re-evaluation three weeks later, the pupils were found to be slightly asymmetric, there was worsening of the motility defect, and other neurologic signs initially dismissed were still present. An MRI scan at this time revealed a left posterior fossa meningioma. The tumor was resected and all of the neurologic signs resolved.

The authors stress that any sign that is atypical for an ischemic etiology should cause one to investigate further.

Ji Soo Kim, MD, Department of Neurology, College of Medicine, Cheju National University, Ara 1-dong, Cheju 690-756, Korea. e-mail: jisookim@cheju.cheju.ac.kr


The authors compared vergence adaptation in 18 children and in 18 young adult subjects by assessing tonic vergence before and immediately after a period of sustained near fixation by measuring heterophoria with a synoptophore through 0.5mm binocular pin holes. Adaptation was induced by a reading task at 15cm for a continuous five-minute period. The authors found a greater vergence adaptation in children.

Dr. Rosenfield, SUNY College of Optometry, 33 West 42nd Street, New York, NY 10036.


Ataxia telangiectasia is a rare, autosomal recessive, progressive disorder. The authors describe a case report to reveal its characteristics.

Tracy Wood, Orthoptic Department, Tameside General Hospital, Fountain Street, Ashton-under-Lyne, Lancashire OL6 9RW, UK. Tel: (0161) 3315151.

The authors report five cases age seven years or younger who underwent penetrating keratoplasty, cataract extraction, and IOL implantation for traumatic corneal laceration and cataract. The age at the time of injury ranged from three to seven years. None of the patients had glaucoma before their penetrating keratoplasty, however, glaucoma developed afterward in one patient. One of the five patients had posterior segment pathology. Delay between the original surgery and the definitive treatment ranged from three days to two years. All patients had a significant visual improvement after surgery and all had amblyopia therapy. Preoperative vision ranged from light perception to 20/400. Postoperative vision ranged from 20/400 to 20/20. The authors conclude that successful surgical rehabilitation was accomplished in these patients.

Dr. Zaidman, Department of Ophthalmology, Westchester Medical Center, Macy Building, Room 1100, Valhalla, NY 10595.


A case presentation of ocular juvenile xanthogranuloma, without skin or systemic findings, was diagnosed by histological, immunohistochemical and electron microscopy. The anterior and posterior segments reveal a histiocytic response.

Narsing A. Rao, MD, Doheny Eye Institute, University of Southern California, Keck School of Medicine, 1450 san Pablo Street, DVRC 211, Los Angeles, CA 90033. e-mail: nrao@hsc.usc.edu