

MAILBOX

Effect of spectacles on changes of spherical hypermetropia in infants

EDITOR.—Ingram *et al*¹ describe the effects of spectacles on changes of spherical hypermetropia in infants who did, and did not, have strabismus. The aim of the study was to explore why emmetropisation fails in children who have strabismus. It was found that mean spherical hypermetropia decreased in both eyes of non-squinters (consistent wearing of glasses impeded this process) whereas in the children with strabismus, there were no significant changes in either eye.

Could the difference between squinters and non-squinters not be explained by assuming that esotropia is more likely to occur in children who have increasing as opposed to decreasing hypermetropia, as suggested by us in 1992?² If one reads early papers on the course of hypermetropia in childhood this seems so logical: papers reporting a decrease of hypermetropia during the first years of life³⁻⁵ concern cross sections of the general population, whereas papers that report an initial increase in hypermetropia⁶⁻¹⁰ originate from ophthalmological practices or strabismus departments. These contrasting findings could be reconciled when assuming a population bias: the children who are referred to an ophthalmologist will often have esotropia, and esotropia could well be more likely to occur when hypermetropia increases. Although hypermetropia decreases in most children, its change follows a change in distribution. In children who happen to have increasing hypermetropia with age, binocular vision develops and the relation between vergence and accommodation becomes fixed, so additional accommodation will be needed to overcome hypermetropia and they will consequently squint. Findings of other recent studies could be reconciled with this argument.^{11 12}

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- 1 Ingram RM, Gill LE, Lambert TW. Effect of spectacles on changes of spherical hypermetropia in infants who did, and did not, have strabismus. *Br J Ophthalmol* 2000;84:324-6.
- 2 Simonsz HJ, Grossglauser B, Leuppi S. Costs and methods in preventive visual screening and the relation between esotropia and increasing hypermetropia. *Doc Ophthalmol* 1992;82:81-7.
- 3 Atkinson J, Braddick O, Wattam-Bell J, *et al*. Photorefractive screening of infants and effects of refractive correction. *Invest Ophthalmol* 1987;28(ARVO Suppl):399.
- 4 Herrnheiser J. Die Refraktionsentwicklung des menschlichen Auges. *Zeitsch Heilk* 1892;13:342-77.
- 5 Molnár L. Refraktionsuntersuchungen. *Acta Med Acad Sci Hung* 1967;23:297-308.
- 6 Brown EVL. Net average yearly changes in refraction of atropinized eyes from birth to beyond middle life. *Arch Ophthalmol* 1938;19:719.
- 7 Brown EVL. Use-abuse theory of changes in refraction versus biologic theory. *Arch Ophthalmol* 1942;28:845-50.
- 8 Slapater FJ. Age norms of refraction and vision. *Arch Ophthalmol* 1950;43:466-81.
- 9 Lahav-Guss C, Kaufmann H. Refraktionsänderungen im Kindesalter: Hyperopie. *Klin Monatsbl Augenheilkd* 1974;164:274-8.
- 10 Lepard CW. Comparative changes in the error of refraction between fixing and amblyopic eyes

during growth and development. *Am J Ophthalmol* 1975;80:485-90.

- 11 Aurell E, Norrrell K. A longitudinal study of children with a family history of strabismus: factors determining the incidence of strabismus. *Br J Ophthalmol* 1990;74:589-94.
- 12 Abrahamson M, Fabian G, Sjöstrand J. Longitudinal changes in refraction and risk indicators for amblyopia. *Invest Ophthalmol* 1991;32(ARVO Suppl):1238.

BOOK REVIEWS

Current Oculomotor Research: Physiological and Psychological Aspects. Eds W Becker, H Deubel, T Mergner. Pp 492; \$135. Dordrecht: Kluwer Academic, 2000. ISBN 0-306-46049-1.

Which European meeting attracts delegates from the diverse fields of neuroscience, ophthalmology, psychology, engineering, medical physics, and neurology? The answer to this question is the European Conference on Eye Movements. This book is an attempt by the editors to condense the proceedings of the Ninth European Conference on Eye Movements (1997) into what they feel are the most important contributions to our understanding of eye movements as a whole. A total of 66 papers are presented, 40 of them in full and the remainder in condensed form. As a result of the broad multidisciplinary input to the conference some of the papers represent years of research in very specialised areas. Consequently some are of limited interest and relevance to those of us who whose work and interests lie outside these areas. There were, however, some papers which as an ophthalmologist I found both interesting and enlightening. The generation and control of saccadic eye movements receives a great deal of attention in this volume reflecting its complexity. An interesting paper discusses the perception of saccadic eye movements as being sooner than the actual measured saccade demonstrating switching of visual attention. Functional magnetic resonance imaging is an exciting new development in cortical mapping and three excellent papers are presented. The integration of neural pathways involved in the blink response and reading is also fascinating. This book is well presented and the black and white illustrations are adequate if a little dull. Overall, I think most ophthalmologists would find something of interest in this text but that it is most appropriate to those with a subspecialty interest in eye movement disorders albeit with a degree of selectivity.

ALASDAIR T PURDIE

Glaucoma Medical Therapy. Principles and Management. By PA Netland, RC Allen. £75. San Francisco: American Academy of Ophthalmology, 1999. ISBN 1-5605-5171-2.

This book, addressed to practising ophthalmologists and trainees, is intended to provide information regarding the specific benefits and risks of the current medications for glaucoma, and to guide the clinician on how to use them for the patient's maximal benefit.

The different types of antiglaucoma medications in separate chapters provide pharmacological information and data on efficacy, tolerability, and safety. The chapter on initial medical treatment summarises the findings of the most important treatment trials that have greatly influenced the treatment of glaucoma. It also addresses the concept and practicalities of target intraocular pressure and the essential role of monocular trial in the judgment of treatment efficacy. This chapter would have benefited from a comparison of efficacy of all antiglaucoma medications, perhaps with a figure or table. The chapter on combination medical therapy provides practical guidelines for combination therapy for glaucoma and describes the concept of maximum medical therapy. The epilogue and other chapters on compliance with medications and special therapeutic situations add useful and practical information to the book.

I would like to comment on a few statements that may be controversial. In the chapter on adrenergic agents, the authors claim that "apraclonidine 0.5% three times daily is safe and effective in the management of ocular hypertension and advanced glaucoma, although long term use is hampered by a delayed allergy-like reaction." It would be fair to mention that apraclonidine is rarely used in the long term treatment of ocular hypertension and glaucoma. Apraclonidine is associated with intense vasoconstriction of anterior segment vessels and its safety has not been supported by long term data. Although it is not known whether the posterior segment and optic nerve vessels may suffer vasoconstrictor effects, caution should be exercised in patients with severe glaucoma before using such a potent vasoconstrictor. The authors also claimed that apraclonidine might have further use in the treatment of acute narrow angle glaucoma. The latter suggestion was based on a report of a single case and needs to be confirmed with further clinical evidence. Regarding carbonic anhydrase inhibitors (CAI), the author pointed out that the IOP lowering effect of dorzolamide is similar to oral CAI. The author's statement is supported by two relatively small studies. Although most clinicians have had a positive experience with both the tolerance and the efficacy of topical CAI, and the chronic use of oral CAI for glaucoma is currently exceptional, in my experience, oral CAI are more effective than topical agents.

In brief, this book provides a detailed and practical review of all antiglaucoma drugs. It is useful for clinicians to understand the data available on antiglaucoma medications and the specific benefits and risks for their glaucoma patients.

AUGUSTO AZUARA-BLANCO

Clinical Strabismus Management: Principles and Surgical Techniques. Eds AL Rosenbaum, AP Santiago. Pp 592; £135. Philadelphia: WB Saunders, 1999. ISBN 0-7216-7673-1.

In their preface, the editors state that "The primary goal of this book is to provide an in-depth and detailed description of the various strabismic entities, followed by a review of the treatment options, in such a way that the reader can grasp the author's reasoning process as various alternative are considered." In its 41 chapters by a total of 52 authors the book achieves this purpose in a uniformly excellent way.