

**Aims of the All India Strabismological Society (founded by Dr. H.L.Patney and Dr. Sudha Awasthi Patney at Eye Hospital, Sitapur, India in 1967 in accordance with the principles of International Strabismological Association). Objectives 1-4 are common to IS A, AISS & JKA Institute:**

1. To disseminate knowledge on all sensory and motor aspects of strabismus and disorders of ocular motility
2. To foster clinical and experimental research
3. To encourage and support countries wishing to set up organizations for the study and treatment of strabismus and associated sensory disorders
4. To create, as far as possible, a common terminology and a standardization of diagnostic and therapeutic procedures
5. To hold free strabismus diagnostic and surgical camps for the poor patients. The aim of these camps will be to provide the much needed free consultation and therapy to prevent amblyopia in children, treat strabismus and amblyopia when indicated and get rid of strabismus by surgery if required. Treatment of strabismus in adults and older children for cosmetic purpose only is also important as strabismus gives rise to many psychological, social and professional problems. Help of NGOs (non-government service organizations) like Rotary clubs will be accepted to perform free surgery on poor patients.
6. To spread awareness in public, of the necessity for a complete ophthalmic examination including an orthoptic check up in every infant and child to prevent amblyopia, correction of significant refractive errors in infants and children and immediate treatment of strabismus, amblyopia and related disorders
7. To encourage ophthalmologists to pay more attention to this important but not so lucrative subject and create a love of strabismology in as many of them as possible.

NOTE: *The inspiration for both, starting a strabismological society and a training institute for the subjects of Strabismus and binocular vision in India came from two main sources:*

1. Mr. T.K. Lyle, Dean, Institute of Ophthalmology and Director, Orthoptic Department, Moorfields Eye Hospital (High Holborn), London, and
2. International Strabismological Association (ISA): The decision to start the AISS was taken by Dr. H.L.Patney and Dr. Sudha Awasthi (Patney) at Eye Hospital, Sitapur, India, right after they returned from the founding session of the ISA in Giessen, W. Germany in 1966. In fact, the first four aims of AISS & JKA Institute are the same as those of the ISA.

**List of the honorary fellows of the JKA Institute of Strabismology**

- |   |            |
|---|------------|
| 1. Mr. T. Keith Lyle, London, UK (now expired)  | Since 1983 |
| 2. Prof. Alfred Bangert, Switzerland            | Since 1983 |
| 3. Noorden, Gunter K. von, USA                  | Since 1983 |
| 4. Prof. Cuppers, C.W.C., Germany (now expired) | Since 1983 |
| 5. Prof. Bruno Bagolini, Italy                  | Since 1983 |
| 6. Dr. Alfredo Arruga, Spain                    | Since 1983 |
| 7. Dr. A.T. Franceschetti, Switzerland          | Since 1983 |
| 8. Dr. Alberto O. Ciancia, Argentina            | Since 1983 |
| 9. Dr. John A. Pratt-Johnson, Canada            | Since 1983 |
| 10. Dr. Arthur Jampolsky, USA                   | Since 1983 |
| 11. Dr. Emilio Campos, Italy                    | Since 1996 |
| 12. Dr. P.N. Nagpal, India                      | Since 1996 |
| 13. Dr. John Gianjocomo, USA                    | Since 1997 |
| 14. Dr. Robert Reinecke, USA                    | Since 1999 |

**List of Honorary members of the JKA Institute of Strabismology**

- |   |            |
|---|------------|
| 1. Miss Sheila Mayou, UK (The first orthoptist of UK) | Since 1983 |
| 2. Mrs. Olive H. Knight, DBO (T), UK                  | Since 1983 |

**“ The science of ophthalmic surgery is as vast as the ocean. It is a growing science, one should not think that everything is written in these verses. The underlying principles of the Science of ophthalmology, as written in these verses, would therefore sprout, grow and bear good fruit only under the congenial heat of a medical genius.”**

*Sushruta, India*

In “Sushruta Samhita”, dated about 1000 B.C.

**Contents**  
**InteRyc-volume 2, April, May and June, 2001**

<b>Serial No.</b>	<b>Subject / Items / Headings</b>	<b>Page Number</b>
1	Aims of AISS and JKAI & List of Honorary fellows and members	Back of front cover
2	Contents	Page 1
3	Letter from the president / Director	2
4	A special request	3
5	Remove your cobwebs (Ryc)	3
6	Attention	7
7	Coming-Up	9
8	Strabismus summary series-part XII	11
9	Update: General ophthalmology	13
10	Update: Strabismology	14
11	InformIT	15
12	Short review article on strabismus	16
13	New instruments/Techniques	28
14	Spot the diagnosis	29
15	Book Selection	29
16	Eye-Rhyme	30
17	Cartoon-Eye	30
18	History of strabismology (world)	31
19	CME Quiz	31
20	History of strabismology (India)	32
21	Update questionnaire	32
22	Rate yourself (Correct answers to CME Quiz No.4, 2000)	33
23	Rate yourself (Correct answers to CME Quiz No.1, 2001)	34
24	In fond memory	35 Inside back cover



ALL INDIA STRABISMOLOGICAL SOCIETY

**JKA Institute of Strabismology and binocular Vision**

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Address in USA: 2701 rain Tree Court, Columbia MO 65201, Phone: +1-(573)-875-3087

E-Mail: [sawasthi6@yahoo.com](mailto:sawasthi6@yahoo.com) & [sapatney@yahoo.com](mailto:sapatney@yahoo.com)

Website: [www.geocities.com/sapatney/](http://www.geocities.com/sapatney/)

President AISS, Director JKAI & Author & Editor of InteRyc:  
Sudha Awasthi Patney, MBBS, MS (Ophth), FRCOphth (London)

The following is a repeat for obvious reasons

### **A special request to the members from the president**

This is an appeal to all the members to please start a campaign for prevention of amblyopia. Actually I am of the opinion that a legislation is needed badly, that will make it compulsory that every child's eyes are thoroughly examined by the age of 1 year, so that measures can be taken to prevent amblyopia (strabismic, anisometropic and ametropic) and strabismus. If it could be done for vaccination, it can be done for eye examination also.

At present there is general indifference towards this subject. It is also obvious that ophthalmologists have to be trained not to advise delay in treatment because the patient is a young child / infant. It is tragic that now that parents have become aware of the need for early treatment, the ophthalmologists are advising them to wait until the child is old enough for examination. We have to advise them strongly against this practice. If we can not compel the Government to bring in legislation, we can at least alert the public and the ophthalmologists.

Many more Institutes of strabismology are needed in various parts of the country. Would you, dear members, be willing to take on the task of starting a branch of this JKA Institute in your area? Any help and advice that I am capable of providing will be forthcoming. You will need some basic instruments to start with. Orthoptic instruments are the cheapest of the lot, have you noticed? *Please let me know at once if you are interested.*

Please try to alert the patients, their relatives, the public and other physicians, particularly ophthalmologists and pediatricians about the dangers of amblyopia, strabismus and other complications if significant refractive errors are not corrected within the first years of life and if strabismus is not treated immediately.

It is very painful to see so many cases of amblyopia. This condition is totally preventable if treated early, whatever the age of the patient, the younger the better. The best time is immediately after the start of strabismus. However, it is obvious that to prevent ametropic and anisometropic amblyopia and in many cases strabismus, the children have to be thoroughly checked at least once by the age of 1 year. The saying that prevention is better than cure is *truest* in the case of strabismus and amblyopia.

### **REMOVE YOUR COBWEBS (Ryc)**

1. About the Institute
2. About the Society
3. About the courses
4. About the workshop
5. About InteRyc, the News-Letter-Update of the society
6. About the Indian Orthoptic Journal to be restarted soon.

1. About the Institute

A) *The need to have a squint treatment center* and a training center for strabismologists and orthoptists in India could not be ignored anymore in *nineteen fifties*. Dr. H.L.Patney felt it most acutely as he had trained as a premedical student, medical Graduate and postgraduate in ophthalmology in UK. He had been doing orthoptics, contact lenses and all types of surgery as a Registrar in the Ophthalmology department of the Royal Cardiff Infirmary in Cardiff, Wales, UK back in 1942-44. He had the good fortune of being the assistant of Sir Tudor Thomas and used to assist him in his private practice also. Sir Tudor Thomas was a living legend in those days and was a pioneer in keratoplasty. However, he did all types of operations including retinal detachment repair and plastic surgery. Young Dr. Patney was given lots of opportunity to operate even on Sir Thomas' private patients. Sir Thomas was a very famous and busy man and he must have had confidence in Dr. Patney's prowess in surgery as he gave him even major surgeries to do. Sir Thomas' words and signatures on Dr. Patney's old books testify to this. In 1946 when Dr. H.L. Patney was asked by Dr. Mehrey, the founder of Sitapur Eye Hospital to make a plan for the expansion of the hospital, he did a thorough job. He included in the plan, the name of *a squint / orthoptic department and school* along with those of ocular pathology, instrument factory, blind school, optometry school, postgraduate institute of ophthalmology, trainee's hostels, staff's residences etc. Much later he used to say that everything in that plan materialized except a boundary wall.

Dr. Mehrey who was himself keen on keeping everything upto date in his hospital happily worked hard to realize their dreams. It took them a few years to get a first rate orthoptic department and school.

1) The beginning was with *an orthoptic department* in early fifties by Dr. Patney who taught a smart compounder in the hospital the basic techniques of orthoptic examination and exercises on synoptophore.

2) *The Orthoptic School* was started in 1960 and according to plan Dr. Sudha Awasthi (who was at that time in K.G. Medical College, Lucknow) was asked to join the hospital by Dr. M.K.Mehra, (Dr. Mehrey's son). Dr. Awasthi had just passed her MS (Ophth.) from King George's Medical College, Lucknow, and was known to be specially interested in the subject. She joined Sitapur Eye Hospital and was soon after sent to London in October 1960.

3) A first rate orthoptic department, the first in India, which was on the lines of that at Moorfields Eye Hospital (High Holborn branch where Mr. T. Keith Lyle was the Director), was established after she returned from London after 1 year's training under Mr. Lyle.

B. *The need for imparting training in the subject of strabismology* (including orthoptics), was repeatedly impressed upon Dr. Sudha Awasthi (now Patney) by another living legend of those days, Mr. T. Keith Lyle. He was in 1960 and later for many years, the Dean of Institute of Ophthalmology, London and Director and Surgeon-In-Charge of the famous Orthoptic Department of the Moorfields Eye Hospital (High Holborn branch), London. Dr. Sudha Awasthi was training under him to further her somewhat limited knowledge of the subject, already gained

during the running of an orthoptic clinic by her from 1957 to 1959 under the guidance of Prof. M.K.Mehra, a double FRCS.

Mr. Keith Lyle insisted that she should also train like an orthoptist-trainee in their Orthoptic School to gain first hand practical knowledge so that she can train orthoptists and Ophthalmologists / strabismologists with confidence. She stayed at Moorfields Eye hospital for 1 year and was then sent to Germany and Switzerland to learn first hand, pleoptics from the two pioneers (Prof. Cuppers of Giessen, W. Germany and Prof. Bangerter of St. Gallen, Switzerland, respectively). On her return to India in 1961, the ground was ready for her to impart to the ophthalmologists and the orthoptic trainees, special training in strabismology and orthoptics. *The first Squint / Orthoptic department and Orthoptic School of India had already been started at Eye Hospital, Sitapur, which was the premier eye institution of India in fifties, sixties and seventies* (for some more information see the inside of the back page). During her days there she kept on running the squint department, training the orthoptists, DOMS candidates (as Associate Professor in the Nehru Postgraduate Institute of Ophthalmology) and visiting ophthalmologists wishing to learn the subject.

- C. *The idea of starting a training institute for strabismology was conceived soon after Dr. H.L. and Dr. Sudha Awasthi-Patney left Sitapur and came to Rajkot. The center for squint treatment was being run since their arrival in Rajkot in 1972 but formal inauguration was performed in 1983. However, due to Dr. H.L. Patney's serious and prolonged illness the plan had to be kept suspended. The Institute started functioning in real earnest since 1996 but the foundation was being strengthened by Dr. Sudha Awasthi-Patney since 1994. She took a 4.5 months study tour of USA and UK in 1994, followed by annual visits to update her knowledge in preparation for starting and running the Institute and reviving the AISS. New orthoptic instruments were bought and old ones serviced.*
- D. In 1996 the Institute became functional along with the newly revived AISS.
- E. At present there are only 30 members in good standing, i.e., the members who have paid up their dues until last year (2000). In all there were 88 registered members. Invitation to join the society has never been repeated / sent out again after 1997.
- F. The Institute is running a fellowship course by correspondence. A diploma course is soon to be started for people who find the fellowship course too hard.
- G. Other activities are the various annual contests, the winners getting trophies and cups and a total of Rs.4350 in cash prizes every year.
- H. There is a fellowship (Rs.2000/pm) for members 35 years old or younger during their stay at Rajkot for practical experience. So far nobody has applied for it.

## 2. About the Society

- (1) All India Strabismological Society (AISS) was *conceived and started* by Dr. H.L. Patney and Dr. Sudha Awasthi in 1967. The idea came to them during their participation in the founding session of the International Strabismological Association (ISA), which was held in 1966 at Giessen, W. Germany. Prof. Cuppers, one of the

pioneers of pleoptics was the head of Ophthalmology at the Universitats Augenklinik (University Eye Clinic) there. Mr. Keith Lyle was the founding president and Dr. G.K. von Noorden, the founding secretary. Dr. Sudha Awasthi was one of the panelists and speaker at the ISA meeting.

One of the 4 aims of ISA is to spread of the knowledge of the subject of strabismology. The other three are given on the inside of the front cover.

- (2) The founding meeting of the society was held in Calcutta in 1967 during the AIOS conference. Neither Dr. Patney nor Dr. Awasthi wished to be the President. They asked Dr. L.P. Agarwal to be the first president and he accepted. Dr. Awasthi was the founding secretary and Dr. Patney the treasurer. Many senior and well-known ophthalmologists joined the society.
- (3) The first regular meeting was held at Ahmedabad during the AIOS congress in 1968. At the executive committee meeting, a proposal to have the *society registered* was passed. This was done same year..
- (4) The first activity of the new society was to hold a 7-days refresher course (workshop) on squint and other ocular motility disorders in September 1967 at Sitapur. It turned out to be very successful, probably because it was the first of its kind in India. Members who were mostly senior ophthalmologists attended it; some of them were fairly well known.
- (5) Every year new elections were held and the management of the society changed hands. Somewhere around 1976 the society became defunct.  
*Note: Frankly speaking this is a drawback in the democratic system that a lovingly conceived and nurtured institution / organization may die a premature death if it falls into indifferent hands.*
- (6) *Revival of the society* was proposed during a meeting (of old members and some other ophthalmologists), that was hastily arranged at the request of Dr. Sudha Awasthi-Patney in 1981 just after the conclusion of Dr. Nagpal's very successful National Symposium on squint. It was decided to revive the society during the next conference of AIOS and Dr. Sudha Awasthi-Patney was asked to be the convener and do it. New and old members gave their names to be enrolled again. Dr. Awasthi-Patney unfortunately failed to attend the next AIOS conference in 1982 due to the sudden serious illness of Dr, Patney. She requested Dr. B.T. Maskati, the Hon. Gen. Secretary of AIOS to make an announcement that Dr. Awasthi-Patney can not come now but she will be sending circulars for a meeting of the society to be held later at Rajkot. She never knew what happened but Dr. Prem Prakash started a new society. It is no use going into the details now.
- (7) At last the AISS was revived in 1996. At present there are 88 members but out of them only 29 *are members in good standing (having paid at least upto year 2000)*. Only 9 members have paid for 2001. This is an appeal to the non-payers to please send their subscription for 2001 to enable us to continue sending the InteRyc.

### 3. About the courses

- (a) *Fellowship*: Theory part is now to be sent in 15 installment of 50-100 pages each as the X installment having 5 parts was extended to 334 pages. The number of installments was raised from 11. Apart from the theory part, some practical

experience has to be gained at the Orthoptic / Ocular Motility Clinic, Rajkot. The period of the practical experience has to be determined by the fellows themselves but a minimum of 1 month is preferable.

- (b) *Diploma* (to be started soon): Detailed information on request.
- (c) *Certificate of Proficiency*: If the ophthalmologists / strabismologists wish to get some practical experience only, as many of them did when I was at Sitapur Eye hospital, they are welcome. They will be given a testimonial (Certificate of Proficiency) for the period of their stay here.

#### 4. About the workshops / Refresher Courses

The idea of holding strabismus / amblyopia workshops is very much alive. Members shall be notified about the time and place. The course will be of a week's duration.

#### 5. About InteRyc, the News-Letter-Update of the society

At present it is being published every three months. Previously it was coming out every two months. If we revive the Indian Orthoptic Journal that had been started by Dr. Sudha-Awasthi Patney and Dr. J.M. Pahwa in 1963 at Sitapur, the InteRyc may have to be discontinued.

- 6. About the Indian Orthoptic Journal to be restarted soon. Requests are being sent to some ophthalmologists to be on the editorial board. After that letters will be sent to strabismologists in various countries to contribute their articles /papers for the journal.

Members' views were invited about the replacement of the InteRyc by the soon to be revived Indian Orthoptic Journal. So far no response has been received.

### ATTENTION

1. The constitution of our society was registered in 1968 after it was passed and approved at the meetings of executive committee and the general body at Ahmedabad.
2. This is a repeat request to members to let us know if they *have not received any one or more volumes of the InteRyc*, the next installment of the course material or *a receipt of the money they have sent*. There is always a chance that things may go missing while in transit.
3. The *CME (member of the year 2001) quiz-No.2* is included in this volume. Please answer it, cut along the dotted line and send it back by mail. The solution to the previous CME quiz is now being sent to the members along with the new quiz.



*The questions in each quiz* are drawn from the material given in that particular issue of the InteRyc under the headings of Strabismus Summary Series, Update, InformIT and Short Review article on Strabismus etc.

4. The *update questionnaire* is printed on the back of the CME quiz. Please answer it if there is any change or addition in the information about phone No., FAX number, mobile phone number, pager number, E-mail address or a web-site address.
5. About the *election of the office bearers* (please refer to pp. 5-6, vol.3, 1999): Only five names have been received for the post of member of the executive council and *none for that of office-bearers*. This number is clearly insufficient. Please come forward and volunteer so that we can hold elections. We shall have the election by *postal ballot*, as is the practice in some International organizations like International Strabismological Association.
6. *Editorship of the soon-to-be-revived "Indian Orthoptic Journal"*: I am happy to announce that Dr. S.K. Pal of Calcutta has agreed to take on the difficult task of executive editorship of the Indian Orthoptic Journal. Editorial board members' names will be announced soon.
7. *Background of the journal*: Dr. Sudha Awasthi (Patney) was inspired greatly by her teacher Mr. T. Keith Lyle (read about him under the heading of "In fond memory" on the inside of back cover). He stressed the need of making the subject of strabismus popular among ophthalmologists and campaigning for early diagnosis in infants and children to prevent amblyopia. After coming back to Sitapur Eye Hospital in 1961, she conceived the idea of bringing out an Indian Journal of Orthoptics on the lines of the British Orthoptic Journal. Dr. J.M. Pahwa (who liked the idea and agreed to look after the practical aspect) and Dr. Awasthi (Patney) started the journal in 1963 and looked after it as the editor and the joint editor respectively until her departure from Sitapur in 1972. Dr. Pahwa continued publishing it until a few years back. About 2 years back he asked Dr. Patney if she would like to restart publishing the journal to which she replied in the affirmative. The journal would probably replace the InteRyc, as it will be difficult to publish both. Dr. Pahwa sent some old papers relating to the society sometime back for which we are grateful to him. We are going to invite him to become an honorary fellow of the society he served in the past as president for a year.
8. *I.D. cards*: Only six members have sent their photographs for making laminated ID cards. This is an appeal to the other members to please send their photographs so that their cards can be prepared and sent to them. We need ID card / stamp size photos. However, the members who have sent passport size photos, need not send smaller ones We reduced the size on the computer.
9. The fees for the whole of theory part of *fellowship course* are now Rs.1500 *including the mailing charges*. The mode of mailing each installment is either by

registered A.D. post or by couriers, mostly by the latter as it is faster. However, couriers do not go to all the places.

The new rates apply from the year 2000; the fellows who registered earlier do not have to pay more.

*The usual procedure: Installments are sent one by one* accompanied by the relevant question paper. The fellow has to answer the questions and send the answer sheet back, on receipt of which the next installment of the course is sent. Previously the fees had to be sent for one installment at a time. This has been changed to save the fellow's time, effort and postal expenses. It is now payable in one lump sum in advance in the form of a demand draft for Rs1500 in the name of Dr. S.A.Patney, S/B account No. 4256 at UCO bank. As explained in earlier InteRycs this is a no profit-some loss venture.

As decided and indicated in the InteRyc-volume 4, 1999, the *InteRyc volumes 1-4 of the year 2000* have been sent to members in good standing only. The membership subscription for year 2001 became due on 1<sup>st</sup> January 2001. Members, who do not pay the subscription for the year 2000 by the end of June 2001 (extended date) will not be sent future InteRycs. This is because of financial constraints. Despite subsidizing the expenses we are finding it hard to keep afloat. The members, therefore, *are requested to send it soon. Now the book-post charges have become Rs.5 (a steep rise from Rs.2).*

10. The InteRyc volume 1, 2001 is not being sent to members who are not in good standing (who have not paid the subscription for the last 3 years, i.e., 1998, 1999 and 2000). They had paid only once in 1996-97 at the start when they had registered for the first time. We kept on sending them mail and InteRyc regularly until recently.

All the members, who have not paid the subscription for one or more years, are requested to send it immediately. The subscription for 2001 became payable on January 1, 2001

### COMING UP

Note: Coming events from November 8, 2000 to November 11, 2001 were printed in the InteRyc volume 3, 2000. We are therefore printing events after November 11, 2001 in this volume 2, 2001.

1. November 11-14, 2001: Annual American Academy of Ophthalmology Meeting, New Orleans. Contact: +1 (415)-561-8500 Extension: 304; FAX: +1 (415)-561-8576.
2. November 16-17, 2001: Generation Refraction 2001, Paris, France. Contact: Dr. Stephane Ganem, Institut de la Myopie, Fondation Ophthalmologique, A. De Rothschild, 25-29 rue Manin 75019, Paris, France. Ph.: +33 (1)-480-36891; FAX: +33 (1)-480-36533; email: generationrefraction@noos.fr.

3. December 4-6, 2001: The 16<sup>th</sup> Biennial Contact Lens Course, London. Contact: Dr. Ursula Vogt, Western Eye Hospital, Marylebone Road, London, NW1 5YE, England; +44 (20)-7886-3257; FAX: +44 (20)-7886-3259.
4. December 8, 2001: Neuro-Ophthalmology Meeting, Hamburg, Germany. Contact: Universitätsklinikum, Hamburg-Eppendorf, Klinik und Polyklinik für Augenheilkunde Martinistr. 52, 220246 Hamburg, Germany; Ph.: +49 (40)-428-03-2301; FAX: +49 (40)-428-03-4906; email: augen [klunik@uke.uni-hamburg.de](mailto:klunik@uke.uni-hamburg.de).
5. January 4-8, 2002: 60th Annual Conference of All India Ophthalmological Society, Ahmedabad. Contact: Dr. H.K. Tewari, Dr. R.P. Centre for Ophthalmic Sciences, Ansari Nagar, N. Delhi 110 029, India. Ph.: +91 (11)-6864851-58; FAX: +91 (11)-6852919; email: [hemtiwari@vsa.net](mailto:hemtiwari@vsa.net); Web-site: [www.aios.org](http://www.aios.org).
6. March 21-25, 2002: 3<sup>rd</sup> International Glaucoma Symposium, I.G.S., Prague, Czech Republic. Contact: The secretariat-Ph.: +420 (2)-8400-1444; FAX: +420 (2)-8400-1448, email: [glaucoma@kenes.com](mailto:glaucoma@kenes.com).
7. April 17-19, 2002: 4<sup>th</sup> Annual John Hopkins Clinical Research Conference, Baltimore, U.S.A. Contact: John Hopkins University School of Medicine, Office of Continuing Medical Education, Turner 20, 720 Rutland Ave., Baltimore MD 21205-2195, U.S.A. Ph.: +1 (410)-955-2959; FAX: +1 (410)-955-0807; email: [cmenet@jhmi.edu](mailto:cmenet@jhmi.edu).
8. April 17-20, 2002: 9<sup>th</sup> Meeting of International Strabismological Association, Sydney, Australia. Contact: ISA Contact Secretariat, GPO Box 2609, Sydney NSW 2001, Australia. Ph.: +61 (2)-9241-1478; FAX: +61 (2)-9251-3552; email: [strab@icmsaust.com.au](mailto:strab@icmsaust.com.au). Website: [www.ophthalmology.aust.com](http://www.ophthalmology.aust.com).
9. April 21-26, 2002: 29<sup>th</sup> International Congress of Ophthalmology, Sydney, Australia. Contact: Congress Secretariat, ICMS Australasia Pty Ltd., GPO Box 2609, Sydney, NSW, Australia. Ph.: +61 (2)-9241-1478; FAX: +61 (2)-9251-3552; email: [opthal@icmsaust.com.au](mailto:opthal@icmsaust.com.au).
10. April 21-26, 2002: 13<sup>th</sup> Symposium of International Society on Metabolic Eye Disease, Istanbul, Turkey. Contact: Heskeli M. Haddad, M.D., 1125 Park Avenue, New York, NY 10128, USA; Ph.: +1 (212)-427-1246; FAX: +1 (212)-360-7009.
11. May 5-10, 2002: The Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting, Ft. Lauderdale, FL, USA. Contact: ARVO, 9650 Rockville Pike, Bethesda, MD 20814-3998, USA. Ph.: +1 (301)-571-1844; FAX: +1 (301)-571-8311.
12. May 25-27, 2002: VI International Course of Ophthalmology, Cali, Colombia. Contact: Dr. Piedad Gonzalez P. email: [Clinicaoftdm@andinet.com](mailto:Clinicaoftdm@andinet.com).

13. May 30-June 2, 2002: VI Congress of the Mediterranean Society of Ophthalmology, Alicante, Spain. Contact: Jorge L. Alio. Ph.: +34 (902)-33-33-44; FAX: +34 (96)-526-05-30; email: [oftalio@ibm.net](mailto:oftalio@ibm.net).
14. June 9-11, 2002: The 27<sup>th</sup> Indonesian Ophthalmologists' association (IOA) Annual Meeting, Jakarta, Indonesia. Contact: Dr. Bondan Harmani, Department of Ophthalmology, University of Indonesia, Jl. Salemba Raya No. 6, Jakarta 10430, Indonesia. Ph.: +62 (21)-334-878; FAX: +62 (21)-392-7516; email: [perdami@indo.net.id](mailto:perdami@indo.net.id).
15. July 21-25, 2002: 7<sup>th</sup> International Conference on Low Vision, Goteborg, Sweden. Contact: Conference Secretariat, Congrex Goteborg AB, Att: Vision 2002, Box 5078, 402 22 Goteborg, Sweden. Ph.: +46 (31)-81-82-00; FAX: +46 (31)-81-82-25; email: [vision2002@gbg.congrex.se](mailto:vision2002@gbg.congrex.se); Web-site: [www.congrex.com/vision2002](http://www.congrex.com/vision2002).
16. July 22-25, 2002: XXIII Pan-American Congress of Ophthalmology, Buenos Aires, Argentina. Contact: Pan-American Association of Ophthalmology PAAO Administrative Office, 1301 South Bowen Rd., Ste. 365, Arlington, TX 76013-2286, USA. Ph.: +1 (817)-265-2831; FAX: +1 (817)-275-3961; email: [pao@pao.org](mailto:pao@pao.org); Web-site: [www.pao.org](http://www.pao.org).

### STRABISMUS SUMMARY SERIES PART XIII

In this XIII part of Strabismus Summary Series the important topic of **the glossary** or **terminology** is being continued. The terms are followed by their definitions in short. We hope to include all the words commonly used. I request the members to point out any omissions or mistakes. After completing this topic, a short list of the abbreviations being commonly used in strabismology will be printed.

### Terminology or glossary of strabismology: Part 6

Please see the table below. (Continued from Strabismus Summary Series-Part XII and Terminology/Glossary: Part 5, InteRyc volume 1, 2001).

NOTE: The right hand table is separate. It starts at a word that follows the last word of the left-hand table. The words are given in alphabetical order.

### Table of terminology / glossary:

<b>The term</b>	<b>Short definition</b>	<b>The term</b>	<b>Short definition</b>
<i>Right deorsumvergence</i>	It is the same condition as left sursumvergence, or negative vertical divergence. There is elevation of left eye, relative to right eye.	<i>Stereopsis</i>	The perception of depth or third dimension. The sensation is caused by the images falling on the fovea of one eye and its Panum's area in the other.
<i>Right sursumvergence</i>	Also known as left deorsumvergence or positive vertical divergence.	(Continued on the next page)	

<i>Saccades</i> (Also known as left deorsumvergence)	The purpose of these eye movements, a kind of versions, is to place the image on the fovea and to keep it there as long as required. When optical stimuli from an object in the periphery of the visual field, which attracts attention, reach the retinal periphery they elicit saccades. Other examples of fast saccades are random command movements, movements during fast phase of nystagmus, rapid eye movements (REM) during sleep and correcting saccades during fast pursuit movements.	<i>Strabismic amblyopia</i>	Depressed vision uncorrectable by corrective glasses. It results from squint. It is caused by an active suppression of fovea and a passive disuse (disputable).
		<i>Strabismus</i>	See squint above.
		<i>Strabismus deorsoadductorius</i>	Is the name given to a downshoot in adduction. Usually it is due to superior oblique overaction.
<i>Secondary heterotropia</i>	A manifest squint, which is secondary to either defective vision in one eye (sensory heterotropia) or occurs due to overcorrection of a strabismus, for instance, a previously esotropic eye becoming exotropic (consecutive heterotropia).	<i>Strabismus Fixus</i>	A rare condition in which one or both eyes are fixed or anchored in a certain position, usually adduction. Cases of vertical strabismus fixus are still rarer. The eye can not be moved in any direction. The condition is thought to be due to congenital fibrosis of extraocular muscles.
<i>Sensory heterotropia</i>	Please see secondary heterotropia above.	<i>Strabismus sursoadductorius</i>	Is a name given to upshoot of the eye in adduction. It is usually due to an overaction of inferior oblique.
<i>Simultaneous perception</i>	Worth divided binocular vision (BV) into 3 grades, which are mainly relevant to examination on major amblyoscope. First grade is simultaneous perception (SP), which is the ability of the brain to perceive two dissimilar images, one formed in each eye, simultaneously. It is tested on synoptophore by superimposing the SP targets like the joker and the gate. For details see grades of BV in terminology.	<i>Suppression</i>	Is an active central inhibition of image responsible for diplopia and confusion, which result from a manifest deviation. It is usually found in children and is limited to binocular vision. If the fixating eye is covered, suppression in the deviating eye disappears.
<i>Smooth pursuit or Following movements</i>	They are made while following an object. They are a kind of versions. Relatively slow movements, they are brought into play while tracking a moving object.	<i>Suppression scotoma</i>	To avoid diplopia and confusion resulting from a deviation, suppression occurs in the fovea of the deviating eye and that area on the periphery where the image of the object of attention falls (fixation point scotoma). In cases of alternating deviations suppression scotomas are found alternately in each eye ( the nonfixing eye).
<i>Squint</i>	A deviation of visual axis from its fixing position. Usually the word is used for a manifest deviation.		
(Continued in the right hand columns on the previous page)		End of part XIII of terminology	

NOTE: The terminology / glossary will be continued in the InteRyc volume 3, 2001.

## **UPDATE**

Note: Update contains abstracts/short outline of the articles that are of clinical interest and that have been recently published in the medical/ophthalmic literature. If the reader is interested in any of the abstracts / short outline items given below, a copy of the requested full article can be sent.

### **Update-General ophthalmology**

1. *What's new in glaucoma therapeutics?* (By Sara E Smith, Managing Editor: Ocular Surgery News Europe / Asia- Pacific, Volume 12, No. 1, January 2001, p. 22): According to the author a new *docosanoid and a prostaglandin / betablocker* are the latest drug treatment on the scene. Prostaglandins have been playing a significant role in the treatment of glaucoma by increasing the aqueous outflow. When they are combined with conventional anti- glaucoma drugs, the IOP lowering effect is significant. The FDA in USA has recently approved the new drug Rescula, manufactured by CIBA Vision Ophthalmics. Rescula is Docosanoid, unoprostone isopropyl 0.15%. Another anti- glaucoma medicine, which is a combination drug and has recently been approved by FDA in USA, is Xalcom by Pharmacia. It is a combination of Docosanoid, unoprostone isopropyl 0.15%, the PG-F analogue, latanoprost and timolol. It has significant IOP reducing effect and fewer side effects. Unoprostone may play a role in increasing the blood flow in the eyes. Stinging and burning seem to be the only side effects. A very slow pigmentation of iris can occur rarely. Rescula is to be used twice and Xalcom only once a day.
2. *Study: Non-penetrating Schlemmectomy an effective glaucoma treatment option* (News in Ocular Surgery News Europe / Asia- Pacific, Volume 12, No. 1, January 2001, p. 24): A preliminary study on the non-perforating ablation procedure shows promise in the treatment of primary open angle glaucoma (POAG). Oswaldo Borrás, M.D. and Juan Echague, M.D. presented the results of their study according to which this procedure is free of any postoperative complication and is quite effective in reducing the IOP. The maximum postoperative period of follow up was 9 months. However, they are of the opinion that more cases should be done and a longer follow up is required to evaluate the possibility of a cataract formation as a post operative complication.
3. *Presbyopia correction possible using Anterior Ciliary Sclerectomy plus silicone expansion plugs* (Hideharu Fukasaku, M.D.,: Ocular Surgery News Europe / Asia- Pacific, Volume 12, No. 1, January 2001, p. 42): According to new theories that suggest that presbyopia is a result of posterior chamber crowding and not of lens sclerosis, interest in surgical treatment of presbyopia has been revived. 12 patients who had undergone ACS with implantation of silicone expansion plugs in the ACS incision, had an improvement of 1.5 D in accommodation over 18 months.
4. *Characteristics and outcomes of paediatric rhegmatogenous retinal detachment treated by segmental scleral buckling plus an encircling element* (Sadeh, A.D. et al:

Eye 15:31-33, 2001): The authors have reported retrospective review of 15 consecutive paediatric patients (16 eyes). *Results*: The male female ratio was 13: 2. The average age was 10.9 years (range: 6-18 years). The cause of the retinal detachment was trauma in 9 out of 16 eyes, high myopia in 5 of the 16 eyes and unknown in 2 out of 16 eyes. Final reattachment was achieved in all cases. Out of 11 eyes with a follow up of 6 months or more there was improvement of visual acuity in 7 eyes and a best- corrected visual acuity of 6/20 in 5. *Conclusion*: Paediatric rhegmatogenous retinal detachment is characterized by a delay in diagnosis and a high degree of macular involvement. Anatomical reattachment was possible in all cases with segmental scleral buckling plus an encircling element and better visual acuity was achieved in 50% of all cases with a follow up of 6 months or more.

### **Update-Strabismology**

- 1) *Active management in patients with ocular manifestations of Myasthenia Gravis* (Bentley, C.R., Dawson, E. and Lee, J.P.: Eye 15:18-22, 2001): The authors report a retrospective study of some patients with myasthenia Gravis or "myasthenia Gravis like" symptoms. The patients included in this study were those in which Botulinum toxin treatment and / or surgery was carried out for disabling diplopia and / or poor cosmesis. Surgical techniques used were conventional, recess-resect, posterior fixation, superior oblique tenotomy and adjustable sutures. *Results*: 8 out of 9 patients in the group were females. Age range was 21 -59 years. 6 of them became free of symptoms after treatment. 2 patients improved but had occasional diplopia and the remaining one failed treatment and required an occlusive contact lens for diplopia. *Conclusions*: The ocular manifestations of Myasthenia Gravis or "myasthenia Gravis like" symptoms may respond to surgery and / or Botulinum toxin therapy. Active intervention should be considered when deviations become stable. This is the first report of the use of Botulinum toxin in cases of ocular manifestations of Myasthenia Gravis.
- 2) *Review of the inverse Knapp procedure: indications, effectiveness and results* (Muarini, V., Kwan, A.S.L. and Lee, J.P.: Eye 15:7-11, 2001): The authors carried out a retrospective study of the indications and results of the inverse Knapp procedures performed at Moorfields Eye Hospital during 10 years between 1987 to 1996. *Results*: They found that full records were available in 17 out of 21 patients found. Main indication of surgery in these cases was orbital trauma. The mean vertical deviation in primary position improved from 16.06 PD to 7.35 PD and in downgaze from 26.45 PD to 6.66 PD. Score of BSV improved from 42% preoperatively to 62% postoperatively. Multiple operations were required for 8 patients. *Conclusions*: Inverse Knapp procedure is an uncommon but extremely useful operation for vertical strabismus caused by marked inferior rectus weakness, posttraumatic inferior rectus underaction and for residual large hypertropia in patients with poor binocular functions. Over correction should be avoided.
- 3) *Bilateral VI nerve palsy treated with augmented vertical muscle transplantation* (Murray, D.C. and Amsworth, J.R., Case report, Letters to the Journal, Eye 15:7-11,

2001): The authors report a case of bilateral VI nerve palsy in a patient aged 35 years. He had been developing a progressive esotropia (esotropia) for last 2 years. There was history of a fall from 10 meter height in childhood. He had large right esotropia of about 100 PD with no PL in right eye due to optic atrophy. *On examination* abduction of the left eye was found to be absent. That of the right was somewhat limited. *CT scan* showed a large partially calcified lesion within the right cavernous sinus. Left superior ophthalmic vein was dilated. *On magnetic resonance angiography* a saccular aneurism of the intracavernous part of the internal carotid artery was found displacing the upper right internal carotid artery, temporally. The aneurism did not fill up with contrast indicating the presence of thrombosed blood. Because of the presence of a longstanding history of head trauma and the findings on neuro-imaging, the aneurism was diagnosed as being traumatic in origin and also long standing. The risk therefore was considered to be low (hence no need of neurological treatment).

He was treated for squint by surgery on the left eye consisting of transposition of vertical rectus muscles to the lateral rectus insertion incorporating a Foster's modification. In this case, according to Foster's modification, lateral fixation sutures were applied to 1/4<sup>th</sup> of the vertical recti at 16 mm posterior to the limbus on the lateral side. *Result*: Only 17 PD residual esotropia was present. The eyes looked straight and there was no postoperative limitation of adduction of the left eye. Abduction of the left eye was much improved. *Comments* by the authors: The most unusual feature of this case is its presentation with symptoms of pain and redness in the contralateral eye (such symptoms being rare in the absence of a demonstrable carotid-cavernous fistula). The results of conventional vertical muscle transposition are often disappointing. Foster modification has been found in USA to be more effective, both in complete VI nerve palsy and in Duane's syndrome. The addition of lateral fixation sutures to the transposed vertical rectus muscles significantly increases the tonic abducting forces of the transposition without decreasing adduction, by horizontal redirection of the path of the post-equatorial vertical muscle. Foster suggests that an ipsilateral medial rectus recession should be avoided even at a later date, because of the risk of a decreased adduction and possible late overcorrection. *Conclusion*: The authors suggest that Foster's modification of vertical rectus muscles transposition is a useful technique in selected cases of permanent total VI nerve palsy.

## **InformIT**

By: Mr. Sameer Shah, Technical IT advisor to the JKA Institute of Strabismology

(NOTE: Mr. Shah is a teacher at the NIIT, Rajkot one of the famous institutions that is imparting training in the subject of Information Technology (IT). He was my teacher at NIIT. We are fortunate to have his help in this series on IT. In this installment he gives some extremely useful but simple information).

*Auto Option with Microsoft Word, Make your daily work faster:*

### ***AutoText***

(View menu → Toolbar → AutoText)



AutoText, tries to figure out what word or phrase you're typing, based on the first four letters, and offers to complete that word or phrase for you, for example, you type the first four letters of any month of the year, a little pop-up tip will show you the complete name of the month. Press Enter or F3, and Word inserts the complete word for you. If you want to ignore the AutoText suggestion, just keep typing.

You can make your own additions to AutoText. To do so:

1. Type a word or phrase you often use and want AutoText to help you with.
2. Highlight it (Make a selection).
3. Choose Insert Menu → AutoText → New
5. Type a name for the entry in the Enter AutoText Entries Here box, and click Add. The next time you type the first four letters of that word or phrase, Word will offer to complete it for you.

In this way AutoText is of great help to store commonly used words and messages like address, greeting, etc. and made it available to your at just one key stroke.

### ***AutoCorrect***

(Tools menu → AutoCorrect)

AutoCorrect watches for common typing errors and corrects them as you make them — sometimes before you're even aware you have made them. Choose which errors you would like automatically corrected from the list. If you want it to, Word will automatically correct words or sentences with two initial capitals, capitalize the names of days and the first word of sentences (which it assumes to be any word following a period or other typical sentence-ending punctuation mark), and correct accidental usage of the Caps Lock key. If you select "Replace As You Type", Word will watch for the spelling errors contained in the list at the bottom of the tab and automatically correct them. For example, if you type "accomodate," Word will automatically change it to "accommodate" as soon as you hit the space bar to move on to the next word. You can teach Word to correct your own most common misspellings by entering the wrong spelling in the **Replace box** and the correct spelling in the **With box**, and then clicking **Add**. If you want to remove an existing entry in the AutoCorrect list, highlight it and click Delete. If you'd like Word to automatically replace words it doesn't recognize with suggestions from the spelling checker, click the check box at the bottom of the tab.

### **SHORT REVIEW ARTICLE ON STRABISMUS**

(Note: *The second and final part of "Cyclovertical Deviations" is given in this volume 2, 2001 of InteRyc. The first part appeared in volume 1, 2001 of the InteRyc, pages 13-23)*

### **Management of DVD**

Usually there are no symptoms and the updeviation remains for the most part latent or only occasionally manifest. In such cases no treatment is required. In others the deviation even if intermittent, becomes a *cosmetic problem*. It is these patients who need treatment to correct the deformity.

Surgery as a viable option has become acceptable now but there was a time in the past when the ophthalmologists did not put much emphasis on it. The methods practiced in those days did not often include oblique muscle surgery and the results in many cases were therefore unpredictable.

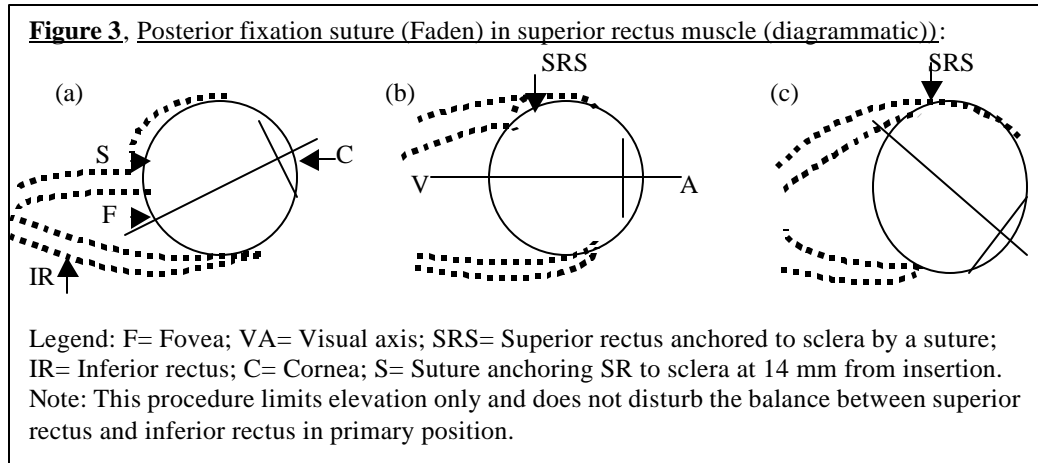
NOTE: *In unilateral cases* only one eye should be operated upon but the patient must be warned that after surgery on the affected eye the latent DVD of the other eye (if present) may become manifest.

The main points regarding treatment of DVD are as follows:

1. *No symptoms and no cosmetic problem*: No treatment is required
2. *Only symptoms of strain on reading etc.*: Correction of refractive error and orthoptic treatment to improve the range of fusion and/or convergence.
3. *Surgery has to be carried out if there is a significant cosmetic problem due to the deviation manifesting in elevation.* The various procedures favored by a majority of surgeons are as following:
  - 1) Conventional moderate recessions of the superior rectus muscles
  - 2) Unusually large recessions of the superior recti
  - 3) Recession of superior recti with resection of inferior recti
  - 4) Resection of inferior recti
  - 5) Posterior fixation (retroequatorial myopexy) of the superior recti
  - 6) Recession of superior recti combined with posterior fixation (Faden operation)
  - 7) Recession of SR combined with Faden and resection of inferior rectus
  - 8) Anterior transposition of the inferior oblique insertions
- 1) *Conventional moderate recessions of superior recti of up to 4 mm* that work well for other vertical deviations are often quite insufficient for DVD.<sup>17</sup>
- 2) *Unusually large recessions of superior recti, of about 7-10 mm* have been found to be quite effective.<sup>13</sup> and do not produce paresis of these muscles.<sup>14</sup> However, some surgeons report that the effects of large recessions last for a shorter period than do those of Faden operation of Cuppers (posterior fixation suture in the superior rectus muscles behind the equator).
- 3) *Recession of superior recti combined with resection of inferior recti*<sup>15</sup> is quite an effective procedure but may result in overcorrection especially if there is no vertical deviation in primary position.<sup>17</sup> Moreover, it can cause unequal palpebral fissures.
- 4) *Resection of inferior rectus of 4-5 mm* as a second stage procedure<sup>14</sup> when the large recession of superior recti fails.
- 5) *Posterior Fixation (retroequatorial myopexy or Faden operation of Cuppers) of the superior rectus muscles (figure 3)*: Some surgeons favor this procedure over large superior rectus

recession while others consider its effect short-lived.<sup>17-20</sup> This operation can be combined with others like superior oblique tuck, inferior rectus resection or horizontal muscle surgery for horizontal strabismus.

- 6) *Posterior Fixation of the superior recti combined with recession*<sup>18-20</sup> is reported to be an effective procedure. The amount of recession of superior rectus varies according to the angle of updeviation in prism diopters (PD). Sprague et al<sup>20</sup> advise a recession of superior rectus by 3 mm (for a drift of up to 15 prism diopters) and 5 mm (for a drift of 20-30 PD). The posterior suture is placed at 14 mm behind the insertion of the superior rectus.



- 7) *Faden operation combined with superior rectus recession and inferior rectus resection*: When the excursions of the affected eyes are large, especially more than 30 PD, Sprague et al are in favor of doing the three procedures at one sitting.<sup>20</sup>

*Comment*: I do not favor Faden operation as it is not known what will be the long-term effect of this suture placed typically at 14 mm behind the insertion of the muscle. As long as I get satisfactory results from simple procedures like large superior rectus recession specially as a hang-back procedure (guarded tenotomy of old) I do not feel the need for more elaborate procedures. In fact in the patients with smaller DVD just getting rid of the horizontal deviation, especially exotropia, may straighten things out.

- 8) *Anterior transposition of the insertion of inferior oblique*<sup>21-23</sup>:

The effect of this procedure is a weakening of the main action of inferior oblique muscle, i.e., elevation. In fact, clinical, histological and radiological evidence has been found that anterior transposition of the inferior oblique muscle converts the muscle to a depressor

Two of the main indications of this operation are:

- (a) DVD
- (b) Overaction of inferior oblique muscle

Comment: It is to be remembered that in cases of DVD the balance tilts towards conservative treatment especially under the following circumstances:

- If there is an absence of binocular functions.
- If the only problem is an asymmetrical cosmetic defect (vertical and horizontal deviation appearing in elevation) and
- If the *deviation is significant only while fixing with one of the eyes*, e.g., fixing with left eye and insignificant while fixing with the right eye this is what we can and should do: Trying conservative methods before deciding upon surgical treatment. In the above case vision of the fixing left eye can be somewhat blurred by introducing + additions so that right eye is made to fix and the deviation is unnoticeable.

### **3) Strabismus Sursoadductorius (upshoot or updrift in adduction)**

It is quite common to find that one or both eyes show an upshoot or updrift when the eye/eyes is/are in an adducted position or are moved to an adducted position. The main points are the following:

- Usually there is no vertical deviation (hypertropia of the eye showing upshoot in adduction) in primary position
- In lateroversion there is hypertropia of the adducted eye.
- If the condition is bilateral there is hypertropia of the right eye in levoversion (looking to left) and hypertropia of the left eye in dextroversion (looking to right).
- It may be associated with esotropia or exotropia (the former being more common) in which case the horizontal strabismus often shows a V pattern.
- The main cause seems to be an overaction of inferior oblique but there may be other causes. The etiology is discussed below in short.

#### **Etiology**

1. Overaction of the inferior oblique (IO) muscle is the most common cause as mentioned above. This IO overaction can be of two types:

- (a) *Primary*
- (b) *Secondary*

#### (a) Primary overaction of IO:

The main features are as follows:

- No evidence of ipsilateral superior oblique (SO) or contralateral superior rectus (SR) paresis is found. Bielschowsky's head tilt test is negative indicating an absence of SO palsy.
- A strabismus with V pattern is often present.
- The IO overaction has been attributed to the functional superiority of the muscle. *The views regarding the cause of this functional superiority are given below.*
- *Duane's view:* IO has a greater mechanical advantage in adducted position than its yoke muscle, the contralateral SR has in abduction. Thus we can say that an overaction of IO in adduction is normal.

- *Scobee's view*: Generally in agreement with Duane's view that the overaction of the IO in adduction is normal but it also explains the cause of IO overaction further by adding the following points.
  - A. The overaction of IO can be explained by the following: that superior rectus being at a mechanical disadvantage requires more than normal innervation. This increased innervation, which is then equally distributed between the two synergists in accordance with Hering's law of equal innervation, (IO of one eye and the SR of the other eye) causes the IO to overact.
  - B. That IO is a better elevator in adduction than the superior oblique is a depressor. This also results in an overaction of IO muscle in adduction
  - C. That in extreme lateroversion the nose comes in the way of binocular fixation and causes dissociation between the two eyes and the IO overaction manifests as an upshoot.
- *Guibor*<sup>24</sup> added another view that adds weight to the theory regarding the natural superiority of IO as an elevator in adduction as compared to the superior rectus as an elevator in abduction, which is the direction in which this eye is placed when the other eye is adducted. This view states that there is a synkinesis between the IO and the ipsilateral medial rectus muscle. When there is an overaction of the medial rectus (as for instance in cases of an esodeviation) there are intracranial impulses between them and overaction of IO may result. He therefore advised that conservative treatment should be given a good chance before resorting to surgery.
- *Ocular and orbital torsion*: von Noorden has expressed the view in his book that "so far the nature of the so-called primary overaction of IO has not been satisfactorily explained". He suspects that it is doubtful that any such primary overaction exists at all. He puts forward the view that<sup>25</sup> *in most cases the upshoot in adduction is caused by ocular and orbital torsion*. He has shown the fundus photograph of a patient with upshoot in adduction (and downshoot in abduction) of the right eye. There is orthophoria in primary position. The fundus photographs shows a large right excyclotropia. According to him excyclotropia of an eye will cause an upshoot in adduction and a downshoot in abduction of the eye with excyclotropia. He explains the mechanism thus: When the eye is extorted the medial rectus will not act as a pure adductor but will also acquire an action of elevation as well. When the medial rectus contracts it will not only adduct but also elevate the eye. He adds that a change occurs in the functioning of the lateral rectus muscle also, which develops an action of depression in addition to being an abductor. However the upshoot in adduction is more pronounced than the downshoot in abduction, which may not be present.
- The upshoot in adduction may also be present in cases of Duane's retraction syndrome in which condition there is a co-contraction of the two horizontal rectus muscles. The IO may be normal in these cases.

### **Management of strabismus sursoadductorius**

1. *If the upshoot in adduction does not come in the way of binocular single vision and presents as the only feature, it should be left alone. The oblique muscles should only be operated upon when there is no other, simpler way out.*
2. *If there is an accompanying horizontal strabismus: the insertion of the medial rectus muscle can be moved downwards to weaken its newfound elevation action if the muscle is being recessed or resected.*
3. *In cases with a gross overaction of IO the muscle has to be weakened by myectomy, recession or any other preferred procedure.*
4. *If there is an obstruction to binocular single vision because of this IO overaction, either in adduction or in elevation or depression (when there is a V pattern strabismus): This is also an indication for the weakening of the overacting IO.*

NOTE: As has been mentioned earlier in connection with IO weakening one must always warn the patient (with a unilateral IO overaction) or the parent that after the operation on one eye the other eye may develop (a latent?) upshoot in adduction.

#### **(4) Strabismus deorsoadductorius (downshoot in adduction)**

✓ *Unlike the previous condition this one shows a downshoot in adduction. The misalignment is seen only in lateroversions. It is a much less common condition than upshoot in adduction.*

#### **Etiology**

1. *Overaction of the superior oblique muscles: It can be of two types:*
  - (a) Primary: Its cause is not known. However one of the following conditions may be responsible:
    - It may be due to an ocular or orbital incyclotorsion (in the same way that ocular or orbital excyclotorsion are responsible for overaction of IO muscles (25)).
    - Co-contraction of the horizontal muscles as is found in cases of Duane's syndrome.
    - This condition can also be found in cases of Brown's syndrome.
  - (b) Secondary: It is due to the paresis of either the direct antagonist (the inferior oblique or the contralateral synergist (the inferior rectus). In some cases it seems to be due to a rather longstanding contracture of contralateral superior rectus. This leads to an underaction of the ipsilateral inferior oblique that in turn causes an overaction of the superior oblique.

#### **Management of strabismus deorsoadductorius**

Treatment is required only if the overaction of SO is causing an obstruction to binocular single vision, in which case weakening of the overacting superior oblique muscle/muscles can be carried out.

#### **Cyclodeviations**

The Cyclodeviations can exist alone or they may accompany vertical/horizontal strabismus. Under this discussion will be included cyclodeviations in the B and C subgroups of the Noorden's classification (mechanical and paralytic).

### Definition

The misalignment in Cyclodeviations is around the antero-posterior axes of the eyes. The two vertical corneal axes are not parallel. If they are extorted (with the upper end of the vertical corneal axis tilted temporally) the anomaly is called "*excyclotropia*". If the vertical corneal axis is intorted (with its upper end tilted nasally or inwards) the condition is called "*incyclotropia*".

### Incidence

The incidence of cyclodeviations is not known, as we have found no studies in the literature nor are they mentioned in the many books I have consulted. In most clinics routine tests do not involve testing for cyclodeviations. However, we test each case of ocular motility problems on the synoptophore *and find the cyclodeviations to be quite rare. It is, however, quite possible that double Maddox Rod test, fundus photography and scotometry may show them to be much more common than they appear to be.*

In cases of palsy of the vertically acting muscles, obliques more often than recti, they are reported to be almost always<sup>26</sup> there. These results have been found on doing the above-mentioned<sup>28</sup> three tests.

### Etiology

1. The cause usually is an imbalance between the action of the two intortors (superior oblique and the superior rectus) and the two extortors (inferior oblique and the inferior rectus). Obliques are more often to be blamed. *Usually the afflictions of these muscles are parietic in nature and lead to vertical deviations also. Out of the two vertical groups, the obliques are more often affected.*
2. Cyclodeviations may be present along with other types of strabismus, e.g., A and V pattern deviations. Usually no paresis is detected in these cases.
3. Cyclodeviations may accompany the dissociated vertical divergence (DVD), usually in the form of excycloduction of the updeviated and/or divergent eye.
4. Myasthenia Gravis is another condition in which cyclodeviations<sup>27</sup> may be found.
5. Other condition reported to occur along with cyclodeviations are:
  - Endocrine ophthalmopathy
  - Plagiocephaly<sup>26</sup>

### Symptomatology

Symptoms are not common in cases of cyclodeviations, which seems surprising. One would expect symptoms like torsional diplopia, dizziness and loss of stereopsis (and resulting difficulty in judging distances and depth, e.g., on the stairs).

The reasons for the absence of symptoms in most cases of cyclodeviations may be the following:

- ◇ We know that cyclovergence makes cyclofusion possible and in many cases may lead to compensation of the deviation, turning a cyclotropia in to a cyclophoria which as to be

detected with non-dissociating tests like Bagolini's. Dissociating tests like Double Maddox rod will give a result in terms of manifest cyclodeviation (cyclotropia).

- ◇ There may be suppression, which prevents diplopia.
- ◇ In long standing cases anomalous retinal correspondence may develop, accounting for an absence of double vision.
- ◇ A compensatory head posture (CHP) may overcome diplopia unless the deviation is too large for a comfortable CHP.
- ◇ Even in the presence of cyclotropia (as tested by ophthalmoscopy and fundus photography, the images are not seen tilted. This absence of tilted images even with the cyclotropic eye (e.g., in cases of SO palsy giving rise to excyclotropia) has been explained below.

*There are two types of adaptations that are specific to cyclodeviations:*

- (1) *Physiologic adaptations*: Although studies were conducted on this subject earlier, von Noorden and coworkers reinvestigated the phenomenon of physiologic and psychological adaptation<sup>29-30</sup> in cyclotropia. They confirmed *that a spatial reorientation of the vertical and horizontal meridians of the retinal elements takes place in long standing cases especially those of congenital or early onset. This adaptation is a compensating mechanism so that those images are not seen tilted. There seems to be a neurophysiologic basis for this change in spatial orientation.*
- (2) *Psychologic adaptations*<sup>29-30</sup>: they take place in some patients who then do not notice tilting of their environment. Spatial clues like the memory of the doors and windows being vertically erect (and not tilted) are used to ignore/correct the tilting of the images. When the normal environmental frame is not available for reference, for example in darkness, the patient may become aware<sup>31</sup> of cyclotropia. Ruttum and Noorden confirmed<sup>29-30</sup> this by measuring the *subjective horizontal* in cyclotropic patients. We had talked about the "subjective horizontal" in the chapter on measurement of cyclodeviations. It is defined as "*a subject's perception of a horizontal plane as opposed to the plane's actual position in space*".

NOTE: There is no fixed pattern of these adaptations as regards their character, frequency and the type of cyclotropia (intermittent, congenital or acquired). However, on the whole, these adaptations are more developed and comparatively well-fixed in cases of congenital cyclotropia. The various types of adaptations may be present in different proportions in the same patient. There is so much flexibility that the patients are generally much more comfortable (asymptomatic or only partially so) than one would expect them to be.

### **Investigations**

Apart from the usual points in history taking and the examination there are certain special points one must keep in mind as regards cyclodeviations as given below.

1. History: Anything suggesting that the causative condition is paretic in nature (head trauma, intracranial inflammations and other lesions etc.).



## 2. Examination:

- (1) *Measurement of deviation* must be done if possible on the *major amblyoscope* (e.g., *synoptophore* as it easily measures all the three types of deviations, i.e., vertical, horizontal and torsional). Cyclodeviation should be measured with *Double Maddox Rods and Bagolini's lenses*. *Bagolini's test* should be performed to see the state of binocular vision under casual binocular conditions of viewing. To get proper measurement of cyclodeviation horizontal and vertical deviations have to be neutralized with prisms. *Diplopia test* should be performed with special reference to tilting of the images. The direction of maximum tilting should be noted down. If necessary cylinders can be used to measure the degree of tilt. The image showing maximum tilting should be correlated with the eye (right or left), ocular motility findings, the degree of palsy and the muscle affected.
- (2) *Fundus photography* is of help, as it will show the shift in the position of the fovea if the fundus is tilted.
- (3) Some strabismologists carry out *perimetry under unioocular and binocular conditions of viewing* to see if there is any shift in the position of blind spot from one to the other.

## **Management of cyclodeviation**

*Nonsurgical or conservative treatment* consists of:

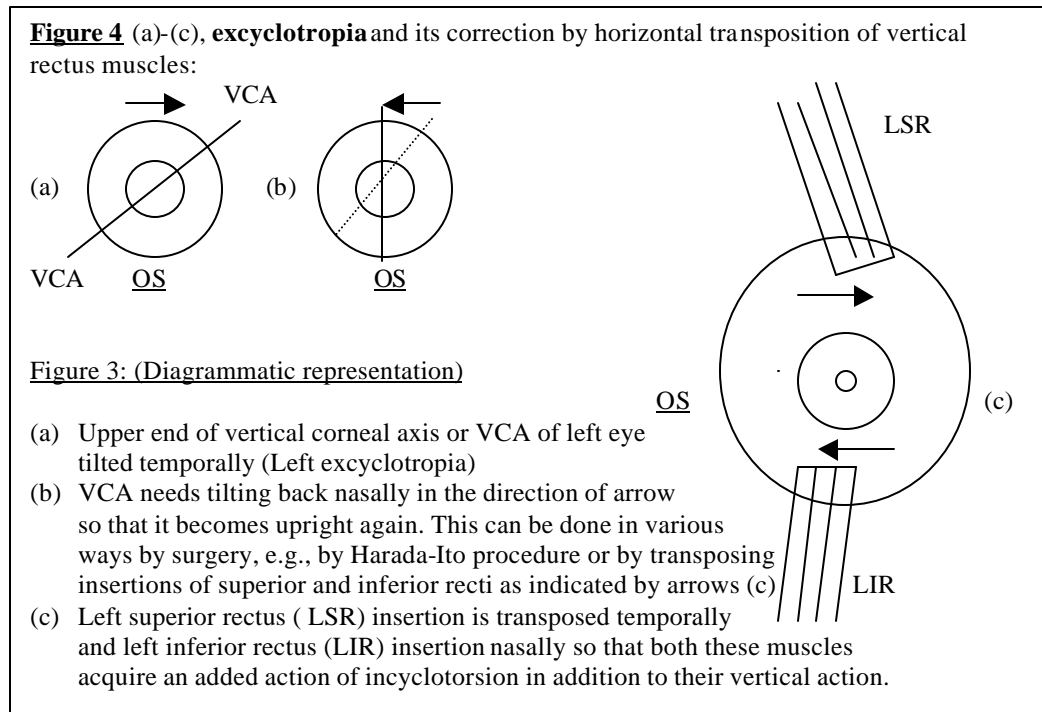
- (a) In recent palsy, treatment of the cause and prevention of sequels.
- (b) In longstanding cases with symptoms, some strabismologists prescribe tilted cylindrical glasses. However, they are not very effective.

*Surgical treatment:* Surgery is effective but should only be used as a last resort. If there are troublesome symptoms due to cyclotropia, one of the involved muscles causing it is operated upon. For instance if there is superior oblique (SO) palsy leading to overaction of inferior oblique (IO), which in turn causes excyclotropia, a weakening procedure on the overacting IO muscle is advised. The main points are discussed in short below.

### ➤ For Excyclotropia:

- 1) *Ipsilateral hypertropia with excyclotropia due to a palsy of the superior oblique and an overaction of the direct antagonist, i.e., ipsilateral inferior oblique (IO) muscle:* Surgery advised is IO is weakening by any of a number of procedures available (recession, myectomy, anterior transpositioning of its insertion etc.).
- 2) *If the excyclotropia and hypertropia are not present in primary position but only in depression, the SO is significantly underacting and the patient is symptomatic:* A strengthening procedure like tucking can be performed on the palsied SO. (Note: personally I do not favor this procedure as it can cause a tight SO tendon or acquired Brown's syndrome, which is pretty common in countries where this operation is popular). Alternative procedures are available as given below.
- 3) *If there is excyclotropia only (no hypertropia):* weakening the IO and strengthening the SO is not advisable as it may give rise to a vertical deviation. In such cases there are certain procedures, which correct the cyclotropia only and do not affect the vertical alignment of the eyes. *They are as follows:*

- 1) Harada-Ito procedure for excyclotropia consists of advancement and lateralization of the superior oblique tendon. The anterior portion of superior oblique is transposed anteriorly and temporally. This procedure increases the intorsion effect of the superior oblique by 9-15 degrees. It has found favor with many ophthalmologists. However, there is a limitation, it can not be performed in patients who have undergone superior oblique tenotomy or if there is congenital aplasia of the muscle. The effect of this operation is generally seen to decrease with time.
- 2) For excyclotropia in primary position as well as in depression: Temporal transposition of superior rectus tendon and nasal transposition<sup>33-34</sup> of the inferior rectus tendon. These procedures add the action of torsion to the vertical action of the vertical recti. *The superior rectus insertion shifted temporally will add an action of intorsion to the elevation action of the muscle. Similarly, the insertion of inferior rectus shifted nasally will add an intorsion to the muscle's depression action* (figure 3).  
The amount of correction obtained by these procedures is 8-10 degrees of excyclotropia.
- 3) For excyclotropia in depression only: The temporal transposition of the insertion of the inferior rectus<sup>33</sup> will usually look after the excyclotropia.



NOTE: The procedures no. (II) and (III) are useful when SO has already been operated upon (tenotomized) and in rare cases of congenital absence of the SO muscle. They also serve as the alternatives to the SO tucking.

➤ For Incyclotropia

Incyclotropia is less common than exotropia and the surgical treatment usually consists of transposition of the superior and inferior rectus insertions. *The superior rectus tendon is transposed nasally and inferior rectus insertion temporally.* This gives the muscles an added

action of extorsion (excyclotorsion) in addition to their vertical one. The correction obtained by these procedures is 8-10 degrees of cyclotropia.

Alternative surgical procedures for cyclotropia are less popular but mentioned<sup>35</sup> below.

- A. Vertical transposition of the insertions of horizontal muscles.
- B. Sloping of the insertions<sup>35</sup> of all the four recti.
- C. Transposition of the anterior aspects of the inferior and superior obliques.

### **Complications of the surgery for cyclotropia**

1. The cyclotropia may be reversed (overcorrected), e.g., preoperative excyclotropia is converted into postoperative incyclotropia. *Management: Wait because usually it decreases with time. One should never be in a hurry to perform a corrective surgery for the overcorrection. This is especially true of the Harada-Ito operation.*
2. Vertical deviation may be created in cases where it was nonexistent or asymptomatic before the operation. *This complication can be avoided if we take care to perform the right procedure to correct the cyclotropia. An oblique muscle should not be weakened or strengthened unless there is a vertical deviation as well as cyclotropia.*
3. Vertical deviation can be overcorrected. Planning the surgery carefully can prevent this complication also.

### **Management of the complications following surgery for cyclotropia**

*The important points as regards the management of complications after surgery for cyclotropia are as following:*

- One should wait for a few weeks and if it does not improve, re-operation to correct the overcorrection can be undertaken.
- Even adjustment of the sutures (if adjustable sutures have been used) should not be done in a hurry.
- One should keep in mind that the effect of Harada-Ito procedure especially tends to decrease with time.

### **Summary**

- ❑ *Purely vertical deviations are rare.*
- ❑ *Mixed cases* (vertical deviations with horizontal and/or cyclovertical deviations are much more common).
- ❑ *More popular classifications:*
  1. Vellaseca's classification (old) and
  2. von Noorden's classification of cyclovertical deviations (new)
- ❑ *The conditions discussed* in this chapter:

- Vertical deviations: Primary, secondary and mixed cases (*vellaseca's classification*)
- Nonparalytic cyclovertical deviations (*Noorden's classification*):
  - a. Concomitant hypertropia
  - b. Dissociated vertical deviations (DVD)
  - c. Strabismus sursoadductorius (bilateral upshoot in adduction)
  - d. Strabismus deorsoadductorius (bilateral downshoot in adduction)
- *Latent nystagmus* is an important feature of DVD, not commonly seen to occur without it.
- *Main points in the management* are:
  - (a) Cyclovertical deviations: any surgery to correct the deviation must include vertical muscles if it is a primary vertical deviation.
  - (b) Dissociated Vertical Deviations: the most effective simple surgery for DVD is large recessions of superior rectus muscle/muscles.
  - (c) Concomitant hypertropia: usually prisms suffice.
  - (d) Bilateral upshoot or downshoot in adduction: Only required if significant and symptomatic, consisting of weakening of the overacting oblique muscle (IO for the upshoot and SO for the downshoot)
- *Meticulous examination and planning* are essential in the management of cyclovertical deviations.

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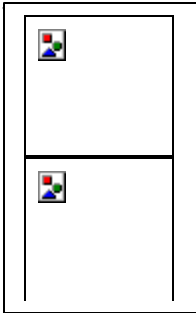

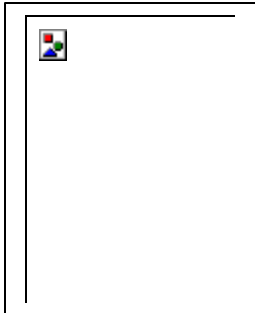
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NEW INSTRUMENTS / TECHNIQUES

**Welch Allyn SureSight Vision Screener**


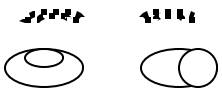
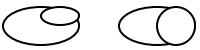


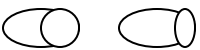
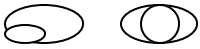

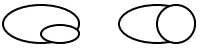
			<p>Welch Allyn Claim fast and efficient results with their SureSight Vision Screener in finding out the refractive errors in 5 seconds. By correcting the refractive error amblyopia, which is a common cause of unocular blindness in people under 70, can be prevented. It gets rid of the necessity of testing with vision charts.</p>
<p>▲ Above= Target ▲ Below=Printer</p>	<p>▲ Testing with SureSight</p>	<p>▲ SureSight Vision Screener</p>	

NOTE: We do not have any financial interest in the instrument.

SPOT THE DIAGNOSIS (2)

Please have a good look at the diagram given below and write to us mentioning your name, JIM number and diagnosis.

**Ocular motility chart of a patient:**

 Gross limitation of OS	 Gross limitation of OS	 Gross limitation of OS
 Gross limitation of OS	 Large left exotropia	 Overaction abduction OS
 Gross limitation of OS	 Gross limitation of OS	 Gross limitation of OS

ERRATA

We are sorry for the following errors in the InteRyc volume 1, 2001:

Page 10: Terminology: Please replace RPM by REM (for rapid eye movements).

Page 24: NEW INSTRUMENTS: Please replace "(Continued from InteRyc volume 1, 2001)" by "(Continued from InteRyc volume 4, 2000)".

Page 25: CME (Member of the year Quiz): Please replace "Quiz No.4, 2000" by "Quiz No.1, 2001".

BOOK SELECTION

**Clinical Strabismus Management- Principles and Techniques:** Rosenbaum, A.L. And Santiago, A.P., editors, 1999, Philadelphia, PA, W.B. Saunders Company- A division of Harcourt.Brace & Company:

Plus points: Easy language, lucid descriptions, ample illustrations, great practical details and good around coverage.

Minus points: Not many but the price factor makes it difficult to afford (at least for Indians). Price: \$225.

Rating: \*\*\*\*

EYE-RHYME

CARTOON-EYE

**HISTORY-A FEW FIRSTS IN STRABISMOLOGY**

- (1) **Worldwide**
- (a) Chevalier John Taylor (1703-1772) who performed a successful operation on a boy did first surgery for squint. He was half surgeon and half quack. He must have realized that squint was a disturbance of muscular equilibrium and conceived the idea that dividing a muscle or a nerve can cure it. However, he earned a bad name through many failures, one of them being on the eyes of Bach, the famous musician.
- (b) In 1743 George L. Buffon recognized amblyopia and recommended occlusion for it.
- (c) In 1839 Johann F. Dieffenbach performed the first successful tenotomy.
- (d) du Bois-Reymond (1852) and Mackenzie (1854) were the first to suggest orthoptic treatment but it was elaborated and established as a technique by Javal (1864-96).
- (e) Prof. A. Bangerter of Switzerland and Prof. C. W. Cuppers of Germany first advocated pleoptic treatment for amblyopia. However, their approach was different.

(Continued overleaf on page 32)

**CME (Member of the year) Quiz no.2, 2001:**

(NOTE: Please encircle the appropriate number or letter, fill in the blanks or describe as required. Then cut along the black line and return by mail. Turn over for the update-questionnaire)

1. Please give short definitions (in a few words) of the following conditions:
  - (a) Right sursumvergence:
  - (b) Saccades:
  - (c) Secondary exotropia:
  - (d) Strabismus sursoadductorius:
  - (e) Smooth pursuit:
  
2. Do the pair of names given below convey the same meaning? Encircle the correct answer:
  - (A) Following movements / Smooth pursuit: Yes / No
  - (B) Downshoot in adduction / Strabismus deorsoadductorius: Yes / No
  - (C) Active central inhibition of image / Suppression of image: Yes / No
  - (D) Sensory esotropia / Consecutive esotropia: Yes / No
  
3. Are the following statements true? Encircle the correct answer (yes/no):
  - (a) 4 mm recessions of superior rectus is sufficient for DVD: Yes / No
  - (b) Resection of inferior rectus should be a first stage procedure for DVD: Yes / No
  - (c) Anterior transposition of inferior oblique muscle converts it into a depressor: Yes / No
  - (d) The effect of large recessions of superior recti last for a shorter time than those of Faden's procedure for DVD: Yes / No
  
4. The main features of strabismus sursoadductorius are:
 

(1)	(4)
(2)	(5)
(3)	(6)
  
5. Name the main surgical procedures for treating cyclodeviations:
  - (1)
  - (2)
  - (3)
  - (4)
  - (5)



**HISTORY-A FEW FIRSTS IN STRABISMOLOGY**

(2) In **India**

(Continued from previous page)

- (A) Dr.H.L.Patney started running an orthoptic clinic with the help of a compounder at Sitapur Eye Hospital whom he taught orthoptic exercises, in early nineteen fifties.
- (B) Dr. M.K. Mehra and Dr. Sudha Awasthi (now Patney) started the first Orthoptic clinic at K.G. Medical College, Lucknow in 1957. She ran it for 2 ½ years.
- (C) Dr. H.L. Patney started the first Orthoptic Department and the first Orthoptic School of India at Eye hospital, Sitapur, U.P. in 1959 and Dr. Awasthi (now Patney) Pleoptic dept. in 1961.
- (D) Dr.Sudha Awasthi and Dr. J.M. Pahwa started the first Indian Orthoptic Journal in 1964.
- (E) Dr. H.L.Patney and Dr. Sudha Awasthi started the All India Strabismological Society in 1967 and held India's first workshop on strabismus in 1967.

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*Please answer the questions or encircle the correct answers, cut along the black line and send by return mail)*

**Update questionnaire**

- 1. I have been receiving InteRyc regularly, sent 2 monthly in 1998 (6 volumes) and 3 monthly (4 volumes) since 1999: Yes / No
- 2. My address remains unchanged: Yes / No
- 3. My email address: My URL:
- 4. My phone No.: My FAX No.:
- 5. My pager No.: My mobile phone No
- 6. I am enclosing herewith a demand draft for Rs100 / *cheque* for Rs118 (year 2001 subscription) / DD for Rs200 or *cheque* for Rs218 (for the years 2000+2001) / DD for Rs 300 or *cheque* for Rs318 for 1999+2000+2001.
- 7. I would like to resign from the membership of AISS and JKAIS: Yes / No
- 8. My membership No. is: JIM-
- 9. My name and present address are:

**For fellowship candidates only:**

- 10. I have paid for ..... installments.
- 11. I have received .....Installments.
- 12. I have sent back solved question papers of ..... installments.
- 13. I have the following problems with the course (please attach a sheet if required):
  
- 14. I have paid the membership subscription for the years 98 / 99 / 00 / 01 / all (97-01)
- 15. I would like to come for the hands on experience in the month of ..... (Please inform at least 3-4 months in advance for arrangements to be made)

## **RATE YOUR PERFORMANCE YOURSELF**

Compare the correct answers of the previous CME Quiz with yours and rate your performance yourself. Answers to Quiz No. 4, 2000 are given below.

### **Correct answers to the CME (Member of the year) Quiz No. 4, 2000:**

(NOTE: Please encircle the appropriate number or letter, fill in the blanks or describe as required. Then cut along the black line and return by mail. Turn over for the update-questionnaire)

1. Please give short definitions (in a few words) of the following conditions:
  - (a) Levocycloverision: Tilting of both VCA towards left
  - (b) Oculomotor palsy: III CN palsy with ptosis and paralysis of elevation, adduction and depression.
  - (c) Non accommodational ET: ET that is not corrected by spectacles.
  - (d) Infantile strabismus: Strabismus that starts within the first 6 months of life.
  - (e) Occlusion amblyopia: Diminution of vision resulting from prolonged occlusion in non-amblyopic eye.
  
2. Do the pair of names given below convey the same meaning? Encircle the correct answer:
  - (A) Orthotropia / Orthophoria: Yes
  - (B) Structural strabismus/ Restrictive strabismus: Yes
  - (C) Negative vertical divergence / Right hyperdeviation: No
  - (D) Right deorsumvergence / Left sursumvergence: Yes
  - (E) Left sursumvergence / Right hyperdeviation: No
  
3. Are the following statements true? Encircle the correct answer (yes/no):
  - (a) Children not uncommonly suffer from functional visual loss and need psychiatric treatment: Yes
  - (b) Primary visual cortex, area V1 plays a part in the localization of objects in space: Yes
  - © Divergence caused by congenital blindness due to corneal trauma is called Primary Exotropia: No
  - (d) Good stereoaucuity exists in infants younger than 2-3 months: No
  - (e) DVD has got several times the capacity of a regular CD: Yes
  
4. What are the components of congenital fibrosis syndrome:
  - (1) Ptosis and chin elevation
  - (2) Histopathological evidence of fibrosis of EOM
  - (3) Absence of vertical movements with eye fixed in 20-30 degrees depression
  - (4) Little or no horizontal movements
  - (5) Absence of Bell's phenomenon
  
5. Name the complications of surgery for CFEOM:
  - (1) Exposure keratitis, even without overcorrection of ptosis, due to absence of Bell's phenomenon
  - (2) Anterior segment ischemia if more than two horizontal recti are operated upon
  - (3) Consecutive exotropia after free tenotomy of medial rectus muscle
  - (4) Enophthalmic look after too much resection
  - (5) Gross undercorrection if all the old fascial attachments, intermuscular septa and

## **RATE YOUR PERFORMANCE YOURSELF**

Compare the correct answers of the previous CME Quiz with yours and rate your performance yourself. Answers to the Quiz No. 1, 2001 are given below.

### **Correct answers to the CME (Member of the year) Quiz no.1, 2001**

(NOTE: Please encircle the appropriate number or letter, fill in the blanks or describe as required. Then cut along the black line and return by mail. Turn over for the update-questionnaire)

1. Please give short definitions (in a few words) of the following conditions:
  - 1) Retinal rivalry: Alternate suppression of dissimilar images falling on corresponding points of two retinas.
  - 2) Proprioceptive impulses: Impulses carrying information from extraocular muscles to brain about the position of globes.
  - 3) Rapid eye movements: Random fast saccadic eye movements occurring during sleep.
  - 4) Recession: Surgery whereby muscle insertion is detached from its original position & retroplaced to weaken the muscle.
  - 5) Prism diopter: One prism diopter is the angle determined by deviation of 1 cm at 1 meter.
  
2. Do the pair of names given below convey the same meaning? Encircle the correct answer:
  - (A) Restrictive strabismus/Mechanical strabismus: Yes
  - (B) Paralysis/Paresis: No
  - (C) Positive vertical divergence/Right hyperdeviation: Yes
  - (D) Recession /Retropositioning: Yes
  
3. Are the following statements true? Encircle the correct answer (yes/no):
  - (a) Children not uncommonly suffer from functional visual loss and need psychiatric treatment: Yes
  - (b) Primary visual cortex, area V1 plays a part in the localization of objects in space: Yes
  - © Divergence caused by congenital blindness due to corneal trauma is called Primary Exotropia: No
  - (d) Good stereoacuity exists in infants younger than 2-3 months: No
  - (e) DVD has got several times the capacity of a regular CD: Yes
  
4. Name the main groups of cyclovertical deviations according to von Noorden's classification:
  - (1) Nonparalytic cyclovertical deviation
  - (2) Vertical deviation due to mechanical factors
  - (3) Paralytic cyclovertical deviation
  
5. Name the main clinical features of DVD:
  - (1) Each eye deviated upwards when the other eye is fixing.
  - (2) Under cover the updeviated eye makes vertical pendular movements
  - (3) On removing the cover the updeviated eye moves downwards to take up fixation.
  - (4) The degree of updeviation goes on increasing on prolonged cover or dissociation.
  - (5) Under the cover excycloduction of the updeviated eye is common.

## In fond memory

- (1) **Mr. Thomas Keith Lyle**, M.D. Chir., F.R.C.S., F.R.C.P., London, U.K. was, in nineteen fifties, sixties and seventies, a legend in the field of strabismology and related subjects. When I trained under him at the famous Moorfields Eye hospital in 1960-61 he was a consultant eye surgeon and also the director of the Orthoptic and Squint department. The department had become famous because of his expertise and dedication. In addition to the above posts he also held the prestigious post of the Dean of the famous (in those times) Institute of Ophthalmology, London. In those days most doctors used to go to UK for further studies and not to USA as it is now. He inspired umpteen numbers of ophthalmologists to take up the noble mission of preventing amblyopia. When the International Strabismological Association was started in 1966 at Giessen, Germany, he was its found president and Dr. von Noorden of USA the founding secretary. He was a perfect gentleman, a typical Englishman: reserved, simple and unassuming person, a wonderful human being and a missionary to the cause of prevention amblyopia in children. His teaching, working style and surgery were deceptively simple. Good solid knowledge up on one and infiltrated the subconscious before one became aware of it.  
*When we informed him about starting the Institute in 1983, he immediately sent his blessings (good wishes) and extolled me to impress upon the ophthalmologists and the orthoptists to be thorough in their examination of children and to campaign for the early detection and treatment of amblyopia. He advocated great patience and perseverance while investigating and treating a case of strabismus/amblyopia. He told me there was a great need to train more ophthalmologists in this subject.*
- (2) **Dr. Mrs. Kanti Devi Awasthi** was a martyr to the cause of country's freedom from English rule and oppression. She was only 28 yr. old when she died for the country in 1944. She was totally dedicated to the cause and was her husband's better half in every sense of the word.
- (3) **Pandit Jaidayal Awasthi** started his fight for freedom in 1921. His wife joined him in 1930. The British Government imprisoned them repeatedly. Their last imprisonment was in 1942 and they were released in late 1944. His wife was critically ill. She and their youngest daughter died in 1944. He sacrificed not only his huge business also his wife and the youngest daughter for the cause of country's freedom. Later he refused the rewards of service to the country and resigned from congress in the fifties. He even refused a congress ticket for standing in the election membership of parliament.
- (4) **Dr. H.L. Patney** was an eye surgeon par excellence. He was equally good in all specialties of ophthalmology. He had his premedical, undergraduate and postgraduate medical training in UK. He did his house job (residentship) and registrarship in the Royal Eye and Ear Infirmary at Cardiff, Wales, UK. During those years he was the personal assistant of the legendary Sir Tudor Thomas, a pioneer in keratoplasty. He assisted at his private clinic operating patients for keratoplasty, retinal detachment surgery, and plastic surgery. He was also fitting contact lenses and Orthoptics! After staying there for 14 years he came back to India to serve his country and to do that he joined Eye Hospital, Sitapur in 1946. That institution was in the fifties, sixties and seventies the premiere ophthalmic institution in India. When he joined it the hospital was functioning like a camp hospital doing a large amount of cataract, glaucoma and strabismus surgery. He updated its plans.  
An interesting incident in 1942 changed the destiny of Eye Hospital, Sitapur. His highness the Governor of U.P. Englishman, was travelling on the Lucknow-Delhi Road when he saw a large number of people with their eyes bandaged, sleeping on the roadside in Khairabad. The small township is about 5 miles from Sitapur. He asked him to investigate. He was informed that the place was a Government dispensary where the medical officer was doing a large number of cataract operations. He met the M.O., Dr. M.P. Mehrey and promised land for a hospital at Sitapur. The land was given. The hospital was built and it flourished. Top Indian industrialists and the central (and state) cabinet ministers got treatment from there and helped in making it the biggest and the best (in those days) eye hospital in India. Rest is history.  
Alas! The great institution is not the same now but there was a time when people considered treatment at Sitapur Hospital the ultimate help for eyes in India. And to be fair, I have yet to see more comprehensive facilities anywhere else. Its permanent bed strength was for 800 general ward patients (which used to double in winter with extra beds/mattresses put on the floor to accommodate the extra number of cataract patients). When I was there in sixties and early seventies there were 200 private wards, 5 guest-houses for rich patients, a so-called ulcer ward with beds for 150-200 blind, hopeless and infective cases. This ward was our practical research ground as we experimented with several new techniques on willing patients there. In addition, there were an Ocular Pathology department, a first Orthoptic/Squint department, Orthoptic School, Optometry School, a library, the Blind School, an Instrument factory, the upgraded Postgraduate Regional Institute of Ophthalmology, a Carl Zeiss operating microscope, an Electro-retinogram machine, and for several years the first and only functioning photocoagulator in India. The doctors sent there were often sent abroad to learn the latest in various sub-specialties of ophthalmology. Patients were referred all over India and some neighboring countries.

