XXth International Congress of Ophthalmology

Munich, August 1966

Symposium in Giessen, August 9-12, 1966

International Strabismus Symposium

An Evaluation of the Present Status of Orthoptics, Pleoptics and Related Diagnostic and Treatment Regimes

Edited by A. Arruga, Barcelona

With 95 figures and 78 tables

BASEL (Switzerland) S. KARGER NEW YORK

Symposia held in connection with the XXth International Congress of Ophthalmology, Munich, August 14-19, published by S. Karger AG, Basel/New York


Traitement des tumeurs intraoculaires et Progrès de la chirurgie cboriorétinienne / Behandlung intraoculrarer Tumoren und Fortschritte der chorioretinalen Chirurgie ! Treatment


S. Karger AG, Arnold-Böcklin-Strasse 25, CH-4000 Basel 11 (Switzerland)

All rights, including that of translation into foreign languages, reserved. Photomechanic reproduction (photocopy, microcopy) of this book or part of it without special permission of the publishers is prohibited.

©

Copyright 1968 by S. Karger AG, Basel
Printed in Switzerland by Buchdruckerei Koblepp AG, Neuallschwil

Contents

Committee of the International Strabismus Symposium VI
Acknowledgements VII

Official Welcome

Rectoral Address by Prof. Dr. R. Kepp (Giessen) VIII
Welcome by the Lord Mayor of Giessen IX
Opening Remarks of the President Dr. A. JAMPOLSKY (San Francisco) XI

I
Diagnosis, Pathophysiology, and Treatment of Amblyopia

Franceschetti, A., Franceschetti, Albert Th., Hudson-Shaw, Sandra (Geneva): The Social Importance of Amblyopia. The Possibilities of Early Detection 1
ThOMAS, Ch. (Nancy): Differential Diagnosis of the Different Syndromes of Functional Amblyopia 8
AVETISOV, E. S. (Moscow): Methods and Results in Examination of Fixation in Amblyopia 14
CASTANERA, A. (Barcelona): The Aetiology of Strabismic Amblyopia in Relation to the Problem of its Therapy 31

Arruga, A. (Barcelona): Physiopathology of Amblyopia as Basis of its Treatment 33

VON Noorden, G. K. (Baltimore): Classification of Amblyopia 39

François, J., Verriest, G. and Verly-Ten, P. (Ghent): Comparison of the Results of Static and Kinetic Perimetry in the Central Region of the Visual Field of the Amblyopic Eye 45

SATO, O. (Oslo): White and Colour Visual Fields and Scotometry - Possible Difference between Amblyopias of Different Etiology 51

GÖRTZ, H. (Lüdenscheid): Importance of Additional Factors for Indication or Prognosis of Amblyopia Treatment 56

GILLIES, W. E. (Melbourne): The Significance of Nystagmoid Movement in Amblyopia 60


BANGERTER, A. (St. Gallen): Prophylaxis and Therapy of Amblyopia 67

Round Table Session 1 73

Ayberk, N. (Istanbul): Treatment of Amblyopia with and without Foveal Fixation 80

Fletcher, Mary C. (Houston, Texas): Persistent Amblyopia 84

SeVRIN, G. and DE CORTE, H. (Brussels): Surgery for Eccentric Fixation Displacement 89

MORTADA, A. (Cairo): Results of Treatment of Concomitant Squint Amblyopia with Eccentric Fixation by Squint Operation and Occlusion of the Fixing Eye 98

LyLE, T.K. (London): Examples of Binocular Therapy in Cases of Early Amblyopia 104

AWASTHI, SUDHA (Sitapur, India): An Evaluation of Successes and Failures (Indications and Contra-Indications) of Orthoptics and Pleoptics 113

IV Contents

Round Table Session 2 120


The Present Status of Diagnostic Techniques for the Sensory and Motor Defects of Strabismus

WYBAR, K. (London): The Aetiology of Motor Disturbance of Squint 130


Adelstein, FELICITAS and CÜPPERS, C. (Giessen): Analysis of the Motor
Situation in Strabismus 139
AUST, W. and DeTTERMING, W. (Marburg/Lahn): Alteration of the Angle of Anomaly Dependent on the Direction of Gaze 149
VancEA, P. and RATIU, E. (Bucharest): The Utility of Orthoptics in the Diagnosis and the Treatment of Strabismus 158
BAGOLINI, B. (Rome): Diagnostic Errors in the Evaluation of Retinal Correspondence by Various Tests in Squints 163
BROWN, N. W. (New York): Dissociated Vertical Anomalies 175
Raab-Sternberg, ALICE (Budapest): Contribution to the Sensory and Motor Status of Strabismus and to the Choice of Proper Conservative and Surgical Measures 180
ScHILLINGER, R. (Los Angeles): An Evaluation of Objective Methods in the Measurements of Strabismus on the Operating Table versus Pre-Operative Objective and Subjective Methods 186
SCHMIDT-Hofmann-FrIEMEL, Erika (Salzburg): Sources of Errors by Exclusive Use of the Hess Screen 196
Arentsen, J. (Santiago-Chile): Use of Prisms in the Diagnosis of Retinal Correspondence and of the Eye-Hand Relation 204
Round Table Session 3 209
LANG, J. (Zurich): Evaluation in Small Angle Strabismus or Microtropia 219

ROMAINE, H. (New York): An Evaluation of the Significance of the Refractive State both Pre- and Post-Operatively 223
WILCZEK, M. (Krakow): The Examination of Retinal Correspondence by the Method of Projected After-Images 227
Siebeck, R. (Erlangen): Flash-Haploscope 237
PIGASSOU, RENÉE (Toulouse): Examination of Binocular Vision in Polarized Light 240
BREITENMOSER, R. (Zurich): Synoptophore in Space Compared with other Methods 252
PARKS, M. M. (Washington): Stereoacuity as an Indicator of Bifixation 258

Round Table Session 4 261

The Present Status of Orthoptic Treatment Techniques

PASINO, L. and MARAINI, G. (Parma): Some Considerations on the Pathophysiology of Anomalous Correspondence in Relation to its Treatment 284
AURELL, G. (Danderyd): The Treatment of Strabismus in Sweden 289
HAMBURGER, F. A. (Wiener-Neustadt): Suppression and Inhibition in Therapy 294
Hugonnier-Clayettbs, S. (Lyon): Methods of Treatment in Free Space of ARC 297
KNAPP, P. (New York): Surgical Orthoptics 302
HUGONNIER, R. (Lyon): The Influence of the Operative Overcorrection of an Esotropia on Abnormal Retinal Correspondence 307
COOPER, E. L. (Royal Oak, Mich.): Purposeful Overcorrection in Exotropia 311
ASBURY, T. (Cincinnati): The Role of Orthoptics in the Evaluation and Treatment of Intermittent Exotropia 331
BÉRArd, P. V. (Marseilles): Prisms: Their Therapeutic Use in Strabismus 339
Wania, J. H. (Karachi): An Evaluation of Treatment and Management of Squints with Relation to Pakistan 345
CIANCIA, A. O. (Buenos Aires): Practical Implications of the Present Knowledge about Subjective Space in Anomalous Correspondence 347
Round Table Session 5 351
CARBAJAL, U.M. (Manila): Effectives of Orthoptics During the Post-Operative Period 360
CaldEIRA, J. A. F. (São Paulo): An Evaluation of Bifocals and Orthoptics in the Treatment of Esotropia with Abnormal Accommodation-Convergence Ratio 367
CHAMBERLAIN, W. (Cleveland, Ohio): Miotics in the Diagnosis and Treatment of Convergent Strabismus 371
GONZALEZ, C. (San Juan, Puerto Rico): Phospholine Iodide as an Orthoptic Tool 375
LIMÓN DE Brown, Emma (México-City): An Evaluation of Successes and Failures of Orthoptics 384
JONKERS, G. H. (Schiedam): The Criteria of Recovery 388
TSAMPARLAKIS, J. (Athens): The Value of Orthoptics in the Treatment of Paralytic Strabismus 392

Round Table Session 6 396

General Topics of the Theme “An Evaluation of the Present Status of Orthoptics,
Pleoptics and Related Diagnostic and Treatment Regimes

Thomas, Ch. (Nancy) : Report of Working Group II 404
Agundis, T. M. (México): An Evaluation of the Present Status of Medical and Surgical Treatment of Exodeviations (Clinical and Etiological Considerations) 409
PALOMINO Dena, F. (México) : An Evaluation of the Present Status of Medical and Surgical Treatment of Exodeviations 413
FOCOSI, M. (Florence): Considerations on Post-Operative Diplopia 417
MOLNAR, L. (Debrecen): Contribution to the Genesis of Strabismus 426
MOUTINHO, H. and Dos SANTOS, J. (Lisbon): Psycho-Pedagogic Aspects of Observation and Treatment of Strabismic and Amblyopic Patients 431
NAWRATZKI, Ilse (Jerusalem): The Incidence of Post-Operative Diplopia in Older Children (Above the Age of 9) and Adults 435

VI Contents

Schlossman, A. (New York): The Role of Contact Lenses in the Management of Strabismus 441
Talwalkar, V. S. (Bombay): Evaluation of Modern Methods of Diagnosis and Treatment of Squint with Special Reference to Conditions Obtained in India 445
RÉTHY, I. (Budapest): Optical Overcorrection of the Manifest Hyperopia in Cases of Convergent Strabismus 449
Dumavibhat, P. (Bangkok): Orthoptics and Pleoptics in Thailand 455
Round, Table Session 7 456
Subject Index 467
Authors’ Index 474

Committee of the International Strabismus Symposium
Giessen, August 9-12, 1966

Organized by C. CÜPPERS (Giessen)
President of the Symposium: A. Jampolsky (San Francisco, Calif.)
Editor: A. Arruga (Barcelona)

Chairmen of Working Groups:

A. LINKSZ (New York, N.Y.)
T. K. Lyle (London)
C. Thomas (Nancy)

Acknowledgements
The task, beyond my capability, of editing the transactions of the Strabismus Symposium, a honour and a responsibility I owe to our President, made me incur a lot of indebtedness. It is a pleasant debt to gratefully acknowledge, first of all, the participants who facilitated my task by punctually submitting the manuscripts of their lecture at the end of each session. Thereby they acted in perfect consonance with the excellent organisation of the meeting, a model in its preparation, which set a record with respect to scheduled time.

We are especially grateful to Miss Barbara Lee, DBO (T), Chairman of the British Orthoptic Society, and her collaborators, who generously accepted the arduous task of putting into understandable English papers from all latitudes... in many cases a really onerous work. Mrs. Sheila Schweizer’s assistance in correcting the orthography of the original manuscripts was of tremendous help.

In order to reflect as faithfully as possible the flavour of the roundtable discussions, these were transcribed directly from the magnetic tapes. The oral expression may differ considerably from the writing style of the same authors, but it was the wish of the President that the spontaneous diction should be maintained as exactly as possible. Here my task was greatly facilitated by Fräulein Neufeld’s first transcription of the sessions’ tapes. I am also indebted to my excellent orthoptists, Verena Bosshard, for her assistance in the translation of the parts of the discussions presented in German, as well as several original manuscripts in that language and to Anne Marie Delachaux who has shared the task of preparing the indexes.

What shall I say of Professor Cüppers, who flew over from Germany especially to bring me a load of magnetic tapes and assist me in the initiation of their transcription, as if his huge task of arranging all local aspects of the International Symposium, in addition to his uninterrupted tremendous activity in his Clinic, had not been enough?

Finally I wish to express my indebtedness to our publishers Messrs. S. Karger, for their assistance in every possible way. To Miss Jenny Brodbeck, who has succeeded in dealing with the flood of my epistolatory requests, goes my sincere gratitude.

These Proceedings were supported in part by grant No. 5 TI NB 5469-02 from the National Institutes of Health, United States of America.

Barcelona, Winter 1967 A. Arruga

Official Welcome

Rectoral Address
As President of the University of Giessen, I have the honour of welcoming you here on behalf of the Justus-Liebig University. You are within the confines of an old University, dating back to 1607. In modern history the case of the University of Giessen is unique; it was the only German University not to be reopened immediately after World War II. The reopening, first as Justus-Liebig College in 1950 with a medical academy, finally led to the foundation of a full medical faculty in 1957 on the occasion of the 350th anniversary celebrations of the former old Ludwig University. I believe I am equitable in stating that this break did not only manifest itself outwardly but—with all due respect to old traditions—it also resulted in a modern, open-minded outlook within the University. From a purely scientific point of view I can comment on your symposium inasmuch as I myself belong to the medical faculty and as obstetrician and gynaecologist I see many a relationship to your particular problems within the various medical disciplines. It stands to the credit of the Justus-Liebig University that you should hold your symposium within the walls of Giessen, and I am wishing you every success for your congress.

R. Kepp, Chairman of the University of Giessen

Welcome by the Lord Mayor of Giessen

As Lord Mayor of the University town of Giessen it is my privilege to welcome you here today. It is a great honour for the town and the University that you have chosen Giessen for your meeting. Research work in strabismus, your modern branch of science, carried out at the Eye Clinic of Giessen since the end of the war has attained international repute and world-wide recognition under its present director and his collaborators. I see in this the reason for the decision that your congress—which four years ago was held in New Delhi—should take place in Germany in 1966. You assembled, Ladies and Gentlemen, in the district of Giessen, in Grünberg, now in the town of Giessen and, finally, you will attend the International Congress of Ophthalmology in Munich. The fact that scientists of 33 nations are exchanging views on important scientific and social problems not only gives your congress rank and distinction in the field of science, it is also a demonstration of international understanding and a meeting of peaceful co-operation. As scientists you are free of political resentments, independent of national boundaries and ideological influence. The thoughts and the language of science are neutral, they are a link between the people of various countries and have the ethos of humanity. You are a team of outstanding personalities from all continents. My
fellow citizens and I are proud that you should meet here in Giessen and I would like to thank you for it. I do hope that you will have sufficient time to get acquainted with our town and its surroundings, to take with you in your mind a picture to remember. The countryside and the cultural area of Oberhessen have seen manifold and fateful changes in the course of German and European history. It is a territory of Roman-Germanic and prehistoric culture. Giessen has lost most of its historical monuments in World War II; 70% of the town was destroyed by bombs. It has been rebuilt and is now a modern town with the restless rhythm of our time. However, Giessen is not only a town of traffic, commerce and industry but also a centre of culture and, primarily, of research and science. During the years of reconstruction our Justus-Liebig University had, and still has today, the support of the town and the county of Hessen. Here as well the changes are impressive, there is open-mindedness on a world-wide basis and progressiveness in a spirit of democratic recovery. Politics of communities and countries and world politics overlap in all spheres of life and in our age of atomic and space research they have their international repercussions. But amidst all progress

X Official Welcome

and all discoveries, in all disputes and contradictions of intellectual efforts, the focus is on man. You, Ladies and Gentlemen, through your distinguished profession, are dedicated to this service, to serving. Our generally accepted conception of occidental culture has today intercontinental validity and we may see in this reconciliation, peace and human equality. May your symposium be a parable, a documentation thereof. And if later on Professor Franceschetti, the President of the International League against Blindness, opens the meeting, the significance of your scientific and social efforts for the benefit of mankind will manifest itself. May the population at large, as it is your intention, become attentive, through your meeting, to the early treatment of a disorder which you as scientists have recognized and against which you have found a remedy. I trust, Ladies and Gentlemen, that your symposium will result in a fruitful exchange of views. For your future work I am wishing you every success, and for the days in Giessen also a certain amount of enjoyment and relaxation.

Schneider
Lord Mayor of Giessen

Opening Remarks of the President
Distinguished hosts and colleagues! It is a pleasure and a great honour for me to open this International Strabismus Symposium. This is a unique opportunity for specialists in strabismus to advance knowledge in this aspect of ophthalmology. In order to advance our knowledge of strabismus, we must first understand each other's terms and customs, and improve our communication system. It is only when these fundamentals are clear that we will be able to compare, evaluate and judge each other's ideas and works. Accordingly, a program concept for these meetings has been shaped and molded through correspondence and meetings so that, hopefully, there will be a firm purpose and a useful result from this initial symposium. Planning goals were set, extensively altered and modified along the way, with a most co-operative spirit and gracious demonstration of flexibility by all, for which many thanks are due.

Our first goal is to dispel existing confusion regarding strabismus terminology, and to specify the form by which we may more adequately communicate to each other the conditions of a sensory or motor test (mensuration). It would also be helpful to be more accurately aware of similarities and differences in strabismus examination customs as they exist.

The second goal is to sharply focus our attention on one aspect of strabismus management. By papers and discussions, we will evaluate the present status of orthoptics, pleoptics and related diagnostic and treatment regimes. As an approach to the first goal, a Working Group procedure was employed. A Working Group is a continuing working committee concerned with a particular problem area, whose work, by correspondence and meetings, culminates in a report with specific recommendations and conclusions. The mechanics of the symposium necessitated limiting the number of participants of the Working Groups to an optimal number in order to accomplish the tasks.

Three Working Groups have developed preliminary reports during the past many months, which have been presented and discussed during the past few days at Griinberg, Germany. Each Chairman of the three Working Groups will present his revised (and still preliminary) report to you here in Giessen for further discussion and recommendations.

Working Group I, under the chairmanship of colleague Arthur Linksz, was charged with the task of defining the commonly used strabismus terms. The task of finding agreeably useful terms is long overdue, but
it is not too late to begin on a co-operative international basis. This Working Group was also asked to attempt to standardize a communication language relative to mensuration techniques; in other words, to suggest how one may adequately describe how any sensory or motor test is performed, and to point out the significant test conditions that should be mentioned simply in order to tell others how any test is done. It was not the purpose to select any test as being best, good or bad, important or unimportant. Nor was it the purpose to establish the best way to do any specific test. Rather, it was the purpose to suggest how to tell others the conditions of any mensuration technique (sensory or motor test) so that another colleague may fully understand and replicate the method in order to appropriately interpret and judge it.

Working Group II, under the chairmanship of colleague CHARLES Thomas, was charged with the task of letting us be aware of what exists in different parts of the world as customary strabismus sensory or motor examination procedures, which, in the opinion of representative individuals are considered necessary, essential, or adequate, for an evaluative examination of a sensory or motor status. This analytic examination may be for the purpose of diagnosis, re-evaluation at different stages during management, or as an assessment of the final management results. It was not the purpose to decide which is the best sensory or motor examination routine, since it is obvious that each individual’s own sensory or motor evaluative examination is best for him, and it was considered inappropriate to attempt to make comparative judgments at this point. Rather, it was the purpose to make us aware of the similarities and differences in examination routines as they exist, for whatever the judgmental reasons, and to learn directly from selected representative individuals what methods they actually prefer in the sensory or motor evaluative examination. In this way our preconceived and often erroneous notions of what we believe to exist as examination customs in different areas may be clarified simply by direct communication of what actually exists.

It was the task of Working Group II to collate the various preferences in examination routines expressed by selected representative individuals, and discussed by all Working Group members. It is only when we are accurately aware of the similarities and differences, and of the changing trends in examination methods throughout the world, that we may start to compare and judge, and to begin to question why.

Official Welcome XIII
Working Group III, under the chairmanship of colleague T. Keith Lyle, was charged with the task of suggesting a format, or international organizational structure, through which we all might continue the improved communications and discussions.

Now, I must say, that it was not expected that all these problems of fundamental import would immediately be solved by the three Working Groups, but a very significant beginning has been made. The boundaries of these overlapping Working Group problems were shifted as the result of much correspondence, and the focus was sharpened on one or another aspect of the problems. Different stages of development have been attained at the Grunberg Working Group preliminary sessions. Each Group chairman will summarize for you in his own way the voluminous preliminary correspondence and long deliberations, and will present his preliminary recommendations and conclusions. These reports will be open for your suggestions which the Chairmen will include in the final published reports. It is my purpose here to give you only the appropriate background for the Working Group preliminary reports which will be presented.

For the second goal, a program concept has been fashioned which will allow us to sharply focus on just one important aspect of strabismus; ‘An evaluation of the present status of orthoptics, pleoptics, and related diagnostic and treatment regimes.’ The papers have been grouped according to different aspects of this theme for each of the next four days here in Giessen, Germany. A round-table discussion will take place at the end of each morning and each afternoon session. The participants of the round table will be the speakers of the morning or afternoon session. Written questions from all participants and attendees hopefully will clarify points, illuminate problems, and help assess the present status of specific diagnostic and treatment regimes. The questions to be discussed will be selected by the Chairmen of the day and the round-table moderator.

I cannot close these introductory remarks without expressing my personal gratitude and thanks to the several committees who have labored so hard to make these meetings as representative and meaningful as possible. The Advisory and Planning Committee has been of inestimable help in all aspects of the arrangements. The Participant Selection Committees were under the chairmanship of colleagues Curt Cüppers (for Europe and neighboring countries), Harold Whaley Brown (for North, Central and South America), and Ronald Lowe (for Australia, New Zealand and Asia).
XIV Official Welcome

Colleague Alfredo Arruga has full responsibility for the simultaneous translation facilities during the meetings and for publication of the proceedings. The three Working Group Chairmen, colleagues Arthur Linksz, Charles Thomas, and T. Keith Lyle, have given complete dedication to their monumental tasks, and our indebtedness to them is gratefully acknowledged.

Our warm thanks and praise are due to our host, colleague Curt Cüppers and his collaborator Dr. Felicitas Adelstein and their staff, for making these magnificent symposium facilities available to us all. As we begin these sessions, I would like to express the hope that if we start with modest ambitions with regard to attaining our goals, we are more likely to end with successfully improved communications, and enhanced mutual understanding and knowledge. As the task is understandably more difficult in strabismus management than in other branches of ophthalmology, it is all the more necessary.

It is entirely reasonable to hope and expect that the Working Group reports, the papers relative to a specific theme, and the round-table discussions, will give these meetings a special form—a real purpose—and a useful meaning.

Arthur Jampolsky, President
International Strabismus Symposium