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PAKISTAN JOURNAL OF OPHTHALMOLOGY

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Editorial

Say: Are the blind and the seeing man equal, or are the darkness and the light equal?
-Holy Qur'an 13:16

Medical Meetings in Pakistan

Khalid J. Awan, F.P.A.M.S.

Bismillahir Ruhmaanir-Raheem. Nuhmodohoo wa Noosulle ala Rasoolaihil Kareem.

Once the famous Muslim jurist *Imam* Uboo-Haneefah was having a haircut. Noticing a few gray hairs in his locks, the *Imam* instructed the barber to pluck them. "But, sir," cautioned the hairdresser,"when plucked, the grey hair sprout back in a larger number." A playful look swept over the *Imam's* face. "If such be the rule," he smiled, "then pluck the dark ones so that they grow more abundantly." "Why," remarked the local magistrate *Qazee* Shareek when told about this, "Uboo-Haneefah could not even resist employing logic with his own barber." [1]

Of course, only a few may be blessed with the gift of such a sweeping and effortless sway over logic, but most of us would admit that logic and reason are the indispensable tools for constructing an organized life. One area where we desperately need some logic and improved organization is the scheduling of medical meetings in Pakistan.

The Ophthalmological Society of Pakistan (OSP) held its 15th Annual Congress on February 25-27, 1992 in Peshawar, and then the organizers decided to hold the 16th Annual Congress during the same year in November. This odd sheduling made it very difficult for participants from abroad to attend the latter meeting, particularly when the regular December conference of the Lahore Branch of the Society was just three weeks away. Then in last December, the Association of Pakistani Physicians of North America (APPNA) and the Ophthalmological Society of Pakistan had scheduled the inaugural ceremony of their meetings in Lahore on the same day, a frustrating choice for an ophthalmologist from abroad.

Furthermore, those who come from abroad usually have other commitments to fulfill. For instance, on the morning of December 18th, I delivered a lecture at the Lahore "Ophthalmo '92" meeting, and gratefully agreed to chair a session as well. At the conclusion of this session, I had to rush to catch a flight to Multan to participate in the Convocation of the Pakistan Academy of Medical Sciences (PAMS) on the 19th. The Annual Scientific Seminar at the Nishtar Medical College began the following day, where I presented a paper in the morning, and then caught an afternoon flight to Faisalabad to be able to hold a session with the staff and trainees of the Department of Ophthalmology, Punjab Medical College in the morning. After spending a day's gap with my father (Who wondered about his son's sanity.), I headed for Islamabad to particiapte in an anti-smoking seminar which the PAMS had sponsored. Most of the next day, which I had wanted to spend with family and friends, was lost on the airport waiting for the delayed flight to Lahore. By the time I reached Lahore, there was just enough time left to catch the flight to New York. Now, if anyone holds this all as not frenetic, he is in bad need of a *Webster's*.

Wrote Herman Melville[2] : "I am a man who from his youth upward has been filled with a profound conviction that the easiest way of life is the best." The above account of my recent visit to Pakistan can hardly be called "the easiest way." A better and timely coordination in the dates and venues by the organizers of these meetings would have been of great help.

Things have changed in Pakistan. In addition to nearly a score of medical alumni associations, numerous new specialty societies have come into existence, and many more are in the planning stages. Add to this several umbrella organizations and also a few single-cause-oriented bodies. It is natural, and encouraging, that the number of medical meetings in Pakistan has mushroomed in recent years. It perhaps is time now for the creation of a center in Pakistan that would coordinate the dates and venues of all the medical meetings of the following year in a fashion that allows an interested person a less hectic and more productive participation in meetings of his choice.

Another more practical step for the Society would be to decide on a fixed date for its annual congress and request the host chapters to hold their regional annual meetings in combination with the congress. This would eliminate the uncertainty of shifting dates that are picked for the next meeting every year. The good example of this is the combined meeting of the SARC, the OSP, and the Lahore "Ophthalmo" which is being held at Lahore in coming December. This occasion should serve as a tradition for all the future meetings. Our Society is not of an unmanagable size, and hence, such a plan would work excellently.

These weary bones are getting wearier of this hectic and make-up-as-you-go programming. Therefore, a humble appeal is made, in the words of Melville, to the "fellow feeling" of our caring and capable leaders: "With submission, sir, we *all* are getting old." Let's try to put a method in our meeting schedules.

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2. Melville, H: Billy Budd, Sailor, New York, Bantam Books, 1984, pp 95-130.

Camera Clinicals

In this section of THE JOURNAL, *photographic documentation of interesting and challenging observations are persented to the readers. They should make their diagnosis from the given information, and compare their conclusions with the expositions given on page 12. (Any information not given should be assumed as normal.)* -Editor.

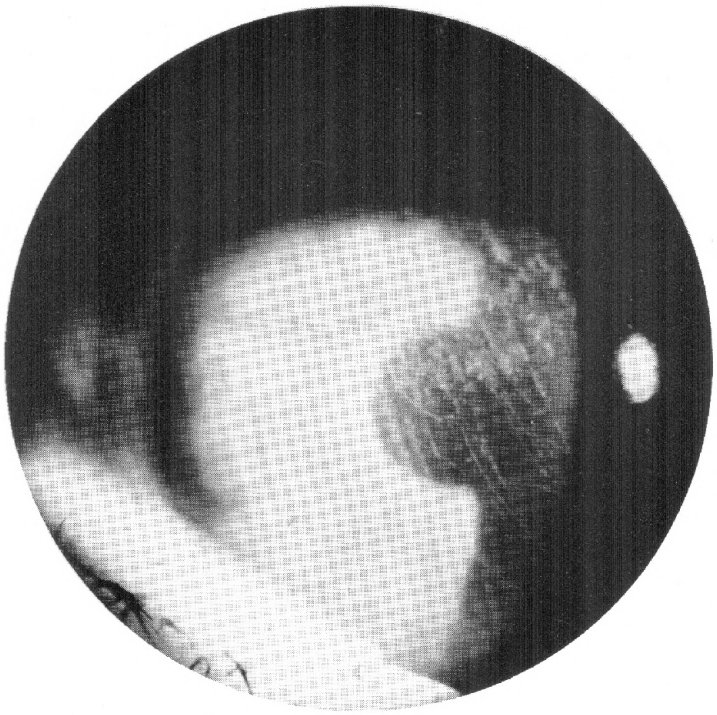

Figure 1

Figure 1: On October 16, 1991, a 72-year-old white woman from the southern Appalachian region of the United States was brought by her son for eye evaluation, because her right eye had been giving her trouble for nearly three weeks. The patient complained of severe pain and watery discharge from the eye. The problem began abruptly with a sensation of something in the eye. After washing the eye with "salt water" did not help, she went to a local family practitioner, who prescribed some kind of eyedrops. When a couple of days of these drops did no good, she decided to apply a home remedy that according to the patient had been used by country folk "for years." She insisted that others had found this remedy to be very effective in removing foreign praticles from the eye, and because her eye felt as if there was something in it, she thought it a good idea to give this folk remedy a try. When this worsened the condition even more, her son decided to bring her to an ophthalmologist in the nearby city.

On examination, the woman appeared to be in acute distress with severe blepharospasm of the right eye. When she opened her eye with great difficulty, a puddle of tears gushed onto her cheek. The eye was angry red, and on slit lamp examination the findings shown in Figure 1 were noticed. Following a proper immediate management, the ophthalmologist prescribed the hourly use of antibiotic drops during waking hours. On first follow-up visit three days later, the cornea had completely cleared and the patient was quite cheerful. Both of her eyes were normal on slit lamp and ophthalmoscopic examinations. Nonetheless, her uncorrected visual acuity, was 20/50 (6/15) in the right eye and 20/40 (6/12) in the left. Because of some residual conjunctival redness in the right eye, refraction was put off till the next follow-up visit. The patient did not keep that appointment, and was never seen again.

Magnesium Levels and Diabetic Retinopathy

Muhammad Shafique, M Phil, Manzoor A. Malik, FCPS,
Muhammad Ashraf, MD, Iqbal A. Khan, MBBS, Misbah-ul-Ain, PhD

ABSTRACT: We measured magnesium levels in 85 diabetic patients with diabetic retinopathy. Compared with controls, these patients showed a significant decrease in plasma magnesium level (P<0.02) and an increase in urinary magnesium level (P<0.05). This tendency was most significant in the sub-group of poorly controlled diabetics, whose fasting plasma glucose was above 250 mg/dl. Reduced levels of magnesium in plasma and in erythrocytes were found to be more pronounced in patients with proliferative diabetic retinopathy than in those with no retinopathy or with background retinopathy only. (Pakistan Journal of Ophthalmology 9:3-5, January, 1993)

Magnesium (Mg) is a major extracellular and intracellular cation, and its presence is required as a cofactor for numerous enzyme reactions as well as neuromuscular stability.[1] A decreased serum concentration of magnesium has been recognized in patients with diabetes mellitus during recovery from ketoacidosis,[2] during maintenance insulin therapy in hospital,[3] and also during daily life when they are studied as outpatients.[4] Hypomagnesemia has also been reported in patients with diabetic retinopathy.[5]

It is well known that the serum magnesium does not accurately reflect the true state of the total body magnesium. In the present study, we determined magnesium levels in plasma, erythrocyte, and urine in patients with diabetes mellitus. These levels were than investigated to determine their relationship to the type and severity of diabetic retinopathy.

Patients and Methods

We included 85 diabetic patients, ranging in age from 20 to 70 year (mean age, 46.5 years), from outdoor and indoor units of the Department of Ophthalmology, B.V. Hospital, Bahawalpur. After a thorough eye examination, these patients were divided into three groups on the basis of retinal findings:

1. Group I: diabetics with normal fundi: 46 patients
2. Group II: diabetics with background retinopathy only: 27 patients
3. Group III: diabetics with proliferative retinopathy: 12 patients

From the Department of Biochemistry, Quaid-e-Azam Medical College, Bahawalpur.
Reprint requests to Dr. Mohammad Shafique, MBBS, M, Phil (Pb.), Chairman, Department of Biochemistry, Quaid-i-Azam Medical College, Bahawalpur, Pakistan.

None of the patients had significant renal or liver damage, and also none had taken any drugs that are known to influence magnesium metabolism. Those patients who had malabsorption or diarrheal conditions were also excluded from the study. The control group consisted of 25 healthy subjects ranging from 22 - 68 years in age (mean age, 44.8 years). The age, weight and blood pressure were recorded, and 24-hour urine was collected in each patient. Blood samples were collected in heparinized tubes after an overnight fast. Lysed blood samples for erythrocyte measurement were prepared by adding 3 ml of deionized water to 2 ml of blood. Five ml of 0.75% EDTA was then added to 0.2 ml of this mixture. After standing for 30 minutes, the solution was contrifuged and a supernatant was used for assay:[6]

I. Magnesium concentrations were measured by PYE-UNICAM SP-9 atomic absorption spectrophotometer.
II. Plasma glucose levels were estimated by routine glucose oxidize method.
III. Erythrocyte magnesium concentration was calculated from plasma and whole blood concentrations, using formula of Fujii, Takemura, Wade, Akai, and Okuda.[7]
IV. Statistical analysis was carried out of applying the Student's t-test.

Results

Table I indicates the general characteristics and overall magnesium levels in subjects studied. The mean values of age, weight and blood pressures were almost similar between patients and controls. Magnesium levels in erythrocytes were also non-

Table 1

Over all general clinical data of patients and controls. Values are presented as mean ± s.d.

Parameter	Diabetic patients	Control subjects
Number	85	25
Age (Years)	46.5 ± 10.7	44.8 ± 9.6
Weight (Kg)	67 ± 12	66 ± 13
B.P. (mmhg)	128 ± 19 / 77 ± 14	125 ± 17 / 78 ± 11
Glucose (mg/dl)	166.5 ± 34.5***	94.2 ± 15.8
Plasma Mg (mEq/L)	1.58 ± 0.02**	1.65 ± 0.12
Urine Mg (mEq/day)	5.48 ± 1.84	4.01 ± 1.25
Erythrocyte Mg (mEq/L)	4.77 ± 0.38	4.93 ± 0.81

The difference is significant statistically, P<0.05, P**<0.02 and P***<0.001 as compared to controls.

Table 2

The relationship between magnesium levels and the glycemic state in diabetic patients.
The values are shown as mean +s.d. (FPG = Fasting plasma glucose.)

Mg/dl	Cases	Plasma (mEq/L)	Erythrocyte (mEq/L)	Urine (mEq/day)
FPG < 150	23	1.63 ± 0.02^a	4.90 ± 0.54	4.48 ± 2.41^b
FPG 150-200	33	1.61 ± 0.03	4.64 ± 0.55	4.01 ± 2.24
FPG 201-250	20	1.57 ± 0.02	4.96 ± 0.52	4.84 ± 0.94
FPG > 251	9	1.54 ± 0.03^a	4.57 ± 0.63	8.01 ± 2.73^b

The difference is significant, $^aP<0.02$, $^bP<0.05$

Table 3

The relationship between magnesium levels and the degree to diabetic retinopathy in diabetes.
The values are represented as mean + s.d. (FPG = Fasting plasma glucose)

Patients	FPG (mg/dl)	Plasma (mEq/L)	Erythrocyte (mEq/L)	Urine (mEq/day)
Group I (46)	168.1 ± 33.2	1.61 ± 0.02^a	4.78 ± 0.32^b	5.09 ± 1.7^c
Group II (27)	159.4 ± 32.9	1.61 ± 0.03	4.78 ± 0.48	4.76 ± 1.96
Group III (12)	172.0 ± 37.4	1.53 ± 0.02^a	4.63 ± 0.35^b	6.60 ± 1.84^c

The difference is significant, $^aP<0.02$, $^{b,c}P<0.05$ statistically

significant, but they were significantly decreased in plasma ($P<0.02$) and increased in urine ($P<0.05$), Table 1. The tendency toward reduced plasma magnesium and increased urinary magnesium excretion was most significant in a subgroup of poorly controlled diabetics, whose fasting plasma glucose (FPG) was above 250 mg/dl (Table 2).

Table 3 indicates the relationship between magnesium levels and the degree of diabetic retinopathy in different groups of patients with diabetes mellitus. The mean values of plasma magnesium and erythrocyte magnesium were significantly lower ($P<0.02$ and $P<0.05$, respectively) in patients with proliferative retinopathy (Group III) than in patients with normal fundi (Group I). The urinary magnesium excretion/day was significantly increased in patients in Group III ($P<0.05$) as compared to those in Group I.

Discussion

The present study demonstrates that hypomagnesemia and hypermagnisiuria which occur in diabetes, depend upon the diabetic control state of the patients. Although the precise mechanism of diabetic hypomagnesaemia still remains unknown, our study indicates that increased urinary loss of magnesium by osmotic diuresis may mainly contribute to diabetic hypomagnesaemia. Clinically significant is that a low erythrocyte magnesium content was observed in clinical situations associated with magnesium depletion.[8] It has been suggested that lesser degrees of magnesium deficiency if prolonged can cause atherogenesis and hypercoagulability.[9]

We found that reduced magnesium levels in plasma and erythrocyte were most pronounced in diabetic patients with proliferative retinopathy, though their plasma glucose levels were maintained at the same level as those of the patients with no retinopathy or with only background diabetic retinopathy (Table 3). Although we have no convincing evidence of concurrent magnesium depletion in other tissues of these patients, the present study suggests that the total body magnesium may be significantly depleted in some diabetics, especially those with advanced retinopathy. Magnesium levels may have some effect on the development or progression of diabetic retinopathy in correlation with other risk factors. Further studies to elucidate the presence or absence of such a relationship are currently in progress.

Acknowledgements

We thank Mr. Shafi Ahmed for much practical help, Mr. Sajjad Hussain for statistical assistance, Dr. Usman Ghani for kind cooperation and Dr. Nazir A. Aasi, Professor of Ophthalmology for invaluable advice and criticism.

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★★★★★

Ophthalmic "Pastpourri"

Eye Makeup and the Meccans

Wrote the "the greateast traveler of premodern times," Abu Abdoollah ibn Battoota in 1326 A.D. (*726 Hijree*): "The Meccans are elegant and clean in their dress, and as they mostly wear white their garments always appear spotless and snowy. They use perfume freely, **paint their eyes with kuhl**, and are constantly (brushing) their teeth with slips of green arak-wood. The Meccan women are of rare and surpassing beauty, pious, and chaste."

Dunn, RE: The Adventures of Ibn Battuta. A Muslim Traveler of the 14th Century. Berkley, University of California Press, p 75.

3. The size of the sheets should be 8 1/2 x 11 inch, and only white paper should be used.

4. A running abridged title, the last names of the authors, and the page number must appear on the upper right hand corner of all the pages.

5. A margin of at least one inch must be left on all four sides.

Division of the Contents

The contents of the paper should be divided into different sections in the following order, and the manuscript paginated in the same sequence:

1. Title Page
2. Abstract
3. Text
4. Acknowledgements
5. References
6. Tables
7. Key Words
8. Legends for the Figures

"Title Page"

The title page is always numbered as the page one of a manuscript. It carries the following items on it:

(i) The complete title and the subtitles, if there are any, of the paper,

(ii) the complete names of the authors and their respective institutions,

(iii) the name and location of the primary institution from where the paper originated,

(iv) the name and address of the author who should be contacted for any inquiries and from whom the reprints should be requested.

(v) the meeting or conference where the paper was presented, if such be the case, and

(vi) the name of the organization which provided the funds for the project.

"Abstract" ("Summary")

To capsulize the text into an effective and substantive abstract is undoubtedly one of the more important basic requirements of writing a noteworthy scientific article. The abstract of a professional paper should be able to stand as a concise and direct statement of the research project's purpose, procedures, and conclusions. In an abstract, the author should place emphasis on the salient features of the paper. The author should avoid all statements that are of secondary importance and not directly related to the primary plans and data discussed in the text. He should include only those elements in the summary that are absolutely essential to the points he is trying to convey. The abstract should include no generalized or ambiguous statements, but should be the abridgement of information discussed in the full text of paper. In modern scientific writing, active voice is preferred over the outmoded passive voice. Hence, passive voice expressions like, "Nine cases were studied," should be avoided, and the active voice "We studied nine cases," should be used instead. The author should not use hackneyed and ambiguous statements, such as "The results are discussed," but should instead give definite information, such as "Ten patients had iritis, six had glaucoma, and 84 were free from ocular disease", etc.

Medical writing has passed through many stages over the years. The summaries of articles in the older issues of even the leading journals left much to be desired when judged by modern standards. They would be rejected outright today by the same journals which originally published them. For example, here is an actual summary of a paper titled "Pseudostrabismus with Heterotopia of the Macula," which appeared over 30 years ago in an ophthalmology journal that is most highly regarded today:

> **"The literature on heterotopia of the macula has been reviewed and eight additional cases have been presented. Several theories as to the etiology of this condition have been discussed. Clinical features and their application to the management of heterotopic maculae have been discussed."[1]**

It is hard to believe this summary was written by the authors from one of the most prestigious professional institutions of the United States.

To be frank, the authors might as well have said, "We describe eight new cases of the heterotopia of the macula" and left it at that, because the rest of the summary gives no actual information about the contents of their paper. Moreover, the passive voice of this writing has rendered it less confident in tone and cumbersome to read. It is interesting that even the very experienced editors of the past did not object to this style of summary. To make the above summary more useful and more conducive to reading, the authors of today would probably write it as follows:

> **"We describe eight new and review 17 previously reported cases of heterotopia of the macula. Retinopathy of prematurity, chorioretinitis, trauma, operative procedures, and congenital anomalies are its usual etiologies. Amblyopia in these eyes is usually refractory to therapy. The eyes with heterotopia of the macula and an actual strabismus demand careful modifications in and respond poorly to standard surgical procedures to correct deviation. "**

This summary is not any lengthier but is more direct and more informative. It gives a much clearer idea of the original material contained in the paper and

the conclusions the authors drew from their study. Now, if the reader wishes to find out complete details of the study, some specific information about the cases reported therein, or how the authors came to their conclusions, he can devote time to a reading of the full text. This summary is also helpful in indexing and cataloging the information contained in the article. However, some journals may require that the author himself supply a few "Key Words" for this purpose.

To achieve best results, the first draft of an abstract should be put aside for a few days, then revised and rewritten. Sometimes, an author might have to revise the summary four, five, or even more times to get it just right. The abstract should be limited to a maximum of 250 words, or to the length specified by the periodical in which the paper is to appear. A longer abstract may become necessary under certain conditions, but the approval of the editor to do so should be sought .

In modern medical publishing, another type of summary, called a "Structured Abstract," is gaining popularity. A structured abstract is a sort of "mini-article" that concisely gives the actual purpose, particulars, and conclusions of a study or a report. This concept has now evolved to a stage where many leading medical journals insist that the authors of manuscripts that are reports of original data, reviews, or meta-analyses must prepare summaries on the principle of structured abstract. In this style of summary, the contents of an abstract may be divided into (e.g. in *New England Journal of Medicine, Ophthalmology, the Journal of the American Academy of Ophthalmology, etc.*):

1. Background, 2. Methods, 3. Results, and 4. Conclusions, or into (e.g. in *JAMA, the Journal of the American Medical Association, etc.*):

1. Objective, 2. Design, 3. Setting, 4. Patients or Other Participants, 5. Intervention(s), 6. Main Outcome Measure(s), 7. Results, and 8. Conclusions.

Under these subheadings, each section of the body of paper is reduced to a few succinct statements that impart a more definite information to the reader. A "structured abstract" of the above summary would look somewhat like this:

> ***Background.*** **We sought to determine the causes, features, and treatment of heterotopia of the macula, a heretofore infrequently reported ocular disorder.**
>
> ***Methods.*** **We reviewed all the previously reported 17 cases and studied eight of our own cases, varying in age from 4 to 11 years, of heterotopia of the macula.**
>
> ***Results.*** **Eleven patients had retinopathy of prematurity, nine had chorioretinitis, two had congenital anomaly, two had non-specific ocular inflammation, and one had trauma. All except one had strabismus. Only one of our eight cases did not have amblyopia.**
>
> ***Conclusions.*** **Retinopathy of prematurity is the most common cause of heterotopia of macula. The patients usually have an untreatable amblyopia, and the operations for strabismus in them may not be successful.**

This style is productive in that it helps the reader get a fair idea of the key concepts and findings of a report without spending more time than he is willing to spare. Conversely, reading this abstract might arouse the reader's interest enough to make him willing to spend the time needed to peruse the whole text. This style of summarizing is also effective because it allows a busy physician to devote at least some attention to most of the articles in a particular journal, giving him some familiarity, if not mastery, of the current topics.

The Text

The body of the text should be arranged in the following successive sections:

1. Introduction
2. Materials and Methods
3. Results
4. Discussion (or Comments)
5. Conclusions (or Recommendations)

"Introduction"

The purpose of the paper and its necessity should be stated in one or two introductory paragraphs, which need not be titled with the word "Introduction." A few sentences about the historical background of the subject being presented are also appropriate, but major arguments and citations should be left for the "Discussion" section. Brevity is the key here.

"Materials and Methods"

The next section should be titled "Materials and Methods," or "Case Reports," whichever is more relevant. In this section all the numbers, dates, periods of time, etc. should be clearly stated. The details of methods and techniques employed should be given in such a way and with such detail that others could duplicate the study presented in the paper. No information or step should be left out simply because the author regards it too trivial or too obvious. A justification for the choice of certain laboratory techniques and statistical methods is also necessary. Both the commercial and the generic names of drugs, etc. and the name and address of the manufacturer of any special instrument or equipment used should also be given. The complete biological names of the microorganisms involved and of the animals used in experiments should be furnished. Ethical considerations and criteria for the selection of humans need to be clearly stated here.

"Results"

The data accumulated during a study and outcomes of tests performed make up the next section, titled "Results." The author should be careful in giving only the actual data and facts drawn from his study, and should not add any comments from other publications or authors. All mathematical figures must conform to the same style: for example, if both number and percentage are used for one entry, this should be the case with all the figures, etc. The figures and percentages must be repeatedly checked for accuracy before mailing the manuscript. This is more important in the case of tables, because mistakes creep into them unnoticeably.

"Discussion" ("Comments")

The results section is followed by "Discussion" or "Comments." Here the author gives his arguments in favor of his own conclusions or against the observations of others. All the opinions must be supported or rejected by providing specific references from the literature or by giving the actual figures from the study the author is reporting. The opinions and views that are not accompanied by scientifically acceptable substantiation should not be included. In this section, the author also compares his results with the results of previously published works, giving arguments why his results concur or do not agree with the results of others. He may also use this section to present and explain his recommendations. An author must never assume that the reader may be already familiar with this and that; every point the author makes must have clear explanation, no matter how simple that point appears to the writer himself.

"Conclusions" ("Recommendations")

In some situations, a separate section on recommendations or conclusions may be added at the end of the text. It should contain definite and direct statements without any confusing qualifying comments. However, one may make brief comments about any exceptions or specific requirements related to the his conclusions or recommendations.

"Acknowledgements"

This section usually appears following the section on "Discussion." Thanks to the individuals who have given guidance, referred patients, have loaned material, and so on, but who have not directly participated in the study, may be expressed in this section. Brevity and justified deservedness are the essence of an acknowledgement. In scientific papers, secretarial assistance, typing of a manuscript, etc. usually are not mentioned in acknowledgements.

References

A sufficient number of references to the previously published works on the subject of the paper should be included. References should be consecutively cited in the body of the paper, and listed at the end in the same order as they appear in the text. Each listed reference must give full title of the paper or book, including all the subtitles. It is best to include the names of all the authors of the cited article. The style below should be followed in typing the cited references:

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Awan, KJ: Intrascleral enucleation. A new surgical technique. Arch Ophthalmol 95:2041, 1977. (The alternative style is, Arch Ophthalmol 1977; 95:2041-2043.)

2. Multiple authors:

Khan, MD, Islam, Z, Nawaz, K, Islam, Z, and Khan, MA: Perforating eye injuries caused by disposable syringes. Pak J Ophthalmol 6:97, 1990. (or 1990;6:97-99.)

For books:

1. Single-volume book:

Newell, FW: Ophthalmology: Principles and Concepts. 6th ed., St. Louis, The C.V. Mosby Company, 1986, p 73.

2. Multiple-volume book:

Duke-Elder, S, and Leigh, AG: Diseases of the Outer Eye. Cornea and Sclera. In Duke-Elder, S (ed): System of Ophthalmology, vol. 8 pt. 2. St. Louis, The C.V. Mosby Company, 1965, pp 110-114.

Accuracy in the spellings of names, title of article, name of the journal or the book, year of publication, volume number, and page numbers in each reference is of critical importance, and it must be double-checked before mailing the manuscript. In the case of books, the number of the edition, the publisher's name and the name of the city where the publisher is located must also be given. Any mistakes in these may cause difficulty for the reviewers of the manuscript in locating the references. This may result in delayed response from the editors, return of the manuscript for revision, or even lead to a rejection of the paper. To illustrate these points, the following is an actual example from a manuscript that was submmited to THE JOURNAL. If this reference had been published as submitted, it would have not only destroyed the credibility of the authors but also compromised the reputation of THE JOURNAL: (Note the underlined *nine* corrections.)

Actual specimen:

4. Naidoff, MA, Bernadine VB, Clarck, WH Jr. Melanotic lesion of the Eye lid. Am. J. Ophthalmol 1976; 81: 371-382.

Corrected version:

4. Naidoff, MA, Bernardino, VB, Jr, Clark, WH, Jr: Melanocytic lesions of the eyelid skin. Am J Ophthalmol 82:371-382, 1976. (or 1976;82:371-382.)

"Figures" ("Illustrations")

The figures should be numbered in order of their appearance in the text. The legends for the figures should be typed double-spaced on a separate sheet and should not be pasted on the back of the photographs. Each figure should only have (i) figure number, (ii) names of the authors, and (iii) an arrow indicating the top on its back. Legends for the figures should include the figure number, the last names of the authors, location and names of structures shown, kind of stain, magnification, etc. Example:

> **Figure 1 (Khan, Chaudhary, and Sheikh).** Right eye. Histologic section of the tumor of the conjunctiva. (hematoxylin and eosin, x400).

The size of a submitted figure or illustration should be such that it can be easily reproduced in the journal of the authors' choice. Too large a figure will add the cost of reduction for printing, and too small a figure may not clearly show its salient features on printing. The symbols or pointers, such as arrows, should be carefully placed on photomicrographs or other illustrations in which there is a lack of clarity or when the material is too esoteric for an average reader. The previously published material and figures included in the paper should be accompanied with a written permission for reproduction from the original publication and the original author. Photographs with recognizable faces should be used only with explicit permission from the subject of the photograph or his parents. Written, signed permission of the subject should accompany such photographs. (The blackening of the eyes in a photograph is not sufficient.) It is preferable to have black and white photographs with a glossy finish. It is advisable that original transparencies are also enclosed with the color prints, because reproduction from the transparencies is of much higher quality. The color reproduction is very costly for the scientific journals, and the publishers in most instances will print color illustrations only if the authors pay the cost.

Revision

Once the first draft of a manuscript is finished, the author should set it aside for a few days, and then carefully read the typescript to make sure that all the information in it is correct and that this information is presented in proper sequence. Mathematical figures, references, tables, and illustrations should receive special attention. Double-, even triple-check, these items. The contents of every table must correspond correctly with text and other tables. The illustrations should be checked for proper citation in the text and the accurate placing of explanatory symbols (arrows, etc.) on them. Check and re-read the original text of all references to confirm that they have been correctly cited. Their numbers in the text should match with their serial numbers in the reference list. The titles, names of the authors, names of the journals or books, volume numbers, years of publication, and page numbers must be double-checked for accuracy and completeness. During the reading of typescript for accuracy of data, any grammatical errors should also be marked. The second draft should be read again to improve the final copy.

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(i) A transmittal letter to the editor giving the most plausible reasons why the author wrote that particular paper and why he chose that particular journal for the publication of his article. The letter should conclude with a statement about the total number of pages in the manuscript (including the pages for figure legends, references, and tables, etc.), the number of tables, and the number of figures. In the case of figures, a clear statement should be made about the number of figures in color and the number of figures in black and white.

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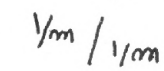
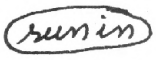
Galley Proof

When the author receives the prepublication printer's galley proof of his accepted paper, he must carefully go over it for any omissions or errors in content, numbers, spellings, figure orientation, address for correspondence, references, etc. The corrections should be carefully marked on the margin and double checked before mailing back the proof within 48 hours. The next two pages of this paper contain and illustrate the use of more common proofreader's marks.

Reference

1. Rados, WT, and Scholz, RO: Pseudostrabismus with heterotopia of the macula. Am J Ophthalmol 45:683-691, 1958.

Instruction	Mark in Margin	Mark in Type	Corrected Type
Delete		the ~~vital~~ organ	the organ
Insert indicated material		the ^ organ	the vital organ
Let it stand		the ~~vital~~ organ	the vital organ
Make capital		the principal	the Prinicipal
Make lower case		The Orbit	the orbit
Set in italic type		the iris is blue	the iris is *blue*
Set in roman type		the iris is *blue*	the iris is blue
Set in boldface type		the entry site	the entry **site**
Set in lightface type		the entry site	the entry site
Transpose		the heart weak	the weak heart
Close up space		the sple en	the spleen
Delete and close up space		the blood	the blood
Insert: space		the left eye	the left eye
period		The patient died ^	The patient died.
comma		iris ^ lens, cornea	iris, lens, cornea
apostrophe		the eyes pupil	the eye's pupil
quotation marks		had sharp pain	had "sharp" pain
parentheses		The graft second ^ also failed. ^	The graft (second) also failed.
hyphen		word ^ for ^ word test	word-for-word test
em dash		The chart ^ how high its cost ^ belongs in every ^ home.	The chart–how high its cost–belongs in every home.
superior type		by Khan and Awan 2	by Khan and Awan^2
inferior type		H_2O	H_2O
Start paragraph		The bleeding stopped. ^ Other blood diseases...	Thebleedingstopped. Other blood diseases...
Run in		The cataract is not removed. However, glaucoma is treated from the start.	The cataract is not removed. However, glaucoma is treated from the start.
Move left		[the liver	the liver
Move right		the liver]	the liver
Align		the liver the liver the liver	the liver the liver the liver
Broken or smudgy type		hepatitis	hepatitis
Spell out		7 patients	seven patients

Proofreader's Marks

Their Placing in the Margin and the Insertion of Corresponding Marks within the Galley Proof*

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***The passage below is from an article that appeared in the *Japanese Journal of Ophthalmology* (35:428-434, 1991). The errors in it were created intentionally to demonstrate the placing of proofreader's marks in the margin and within the text.**

Familial primary angle-closure glaucoma is ~~is~~ a distinct entity[11], and families with primary orbital hypertelorism have been reported.[28] Narrow glaucoma usually occurs by autosomal dominant transmission and hypertelorism is usually an autosomal recessive disorder; nonetheless, some cases of recessive transmission of narrow angle glaucoma and dominant cases of hypertelorism are on record.[8,10] There was definite family history of this syndrome in two of awan's patients, and our two cases also indicate familial involvement, at least by history. Whether heredity has any definite role in the occurrence of the association of these two entities is difficult to say at this stage. In a detailed study of orbital hypertelorism in man and other mammals, Friede[12] concluded that hyper-telorism predisposes to or may be connected with microphthalmia and microcornea with hyperopia. It is wellknown that these entities are also linked with shallow anterior chamber and closed-angle glaucoma. This hypothesis of Friede, a frequency relatively high of the occurrence of cases with the association of a rare condition like primary orbital hypertelorism and angle-closure glaucoma (7 cases in almost a decade[3], including this report), a certain degree of familial tendency, and the fact that several factors other than the depth of angle in the anterior chamber play a role in the etiology of angle-closure glaucoma,[16] support the view that the relationship between hypertelorism, closed-angle glaucoma lean physique and emotional instability is more than a casual one in Awan's syndrome. The role of heredity in the association of these abnormalities is not yet clear. The patients with asymptomatic optic disc cupping and hypertelorism should undergo careful gonioscopy to rule our Awan's syndrome.[3]

The quiet but relentless nature of chronic angle-closed glaucoma

Figure 1

Flaxseeds for the Ocular Foreign Bodies

Khalid J. Awan, F.P.A.M.S.

ABSTRACT: A 72-year-old North American white woman placed a flaxseed under the upper lid of her right eye, in the hope that it would remove the foreign body that she thought was in her eye. It is interesting that this unusual folk remedy is considered an affective therapy for corneal and conjunctival foreign bodies by some rural inhabitants of the Appalachian region of the United States. The flaxseed caused extensive scratches of the cornea, the pain and photophobia from which incapacitated the patient. An intensive treatment with topical antibiotics and cycloplegia cured the patient in a few days. She agreed that she would not employ this therapy in her own or anyone else's eye again. (Pakistan Journal of Ophthalmology 9:2,14, January, 1993.)

Figure 1 is a photobiomicrograph of the right eye, and shows extensive slanting vertical scratches of the cornea. Such scratches, usually running from upper temporal cornea to lower nasal cornea, are a telltale sign of a foreign body that is lodged in the conjunctiva of the upper eyelid.

This patient had developed foreign body sensation in her right eye, perhaps due to a simple conjunctivitis. In the Appalachian region of the United States people resort to assorted traditional remedies. One of the folk therapies for the spontaneous extrusion of a corneal or conjunctival foreign body is the placement of a flaxseed under the upper eyelid and then gently rubbing the shut eye. The patient reported here attributed her gritty feeling from conjunctivitis to a foreign body that she thought might have flown into the eye. However, no such foreign body was found in the eye, only the flaxseed that appeared to have become entangled in the reaction under the upper eyelid. This flaxseed caused repeated scratches on the cornea with blinking of the eye. This was my third case of the use of this unusual method for the removal of a presumed foreign body in the eye in over ten years. I was left in utter disbelief when I encountered the first case. This case, however, aroused only a feeling of perplexity.

Flaxseed, or linseed, is a shiny, flattened, and about 3-4x2-3x0.5 mm in size seed of a small plant called *Linum usitatissimum* of Family *Linaceae*.[1,2]

The plant is cultivated mostly in the United States, Canada, Central Asia, Argentina, and Indo-Pakistan, where it is known as *Alsi* (Hindi) or *Tukhm-e-Katan* (Persian). Flax is grown to extract linseed oil from its seeds and in some countries to produce flax fiber. In some areas, e.g. Pakistan, the residue or oil cake left after the oil has been compressed from the seeds is utilized as a quality feed for livestock.[2]

The plant has at least two hundred species, but *Linum usitatissimum* "has been cultivated for thousands of years for its economic value as the source of fine lenin." This flax lenin has been found to be the material of shrouds of mummified pharoahs that were found in tombs older than four thousand years. Flax lenin remained the most popular until cotton and synthetic fibers overshadowed this popularity.[1]

However, the use of flaxseed in the eye is most unusual indeed. Perhaps the flattened shape, extremely smooth surface, and the appropriateness of size started the idea. When placed in the eye, the seed naturally causes profuse tearing, which in some cases may wash away the very superficial foreign bodies. This may have perpetuated the myth that flaxseed somehow magically extracts the foreign body out of the eye. That the use of this unusual therapy, if it can be at all called a therapy, has persisted into this modern age in the scientifically most advanced country of the world is what it most astonishing.

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Cataract Backlog Free Zone in India: A Pilot Project in Datia District

S. R. K. Malik, T. K. Parthasarathy, D. N. Chaudhri

ABSTRACT: To evaluate its efficacy in treating mass cataract blindness, the concept of "cataract free zone" was put into practice in India's Datia district that has a population of 372,454. The completed Datia plan has shown that with a proper political, administrative, and professional backing it is possible to make a given geographical area with a population of upto 400,000 cataract free in a time-bound program of three to four months. (Pakistan Journal of Ophthalmology 9:15-19, January, 1993.)

Out of 30 million blind persons the world over, 17 million are blind from cataract, a condition curable by surgery and "this number will grow to between 40 to 42 million by the year 2010."

In 1976, when the National Programme for the Control of Blindness (NPCB) was launched, Govt. of India took into account the magnitude of blindness at 9 million and visually handicapped at 45 million which was based on the survey in 1971-73 by the Indian Council of Medical Research at seven centers covering a population of 0.35 million representing 0.06 percent of the total population of 548 million (1971 census). The blind comprised 1.4 percent of the total population. The criterion set by this study for blindness was visual acuity of less than 6/60 with both eyes open. The recent WHO/NPCB study (198-88) with the criteria of blindness as visual acuity of 6/60 or less in better eye places the number of blind at 11.92 million. This was projected on a population of 800 million and the percentage of blindness is 1.49. The study was carried out in 129 districts covering 1100 villages/ urban area blocks selected randomly. The sample covered was 3.1 lakh persons. Comparative results of the studies are given in Table 1.

The important causes of blindness found in 1971 study are compared with the changing pattern of causes as found in 1988 study by WHO/NPCB and given in Table II.

The blindness problem assumes greater significance because of many reasons - acute shortage of trained ophthalmologists, rural/ urban imbalance of the availablility of services, lack of awareness about the services available (this is particularly among rural people), superstition and wrong beliefs about cataract blindness, illiteracy and lack of correct knowledge on how to take care of eyes and protect them against blindness.

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Table 1
Prevalence of blindness in India
(VA: Better eye less than 6/60)

Study	Projected population	Total blind	%
ICMR Study 1971-73	640 million (1975)	9 million	1.4 %
WHO-NPCB Study 1986-88	800 million	11.92 million	1..49 %

Table 2
Changing pattern of causes of blindness

Serial number	Causes	ICMR Study (1971-74) %	WHO-NPCB (1986-88) %
1	Cataract	55	81
2	Malnutrition Vit. A def.	2	0.04
3	Trachoma	5	0.2
4	Glaucoma	0.5	2
5	Small pox	3	NIL
6	Injuries	1.5	NA
7	Corneal opacity	NA	3
8	Refractive errors	NA	7
9	Other infections	15	NA
10	Other causes	18	7

To clear the five million cataract blindness backlog that was estimated to exist then, a target-oriented cataract operations programme was launched by Government of India under the National Programme for the Control of Blindness (NPCB) setting target of 1.3 to 1.5 million cataract operations per year. In actual practice, the achievements have varied between 1.2 to 1.3 million. During the last eight years, about 8 million operations have been performed. But with the existing inputs and resources, the annual performance

appears to have reached a plateau of 1.1 to 1.2 million operations (Table 3).

The recently concluded study on cataract prevalance in 15 centers in the rural areas on all persons above the age of 40 revealed 7.53 million eyes with mature and hypermature cataract. Currently, the number of immature cataract is around 53 million (Table 4). The age incidence of hypermature, Morgagrian, and complicated cataract is given in Table 5.

Another study in Southern India conducted by Dr. G. Venkataswamy projected on a population of 780 million estimates that there are 21 million operable cataract cases in the country.

Extension of cataract relief to the district hospitals (there are around 440 districts in the country), setting up mobile units (80 central mobile units and 150 district mobile units) and through comprehensive eye care camps particularly in rural areas was the key note of the NPCB.

Table 3
Cataract operations (1981-1988)
Targets and achievements

Year	Target (in lakhs)	Performance (in lakhs)
1981-82	-	5.50
1982-83	13.03	9.04
1983-84	12.54	10.69
1984-85	12.78	11.34
1985-86	13.84	12.20
1986-87	13.83	11.76
1987-88	12.37	11.84
1988-89	12.25	11.20

Table 5
(i) Age-wise break-up of mature & hypermature cataracts (1987-88 Study)

Age Group	Cataract blindness (in lakhs) Mature & hypermature
40-44	2.18
45-49	3.56
50-54	6.28
55-59	8.67
60-64	14.26
65-69	11.27
70 and above	29.08
Total	75.30

(ii) Break up of various types of cataract (NPCB)

Type of Cataract	Prevalence in millions
Mature and hypermature	7.53
Immature cataract	53.00
Incipient cataract	18.00

Even before the results of the ICMR and NPCB study came to light in the face of the burgeoning problem around the world, the concept of cataract backlog free zone had started to be discussed in many forums some time ago. The eye camp approach of the yester years was started to take cataract relief work to the far flung areas of the nation for the reduction of cataract blindness to the extent possible. The achievements in terms of absolute numbers - over 8 million cataract operations during the last eight years - are quite creditable but from the point of view of making a sizable dent on the problem of cataract backlog, this approach is perhaps not adequate and requires supplemental efforts. In this background, the concept of cataract backlog free zones has assumed

Table 4
Age Standardised prevalence rate of cataract/100 persons examined at 15 rural study centres

High prevalence	Rate 55% above	Medium prevalence	Rate 40-45%	Low prevalence	Rate 30-40%
Angamally (Kerala)	69.8%	Allahabad (U.P.)	53.4%	Aurangabad (Maharashtra)	31.5%
Jhansi (U.P.)	65.5%	Bangalore (Karnataka)	48.2%	Bhopal (MP)	35.9%
Kurnool (A.P.)	59.3%	Calcutta (W.B.)	51.1%	Dharmshala (H.P.)	33.5%
Madurai (T.N.)	62.2%	Delhi (UT of Delhi)	54.8%	Guwahati (Assam)	33.8%
Jamnagar (Gujarat)	47.0%	Patiala	36.2%	Raipur (M.P.)	34.5%

special significance.

Internationally, this concept of cataract backlog free zones was first discussed and endorsed by the Pan American Association of Ophthalmology (PAAO) Executive Board at the Pan American Congress of Ophthalmology in September, 1985 in San Francisco. A year later, a joint meeting of the PAAO, Pan American Sanitation Organisation (Regional office of the WHO in the Americas), the National Eye Institute at Bethesda and the Helen Keller International decided to set up two demonstration projects in defined areas in Peru and Brazil in South America.

In Peru, 32,123 persons in the age group of 40 years plus were enumerated and in Brazil 9732 persons above 50 years were enumerated.

In India, the National Society for the Prevention of Blindness, India took up Datia District of Madhya Pradesh in 1988 to identify all mature and hypermature cataract cases and operate all such eye thus making the district cataract free at a particular point of time. This district is on the border of Madhya Pradesh with Uttar Pradesh and was an erstwhile Indian princely state. It is surrounded by Gwalior district (M.P.) Jhansi (U.P.), Bhind and Shivpuri (M.P.). This district came very near the criteria for the selection of a praticular zone to make it cataract free. The chance meeting between the district collector Mr. Parvesh Sharma and the Hony. Executive Director of NSPB, Mr. D.N. Chaudhry in November, 1988 led to conceptualisation of this project. The district is one of the smallest in the country with manageable population of 372,454. Geographically, it was a compact area of three towns and 413 villages. The district collector showed ready response and enthusiasm to undertake the project as it was going to be innovative and become a pace setter in the country. It was decided to take up the project as an experimental one with NSPB providing technical consultancy and assistance. It was agreed that the project for making Datia a cataract backlog free zone will be implemented under the auspices of the Datia district unit of the Red Cross of which the Collector is the President and the NSPB.

Objectives of the Program

Main objective: Make the district of Datia in MP a cataract backlog free zone for the time being.

Specific objectives: a) Ophthalmic check-up of all people 40 years plus for identifying all those with visual acuity of 6/60 and less. b) Detailed ophthalmic examination of those found with visual acuity of less than 6/60 for identifying mature and hypermature cataract cases. c) Cataract surgery on those found fit for operation, and d) Postoperative follow-up and supply of eye glasses.

Materials and Methods

The Datia district has a population of 372,454 spread over three towns and 413 villages. The complete updated voters' list was available thanks to the *Panchayat* (village committee) elections and this list had the information on the age of the eligible voters. Since cataract occurs in the 40 years plus age group, it was possible to list out those above 40 years.

The district authorities had decided to follow the routine eye camp approach inviting people through extensive publicity to come to the camp and avail of the facilities for cataract removal. However, the team of teh NSPB represnetatives led by its President, Dr. S.R.K. Malik and included Dr. P.K. Khosla had a different but totally scientific approach in view to ensure complete coverage of all cataract cases in teh district. At the meeting with the district officials in December, 1988 in which the collector Mr. Parvesh Sharma and the Cheif Medical Officer of the district Dr. S.L. Singhai were present, it was agreed that the eye camp approach envisaged by them would not succeed as there was an element of option in availing the services of teh camp and hence it would not help achieve cataract free status by the district. It was decided that 100 percent ophthalmic check-up of all persons in 40 plus age group should be done. The services of the village headmen (*Patwaris*) and health workers were agreed to be used to identify, among the 40 plus group, those with visual acuity of less than 6/60. The examining team would be given a one-day training in the use of the "E" chart to identify the group with visual acuity of less than 6/60. Those falling in this category would then be referred to diagnostic camps led by ophthalmologists and ophthalmic assistants for detailed ocular examination whether these are fit for operation at the camps. The selected cases will be operated at predetermined places which will have the necessary facilities. Arrangements for survey will be made by the district authorities to bring the identified cases to the eye camps. The NSPB-I on its part would make arrangements for the eye surgeons and paramedical staff, equipment and follow-up work. A detailed time-bound programme was settled for all the phases of the work-survey, diagnostic camp, cataract surgery and follow-up and included the locations at which they would be carried out. The whole operation was slated for completion within three months from the middle of December, 1988.

The survey and diagnostic work were carried out by the district authorities in 19 centers (*See maps on the last page*). The population of 40 years plus age group was 76,672, (39,918 men and 36,574 women), an estimated 20.58% of Datia's population.

As mentioned in the plan, preliminary screening was done with the aid of the "E" chart by 152 village *patwaris* and 174 health workers in 19 centers on 74,960 (97.5 percent) of the 76,672 persons.

Out of 74,690 persons surveyed, 6,668 (8.92%) individuals were found to have visual acuity less than 6/60. These cases were brought to the predetermined diagnostic camps by the district authorities. Here the

patients suffering from cataract and having visual acuity of 3.60 or below were selected for surgery. Out of these 6,668 patients, 6,298 turned up at the diagnostic camps and 2,007 (31.86%) patients were found fit for cataract operation. Age-wise break up of these cases is given in Table 6.

Eye camps were conducted during January and February 1989 at three different places - Civil Hospital at Seondha, Primary Health Centre at Indergarh and three different locations in Datia town - Lakunwar Dharamshala, Agarwal Dharamshala, BTI and the district hospital in Datia (Table 7).

The operating teams were drawn from the district hospital at Datia, the NSPB branches at Gwalior, Datia and New Delhi (Gujarmal Modi Eye Research Center at Modi Nagar run by the NSPB-I) and Karnal Eye Institute.

The major responsibility was taken by the NSPB, New Delhi with Dr. V.K. Tewari, in charge of the NSPB's G.M. Modi Community Ophthalmic Research Center, Modi Nagar under the leadership of Dr. S.R.K. Malik and NSPB Gwalior under the leadership of Dr. B. Shukla, Professor and Head, Department of Ophthalmology, Medical College at Gwalior and Secretary, Madhya Pradesh branch of NSPB. Cataract surgery was performed on a total of 1305 (65.11%) out of 2007 identified cases. However, 702 (34.8%) cases could not be done because of the unexpected transfer of the Collector Mr. Parvesh Sharma, to another posting and the consequent official slackness; also some of the affluent patients indicated that they would get the surgery done elsewhere and not in the camps.

A follow-up of the operated cases was done in the first week of April, 1989 at Datia and Indergarh primary health center by the NSPB - I team. Stitches were removed and glasses given.

Comparative picture of the experimental projects for making cataract free zones in Datia District in India and in Chimbote given in Table 8.

Table 6
Age-wise break-up of cases detected

Age	No.
40-50	386
51-60	1022
61-70	508
71 and above	91
Total	2007

Table 7
Venue of camps and operations done agency wise

Centre	No. of Operations done	Team
Civil Hospital Seondha	135	NSPB, Gwalior & Medical College Gwalior
Ladkunwar Dharmas-hala & Agarwal Dharamshala Datia	276	-do-
PHC Indergarh	256	NSPB India (Karnal Eye Institute)
BTI Datia	178	NSPB (India) and Modi Eye Hospital
Distt. Hospital Datia	460	Distt. Hospital team Datia
Total	1305	

Table 8
Cataract free projects in India, Peru and Brazil

	India Datia	Peru Chimbote	Brazil Champinas
1. Total population	372,454	NA	NA
2. No. of persons above 40 years	76,672 (20.58%)	32312	9732 (above 50 years)
3. Total number of cases examined	74,690 (97.41%)	23,929 (74.1%)	7769 (79.8%)
4. Total number of cases referred to ophthalmic examination	6,668 (8.92%)	1172 (3.92%)	877 (11.28%)
5. No. of cases completed examination	6,298 (94.45%)	939 (80.1%)	748 (85.3%)
6. No. of cases of cataract blind needing surgery (vision below 3/60)	2,007 (31.86%)	206 (21.94)	152 (20.32)
7. Number of cases operated	1,305 (67.11%)	133 (64.56%)	97 (63.81%)
8. Period in which work was completed	15th Dec. to15th Mar. 89 -3 months	July, 86 to July 87 -12 months	Oct. 86 to Sept. 87 -12 months

Lessons Learnt

The success of the Datia project, to a considerable extent in the first place, was indeed due to the administrative back-up given by the Collector with his remarkable commitment, dedication and great qualities of leadership and organizational capability, political blessings of the Chief Minister and his active support bordering complete identification with the project and the full technical support of the NSPB from the planning to the implementation stage. This was also taken up as a time-bound project.

The project now shows the effectiveness of the methodology selected: identifying the 40 plus age group, testing the visual acuity by combination of non-techincal and paramedical persons and bringing the cases of less than 6/60 visual acuity for ophthalmic screening for identifying cases with visual acuity of 3/60 or less, and the surgical procedures done by a team of dedicated experts wedded to the cause of blindness prevention.

The project has shown that given the right political back up dedicated and inspiring administrative leadership and the involvement of the district administration and medical staff and the technical assistance and support from the right type of voluntary organizations, it is possible to make a given geographical area with a population of upto 4 lakhs cataract free in a time-bound program of 3 - 4 months.

This experiment needs to be replicated in 60 to 80 districts by taking up a sub-division (Tehsil) with a population of 3-4 lakhs at a time. The pre-condition should be that the District Collector is not transferred at least for a period of two years during which entire district should be made cataract free on the above methodology. Also, NGOs (Non-Governmental Organizations) joined this project of NSPB-I, itself an NGO.

Next Phase

The short break that came in the project after the transfer of Mr. Parvesh Sharma was linked with the coming in of Ms. Amita Sharma who has taken over as Collector. She has shown enthusiasm to start work again and take the district to a cataract free status. Under her leadership, Dr. (Mrs.) H. Kaur Sinha, Chief Medical Officer, Mr. R.P.S. Badona, Dy. Director, *Panchayat,* Mr. S.N. Gupta, and other District Officers have already started planning and implementing the activities to complete the project by December, 1989.

Acknowledgement

Thanks are due to Mr. Parvesh Sharma, District Collector for his commitment and leadership, and Dr. P.K. Khosla, Dr. L.D. Sota, Secretary General, NSPB, the late Dr. S.L. Singhai, CMO, Dr. Pasricha of Karnal Eye Institute, Dr. V.K. Tewari of Modinagar Eye Hospital.

Financial support for this project came from NSPB - India, Royal Commonwealth Society for the Blind, Indian Red Cross Society, Red Cross Society, Datia District Branch and donations from local people.

Figures 2 and 3

Phthiriasis Palpebrarum in Pakistan

Muhammad Humayun, F.P.A.M.S. and Akhtar J. Khan, F.R.C.S.

ABSTRACT: A 14-year-old girl from Sindh Pakistan had phthiriasis palpebrarum, infestation with *Phthirus pubis*, of her right upper eyelid. This case in a Pakistani patient is most unusual in that the Muslim cleanliness practices include regular shaving of the pubic and axillary hair and the sociosexual mores do not permit sexual promiscuity, eliminating the two likely sources of phthiriasis. Pediculosis capitis and pediculosis coporis on the other hand are common due to widespread poverty in rural areas of Pakistan. (Pakistan Journal of Ophthalmology 9:6, 20, January, 1993.)

Figure 2 shows globular particles, the lice nits, attached to a few central cilia of the upper eyelid. The not clearly defined gelatinous material at the roots of the cilia is actually an adult crab (pubic) louse. The claws of parasite were so tightly wrapped around the roots of cilia that it removal was not painless to the patient. Figure 3 shows the morphological features of the parasite, a short, wide body and stout legs and claws, like that of a crab. These clearly show that it is *Phthirus pubis* and not *Pediculus corporis* or *Pediculus capitis*, which have slender tapering bodies and short thin legs.

Phthiriasis palpebrarum is a well-recorded entity in ophthalmology in all parts of the world.[1-3] What makes this case so unusual is that over 90% of Pakistan's population is Mulsim. The Muslims of Pakistan follow the tradition of regular shaving of pubic and axillary hair, only areas where *Phthirus pubis* is found, as an established standard of bodily cleanliness. Sexual contact or using the bed of an infested person are the usual source of acquiring phthiriasis. However, the prevailing social mores in Pakistan drastically curtail sexual promiscuity in all socieconomic segments of population. Therefore, to see a case of phthiriasis in Pakistan is rare and unusual. On the other hand, pediculosis corporis and pediculosis capitis are not uncommon in the poor of Pakistan.

Pediculosis in man goes far back in the human history. In fact some evolutionist authors believe that because of their close association, the evolution of man and louse shows parallel stages in development.[4] Historically, pediculosis was found in mummies from Egypt and the southern United States.[4]

The management of pediculosis and phthiriasis, in addition to the direct treatment of the disease in the patient, involves eradication of the parasite from the infected family members and surroundings of the patient. Also, the local treatment must be directed at the elimination of the adult parasite plus the nits that usually are impervious to some of the therapeutic modalities. Therefore, either one should employ a modality that destroys both the adult parasites and their nits, or repeat the treatment in about eight days when the nits have hatched.

These therapeutic modalities may be divided into mechanical, physical, chemical, and thermal. The mechanical removal of parasites and nits is possible but tedious and time consuming, and sometimes altogerther impossible in heavily infected cases. In the second group comes the ordinary petrolatum, which smothers the adults, and hence must be applied for the duration till the nits hatch. In addition to being messy this method also may obscure the vision. Pyrethrins and gamma benzene hexachloride 1% cream (Kwell) are chemical preparations, and the latter is also effective against the nits. Awan[1,5] introduced both the hypothermal effect of cryotherapy and the hyperthermal effect of direct argon laser application to the adults and nits of pararsite as the effective ways of cure in a single sitting, the latter also being more convenient.

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BOOK REVIEWS

Edited by Khalid J. Awan, FPAMS

Atlas of Optic Nerve Disorders, by Thomas C. Spoor, **1992.** Raven Press, Ltd., 1185 Avenue of the Americas, New York, N.Y. 10036. 178 full-sized pages, hardcover, 358 color and 137 black and white illustrations, table of contents, index. Price: US$ 135.00.

Every author has his own reason and motive to write a book. Spoor's quest for an answer to the question "Is this optic nerve abnormal, and if so, what do I do about it?" spurred the compilation of *Atlas of Optic Nerve Disorders.* The author's intention is not to offer an encyclopedic treatise, but to make this monograph a guide to "diagnosis and management of common optic nerve disorders and the protean variations in their presentation." But he also hastens to warn the reader that "there is no universal agreement in the neuro-ophthalmologic community as to the efficacy or appropriateness of some of the described treatments."

The contents of the *Atlas* are divided into 11 chapters of The Optic Nerve: Anatomy and Physiology; Optic Nerve Evaluation; Papilledema and Pseudopapilledema; Pseudotumor Cerebri; Optic Atrophy; Glaucoma, Pseudoglaucoma, and Low-Tension Glaucoma; Traumatic Optic Neuropathies; Optic Neuritis; Nonarteritic Anterior Ischemic Optic Neuropathy; Arteritic Ischemic Neuropathy, and Optic Nerve Tumors. The text is concluded by an "Appendix" that contains a collection of illustrations of abnormal appearing optic discs, as a sort of quick review that is cross-referenced with the related discussions in the more detailed chapters of the text.

Chapter 1 uses excellent color drawings, actual intracranial dissection photograph, and photomicrographs to detail the anotomy of the optic nerve from the optic disc to its intracranial course. In discussion of physiology, the author places special emphasis on the blood supply, myelination, and axoplasmic transport. The clinical evaluation of the optic disc with actual case presentations and neuroimaging make up a concise Chapter 2.

The remaining nine chapters deal with the clinical changes, diagnosis, and management of various direct and indirect pathologic disorders of the optic nerve. The description of each entity, common or rare, is accompanied with crisp and excellently and reproduced fundus photographs, and where needed with photomicrographs, artwork, echographs, and neuroimages. A total of 55 case reports are also strewn throughout the book to illustrate some more important entities. The usefulness of this technique is well illustrated by Case 6.3 of a 44-year-old woman with LTG (low tension glaucoma).

That Spoor had intention of making *Atlas of Optic Nerve Disorders* a useful guide for the clinician is most obvious from the chapters on pseudotumor cerebri, which includes an excellent step by step description of the surgical procedure for the optic nerve sheath decompression and the chapter on arteritic ischemic optic neuropathy, in which is included the detailed surgical technique of performing temporal artery biopsy. Both of these procedures are illustrated with the most beautiful artwork and actual photographs of the surgical steps. The writing is lucid and concise throughout the book, and printing is also of the highest standard.

A small number of clinical photographs fall short of the overall standard of the book. Some experts may not agree with a few of Spoor's views, such as his statement that a vascular loop on the optic disc "is a normal variant," particularly when it has been found to be associated with retinal hemorrhages and vascular occlusion. Nonetheless, *Atlas of Optic Nerve Disorders* comes mighty close to a must-have. ■

Embryology of the Eye and Its Adnexae, by Y. Robert Barishak (Volume 24 of **Developments in Ophthalmology,** Edited by W. Straub) **1992.** Krager AG, P.o. Box CH-4009, Basel, Switzerland. 142 pages, table of contents, index, black and white illustrations, clothbound. Price: US$132.00.

To be familiar with the embryologic origin and development of the structures is essential for one to be a logical clinician. This is more so with the specialty of ophthalmology than with any other branch of medicine. Therefore, Barishak's *Embryology of the Eye and Its Adnexae* is a highly welcome addition to ophthalmic literature, particularly when a current and comprehensive monograph on the subject of normal development of the eye has been overdue.

The present text is the volume 24 of *Developments in Ophthalmology,* a series that have gained high reputation under the able editorship of W. Straub. The monograph is beautifully printed on quality paper in a single-column format, and is illustrated with black and white photomicrographs and artwork.

The contents, in three parts, follow the development of the eye and its adnexae according to the gestational chronology. The first part, titled "Embryogenesis," deals with the gestational period from first to third weeks. The second part, "Organogenesis," contains development of structures from fourth to eighth weeks and is divided into five weekly chapters. The last and the largest section groups the seven chapters on monthly development and the eighth chapter on "Birth and after Birth" under the title of "Differentiation." A 6-page "Summary" concludes the monograph.

The comprehensiveness and currency of the material is obvious from the fact that the author consulted a total of 187 references, which date from as early as 1958 to as recent as 1990, most of them after 1980. Though very highly priced (a US dollar per page), this monograph is a must, at least on the shelves of all the medical libraries. ■ -*KJA*

Abstracts from Elsewhere

Edited by Khalid J. Awan, F.P.A.M.S.

Archives of Ophthalmology

TREATMENT OF RETINOPATHY OF PREMATURITY WITH ARGON LASER PHOTOCOAGULATION, MB Landers III, CA Toth, HC Semple, LS Morse. Fifteen eyes of nine infants were treated for retinopathy of prematurity by confluent photocoagulation of the vascular retina using an argon laser indirect ophthalmoscope. All treated eyes presented at or beyond threshold of stage 3 retinopathy of prematurity with "plus" disease. Three treated eyes had retinopathy of prematurity in zone 1. Early complete regression of extraretinal proliferation was seen in 13 eyes. At 6 Januarys' minimum follow-up, 11 (73%) of the treated eyes demonstrated a favorable outcome, while four eyes (27%) progressed to an unfavorable outcome. No intraocular hemorrhages occurred during any laser treatment. *(Arch Ophthalmol 110:44-47, 1992) Reprint requests to Dr. M.B. Landers, Department of Ophthalmology, University of California, Davis, 1603 Alhambra Blvd, Sacramento, CA 95816.*

MANAGEMENT AND MONITORING OF CANCER-ASSOCIATED RETINOPATHY, JL Keltner, CE Thirkill, NK Tyler, AM Roth. Cancer-associated retinopathy is a rare paraneoplastic event that can involve allergic reactions and result in retinal degradation. A patient, who had a 35-year smoking history, complained of visual loss and was found to have serum antibodies that reacted with an extract of retina, including the previously described retinal cancer-associated retinopathy antigen. Prednisone treatment appeared to reduce the patient's antibody titers to normal levels. Visual fields stabilized, and the patient was able to maintain useful vision throughout the course of treatment until his death 1 year following initial diagnosis. To our knowledge, this is the first reported case in which monitoring of antibody responses to retinal antigens appeared to be useful in the decision whether to initiate prednisone therapy. Rising antibody titers to the cancer-associated retinopathy antigen probably occurs before progressive visual field loss and may be considered an indication for prompt steroid therapy. *(Arch Ophthalmol 110:48-53, 1992) Reprint requests to Dr.J.L.Keltner, the Department of Ophthalmology, University of California, Davis, Medical Center, 1603 Alhambra Blvd, Sacramento, CA 95816.*

OCULAR FINDINGS ASSOCIATED WITH RHODOPSIN GENE CODON 17 AND CODON 182 TRANSITION MUTATIONS IN DOMINANT RETINITIS PIGMENTOSA, GA Fishman, EM Stone, VC Sheffield, LD Gilbert, AE Kimura. Six members of a family with autosomal dominant retinitis pigmentosa were found to have a cytosine-to-thymine transition mutation in the second nucleotide of codon 17 in the rhodopsin gene that resulted in a threonine to methionine change. Three members from another family with autosomal dominant retinitis pigmentosa showed a guanine-to-adenine transition mutation in the first nucleotide of codon 182 in the rhodopsin gene that resulted in a glycine to serine change. Each of these two mutations presented with a similar phenotype because both showed a regional predilection for pigmentary changes to occur in the inferior part of the retina as well as field impairment predominantly in the superior hemisphere. Electroretinographic amplitudes were more substantial than usually encountered in other forms of retinitis pigmentosa, a finding consistent with the better visual prognosis in patients with either of these two mutations. This article documents the association of two similar phenotypes of autosomal dominant retinitis pigmentosa with specific gene defects at a molecular level. *(Arch Ophthalmol 110:54-62, 1992) Reprint requests to Dr. Fishman, Department of Ophthalmology, University of Illinois at Chicago, 1855 W Taylor St, Chicago, IL 60612.*

VISUAL FIELD LOSS IN PRIMARY GAZE AND READING GAZE DUE TO ACQUIRED BLEPHAROPTOSIS AND VISUAL FIELD IMPROVEMENT FOLLOWING PTOSIS SURGERY, M Patipa. Acquired blepharoptosis has been associated with loss of the superior visual field (SVF) in primary gaze. Because many patients with acquired blepharoptosis complained of difficulty reading or performing other visual functions in reading gaze, a prospective study was undertaken to determine if acquired blepharoptosis was the cause of these visual dysfunctions. Preoperative and postoperative SVFs were tested in primary gaze and reading gaze in 19 patients with unilateral or bilateral acquired blepharoptosis totalling 30 eyes. Preoperative testing revealed a marked loss of the SVF in both primary gaze and reading gaze. All patients underwent levator aponeurosis defect repair. Postoperative results showed a significant improvement in both primary and reading

gaze SVFs. Therefore, patients with good visual acuity complaining of difficulty reading or carrying out other visual functions in reading gaze should be examined for the presence of acquired blepharoptosis. Blepharoptosis repair can be expected to improve the SVF in both primary gaze and reading gaze. *(Arch Ophthalmol 110:63-67, 1992) Reprint requests to Dr Patipa, 2501 N Flagler Dr, West Palm Beach, FL 33407.*

OPTIC DISC SIZE IN EXFOLIATIVE, PRIMARY OPEN ANGLE, AND LOW-TENSION GLAUCOMA, A Tuulonen, PJ Airaksinen. The authors examined the magnification-corrected optic disc size in 54 patients with exfoliative glaucoma, 61 patients with primary open angle glaucoma, and 50 patients with low-tension glaucoma. The mean optic disc area in low-tension glaucoma was statistically significantly larger than that in primary open angle and exfoliative glaucoma. The mean values of eyes with primary open angle and exfoliative glaucoma did not differ significantly from each other. Frequency distribution of the optic disc size showed, however, that all three diagnostic groups differed significantly from each other. Small discs were more frequent in eyes with exfoliative glaucoma, and large discs were more frequent in eyes with low-tension glaucoma. In primary open angle glaucoma, small and large optic discs were found equally frequently. It is possible that in some eyes large optic discs are vulnerable to even low intraocular pressures due to qualitative properties of the extracellular matrix. *(Arch Ophthalmol 110:211-213, 1992) Reprint requests to Dr. Tuulonen, Department of Ophthalmology, University of Oulu, SF-90220 Oulu, Finland.*

GLAUCOMATOUS PARAPAPILLARY ATROPHY, OCCURRENCE AND CORRELATIONS, JB Jonas, MC Fernandez, GOH Naumann. Glaucomatous optic nerve damage is typically associated with intrapapillary changes, such as neuroretinal rim loss. In this study, parapapillary chorioretinal atrophy was evaluated in 691 normal eyes, 1081 glaucomatous eyes, and 31 eyes with ocular hypertension. It was significantly larger and occurred more often in the glaucomatous eyes (parapapillary atrophy area, 1.07 ± 0.83 mm^2) (mean + SD) than in the normal eyes (0.55 ± 0.64mm^2) or in the eyes with ocular hypertension (0.55 ± 0.37 mm^2). These differences were significant also for eyes with moderate glaucomatous damage (0.86 ± 0.62 mm^2). Parapapillary chorioretinal atrophy was associated with shallow glaucomatous cupping, diffuse nerve fiber loss, a marked tessellated fundus, and only moderately elevated intraocular pressure. It increased with a decreasing neuroretinal rim area. It showed a spatial correlation to neuroretinal rim loss inside the optic disc. In unilateral glaucoma, it was larger in the affected eye than in the unaffected eye. Parapapillary chorioretinal atrophy is associated with glaucoma. *(Arch Ophthalmol 110:214-222) Reprint requests to Dr Jonas, University Eye Hospital, Schwabachanlage 6, D-8520 Erlangen, Federal Republic of Germany.*

BLOCK EXCISION OF CYSTIC AND DIFFUSE EPITHELIAL INGROWTH OF THE ANTERIOR CHAMBER, REPORT ON 32 CONSECUTIVE PATIENTS, GOH Naumann, V Rummelt. From 1980 to 1990, 32 consecutive patients with progressive cystic or diffuse epithelial ingrowth of the anterior chamber were treated successfully with block excision. This technique consists of simultaneous removal of adjacent iris, pars plicata of ciliary body, and all layers of sclera and cornea in contact with the lesion acting as a shell. The resulting defect is covered by a tectonic corneoscleral graft. Twelve patients had suffered from perforating ocular injury, 10 patients had previously undergone cataract extraction, and 10 patients had various cause of epithelial ingrowth. Cystic epithelial ingrowth occurred in 27 patients, diffuse sheetlike epithelial ingrowth occurred in four patients, and one lesion was identified as foreign body granuloma. On histopathologic examination, all but two patients revealed epithelial involvement of the surface of the ciliary body. All patients were followed up for an average of 60.1 months (range, 1 to 120 months). Long-term visual acuity was better than 20/60 in 37.5% of the patients. No recurrence of ingrowth was noted an denucleation was not necessary. Our results indicate that block excision currently may be the treatment of choice for cystic and diffuse sheetlike epithelial ingrowth of the anterior chamber. *(Arch Ophthalmol 110:223-227, 1992) Reprint requests to Dr. Neumann, Department of Ophthalmology, University of Erlangen-Nurnberg, Schwabachanlage 6, 8520 Erlangen, Germany.*

IRIS SECTOR HETEROCHROMIA AS A MARKER FOR NEURAL CREST DISEASE, SM Brazel, TJ Sullivan, PS Thorner, MP Clarke, WS Hunter, JD Morin. A 6-month-old female infant with biopsy-proved Hirschsprung's disease had associated sector heterochromia of the irides. The association between sector heterochromia and Hirschsprung's disease has been previously reported and both conditions have been ascribed to neural crest defects. Histologic characteristics of the ocular involvement have not previously been reported, to our knowledge. Histopathologic examination of the globes revealed decreased iris stroma, decreased pigmentation in the anterior stroma, and reduced numbers of pigment-producing cells in the affected areas. Both the ocular and gastrointestinal findings reflect a neural crest origin. *(Arch Ophthalmol 110:233-235, 1992) Reprint requests to Dr. Morin, the Department of Ophthalmology, The Hospital for Sick Children, 555 University Ave, Toronto, Ontario, Canada M5G 1X .*

-Continued on next page

A REVIEW OF MORTALITY FROM CHOROIDAL MELANOMA, II. A META-ANALYSIS OF 5-YEAR MORTALITY RATES FOLLOWING ENUCLEATION, 1966 THROUGH 1988, MD West, BS Hawkins, JA Markowitz, AP Schachat. With the use of data published during the period from 1966 through 1988, a pooled analysis (meta-analysis) of 5-year mortality rates among patients who had an eye enucleated for choroidal melanoma was performed to provide a more robust estimate of this rate than could be obtained from any single study. The literature concerning mortality following a diagnosis of choroidal melanoma has been reviewed systematically and described in a separate article. Of 76 reports published from 1966 through 1988, 29 were excluded from the meta-analysis because there were no cases treated by enucleation alone, mortality was not reported by time from enucleation, fewer than 10 cases were reported, or 5-year mortality rates were not reported or derivable from the data presented. Ten additional reports were excluded because they were based on data for the same set of patients as another article in the series. Of the remaining 37 reports, 29 contained data for patients with tumors of varying sizes that could not be separated into subgroups based on the size of the tumor at the time of treatment. The remaining eight articles reported 5-year mortality rates by tumor size, specifically for small, medium, or large tumors. The combined weighted estimates of 5-year mortality rates following enucleation were 16% for small tumors (95% confidence interval [CI]:[14%, 18%]), 32% for medium tumors (95% CI: [29%, 34%]), and 53% for large tumors (95% CI: [50%, 56%]). Different methods of pooling the data yielded consistent estimates for all three tumor size categories. These results supported the finding of other investigators that tumor size at time of enucleation is a major prognostic factor for patients who have choroidal melanoma. *(Arch Ophthalmol 110:245-250, 1992) Reprint requests to Ms. Hawkins,Wilmer Clinical Trials and Biometry, 550 N Broadway, Ninth Floor, Baltimore, MD 21205.*

ASPIRIN EFFECTS ON THE DEVELOPMENT OF CATARACTS IN PATIENTS WITH DIABETES MELLITUS, EARLY TREATMENT DIABETIC RETINOPATHY STUDY REPORT 16, EY Chew, GA Williams, TC Burton, FB Barton, NA Remaley, FL Ferris III, Early Treatment Diabetic Retinopathy Study Research Group. The Early Treatment Diabetic Retinopathy Study, a randomized clinical trial supported by the National Eye Institute, was designed to assess the effect of photocoagulation and aspirin in 3711 patients with mild to severe nonproliferative or early proliferative diabetic retinopathy. Although the primary goal of the study was to evaluate the effect of photocoagulation and aspirin on diabetic retinopathy, the study also provided an opportunity to evaluate the effects of aspirin on the development of cataract. No evidence showed that aspirin use reduced the risk of development of cataract requiring extraction (4.1% vs 4.3% in patients assigned to aspirin or placebo treatment, respectively; Mantel-Cox P=.77; relative risk, 1.05; 99% confidence interval, 0.73 to 1.51). Aspirin use also did not reduce the risk of less extensive but visually significant lens opacities developing (29.6% vs 28.3%; Mantel-Cox P=.76; relative risk, 0.99; 99% confidence interval, 0.85 to 1.15). Early Treatment Diabetic Retinopathy Study results do not support the hypotheses that aspirin (at a dose of 650 mg/d) reduces the risk of cataract development in this diabetic population. *(Arch Ophthalmol 110:339-342) Reprint requests to Biometry and Epidemiology Program, National Eye Institute, National Institutes of Health, Bldg 31, Room 6A-24, 9000 Rockville Pike, Bethesda, MD 20892.*

GLAUCOMA AND THE IRIDOCORNEAL ENDOTHELIAL SYNDROME, HC Laganowski, MGK Muir, RA Hitchings. The records of 66 patients with the iridocorneal endothelial (ICE) syndrome were retrospectively reviewed. Glaucoma occurred in 33 (50%) of the patients with ICE syndrome and was most common in the variants in which abnormal cells involve the entire posterior corneal surface (disseminated ICE and total ICE). Of 25 patients with glaucoma, the diagnosis of ICE syndrome was overlooked initially in 17 (68%). Medical glaucoma treatment was generally ineffective. Of 22 patients (88%) who underwent surgery (typically trabeculectomy), 10 (45%) required more than one procedure. The success rates of first operations at 1 and 5 years were 60% and 21%, and those of second and third operations at 1 year were 20% and 17%. During the course of their management, 11 patients (44%) developed visual field loss. The diagnosis of ICE syndrome should be considered in younger patients with unilateral glaucoma and confirmed by specular microscopy. Management of glaucoma due to ICE syndrome is surgical, and means of improving its long-term success need to be addressed. *(Arch Ophthalmol 110:346-350, 1992) Reprint requests to Dr.Laganowski, Moorfields Eye Hospital, City Road, London, England EC1V 2PD.*

ANTERIOR TRANSPOSITION OF THE INFERIOR OBLIQUE, ANATOMIC ASSESSMENT OF TH NEUROVASCULAR BUNDLE, DR Stager, DR Wealkey, Jr., D Stager. Anterior transposition of the inferior oblique insertion has been described as an effective procedure for weakening the inferior oblique and for decreasing dissociated vertical deviation. It has been postulated that this occurs by converting the inferior oblique muscle from an elevator to a depressor. They found histologic, radiologic, and clinical evidence that anterior transposition of the inferior oblique muscle

converts it to a depressor by means of the firm posterior attachment of the inferior oblique muscle at the site of its neurovascular bundle. This new functional insertion at the neurovascular bundle created by the anterior transposition allows for the depressor effect seen after this procedure. *(Arch Ophthalmol 110:360-362, 1992) Reprint requests to Dr. D.R. Wealkley,Department of Ophthalmology, University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd, Dallas, TX 75235-8895 .*

CATARACT EXTRACTION AFTER PROTON BEAM IRRADIATION FOR MALIGNANT MELANOMA OF THE, ES Gragoudas, KM Egan, PG Arrigg, JM Seddon, RJ Glynn, JE Munzenrider. The authors evaluated visual outcome and risk of metastases in patients who underwent cataract extraction after proton beam irradiation of a uveal melanoma. A total of 84 patients underwent cataract extraction between 2 months and 11 years after irradiation. One year after cataract extraction, approximately half of the patients had visual acuity of 20/100 or better, and approximately one third had an acuity of 20/40 or better. Larger tumor size was highly correlated with poor visual outcome 1 year after extraction. Six patients underwent enucleation after cataract removal, five due to blind, painful eyes and one due to continued growth of a previously undiagnosed ring melanoma. The rate of metastases was not higher among patients who underwent cataract extraction (adjusted rate tario, 0.83). Results suggest that cataract extraction offers improvement of vision in selected eyes previously irradiated for a uveal melanoma, without adding to the risk of metastases among patients undergoing the procedure. *(Arch Ophthalmol 110:475-479, 1992) Reprint requests to Dr Gragomlas, Massachusetts Eye and Ear Infirmary, 243 Charles St, Boston, MA 02114.*

ARGON LASER TRABECULOPLASTY CONTROLS ONE THIRD OF CASES OF PROGRESSIVE, UNCONTROLLED, OPEN ANGLE GLAUCOMA FOR 5 YEARS, GL Spaeth, KA Baez. Seventy-eight patients (109 eyes) with progressive glaucoma had argon laser trabeculoplasty as a substitute for filtration surgery and were then followed up for a minimum of 5 years. One hundred spots were placed at the anterior margin of the posterior trabecular meshwork over 360°. Consecutive cases between 1980 and 1985 were reviewed, 95% of treated cases being included in the final analysis. Eighty-two eyes had primary open angle glaucoma. If only the group with primary open angle glaucoma is considered, the failure rate the first year was 19%. After that, the failure rate was approximately eight per year. At the end of 5 years, 65% of all eyes had failed. At the end of 10 years, data were available on 84 of the original 109 treated eyes; in 80 treatment had failed, and four were still receiving medical therapy. *(Arch Ophthalmol 110:491-494, 1992) Reprint requests to Dr Spaeth,Wills Eye Hospital-Jefferson Medical College, Ninth and Walnut streets, Philadelphia, PA 19107.*

IMMUNE-RELATED DISEASE AND NORMAL-TENSION GLAUCOMA, A CASE-CONTROL STUDY, MJ Cartwright, AL Grajewski, ML Friedberg, DR Anderson, DW Richards. The authors reviewed the charts of 67 patients with the diagnosis of normal-tension glaucoma listed in the Bascom Palmer Eye Institute computer database. These patients were matched with respect to age, race, and sex with an equal number of patients having ocular hypertension. All medical diagnoses in the charts for both groups were tabulated and classified as either immune-related or non-immune-related. Twenty (30%) patients with normal-tension glaucoma had one or more immune-related disease(s) compared with five (8%) patients in the comparison group (P=.00134, McNemar statistic with continuity correction). *(Arch Ophthalmol 110:500-502, 1992) Reprint requests to Dr.Cartwright, 2742 Page Ave, Ann Arbor, MI 48104.*

THE CORRELATION OF VISUAL FUNCTION WITH POSTERIOR RETINAL STRUCTURE IN SEVERE RETINOPATHY OF PREMATURITY, WS Gilbert, V Dobson, GE Quinn, J Reynolds, B Tung, JT Flynn, on behalf of the Cryotherapy for Retinopathy of Prematurity Cooperative Group. The Multicenter Trial of Cryotherapy for Retinopathy of Prematurity previously reported reduced incidence of both poor structural and functional outcomes after cryotherapy. They compared the results in 304 eyes of patients in the randomized portion of the trial in whom both structural and functional assessments were performed 12 months after randomization. Two hundred fifty-five eyes (83.9%) had concordant outcomes: 153 eyes had favorable structural and functional outcomes and 102 eyes had unfavorable structural and functional outcomes. Twenty-nine eyes (9.5%) had discordant outcomes: 20 eyes had favorable structural and unfavorable functional outcomes and nine eyes had unfavorable structural and favorable functional outcomes. The small number of discordant outcomes could generally be accounted for by three factors: (1) retinal abnormalities beyond those considered in the photographic grading system (12 eyes), (2) nonretinal visual pathway disease (five eyes), or (3) false-positive and false-negative results in the measurement systems used to evaluate structure and function (five eyes). In 20 eyes (6.6%), photographs could not be graded or the visual acuity was untestable. They conclude that the appearance of the posterior pole of the eye correlates well with grating acuity in the 12-month-old infant with a history of severe retinopathy of prematurity. *(Arch Ophthalmol 110:625-631, 1992) Reprint requests to Dr.Gilbert, the Retina Group of*

Washington, P.C., Suite 1540, 5454 Wisconsin Ave, Chevy Chase, MD 20815.

NEUROIMAGING OF THE OPTIC NERVE AFTER FENESTRATION FOR MANAGEMENT OF PSEUDOTUMOR CEREBRI, LM Hamed, DT Tse, JS Glaser, SF Byrne, NJ Schatz. The mechanisms by which optic nerve-sheath fenestration is effective remain speculative. Possibilities include surgical production of a cerebrospinal fluid filtration outlet or scarring in the subarachnoid space around the nerve in the vicinity of the fenestration site, with shifting of the pressure gradient from the nerve head to the retrobulbar portion. Two patients who underwent successful optic nerve-sheath fenestration developed a cystlike structure contiguous to the fenestration site, apparently in direct communication with the optic nerve sheaths. This was shown on magnetic resonance imaging (one patient) and orbital echography (both patients). These previously unreported observations may support the hypothesis that fenestration works by creating a filtration apparatus that controls the intravaginal pressure in the subarachnoid space surrounding the orbital segment of the optic nerve. *(Arch Ophthalmol 110:636-639, 1992) Reprint requests to Dr. Hamed, Department of Ophthalmology, University of Florida College of Medicine, PO box 100284, Gainesville, FL 32610-0284.*

CHOROIDAL NEOVASCULARIZATION ASSOCIATED WITH CHOROIDAL HEMANGIOMAS, AJ Ruby, LM Jampol, MF Goldberg, R Schroeder, S Anderson-Nelson. Two patients with choroidal hemangiomas treatment was performed by qualitative and quantitative comparison of simultaneously projected pretreatment and posttreatment photographs and by comparison of photographs with a visual analog scale. These periorbital port-wine stains were treated with good-to-excellent results in 95% of the patients. As a result of treatment, macular (ie, nonhypertrophic) lesions, were lightened by an average of 80%. Neither scarring nor permanent pigmentary alteration was noted. Children of all ages were treated without adverse consequences, and the results were comparable to those of adults. The flashlamp-pumped pulsed dye laser treatment of periorbital port-wine stains is effective and safe in patients of all ages and should be considered the treatment of choice for flat and mildly hypertrophic lesions. *(Arch Ophtahlmol 110:793-797, 1992) Reprint requests to Dr. Geronemus, New York University Medical Center, Department of Dermatology, 560 First Ave, New York, NY 10016.*

ENDOPHTHALMITIS CAUSED BY STREPTOCOCCAL SPECIES, LK Mao, HW Flynn, D Miller, SC Pfugfelder. The medical records of 48 patients with culture-positive streptococcal endophthalmitis diagnosed between January 1977 and May 1990 were reviewed. The viridans group streptococci were isolated in 24 (50%) of the 48 cases, enteroccci in 13 cases (27.1%), Streptococcus pneumoniae in six cases (12.5%) of 48 cases. The clinical statuses of endophthalmitis cases by etiology were postoperative in 40 patients (83.3%), posttraumatic in six patients (12.5%), and miscellaneous in two patients (4.2%). Overall,. 15 (31.2%) patients achieved 20/400 or better visual

immunity to Toxoplasma antigen. Analysis of aqueous humor samples for Toxoplasma antibodies in patients with FHI also yielded negative results. On the basis of the negative results of these laboratory tests, we concluded that FHI is not associated with ocular toxoplasmosis. *(Arch Ophthalmol 110:806-811, 1992) Reprint requests to Dr. La Hey, Department of Ophthalmo-Immunology, The Netherlands Ophthalmic Research Institute, Postbox 12141, 1100AC Amsterdam, the Netherlands.*

CONTRAST SENSITIVITY IN PATIENTS WITH NUCLEAR CATARACTS, MA Drews-Bankiewicz, RC Caruso, MB Datiles, MI Kaiser-Kupfer. Spatial contrast sensitivity and lens density were measured in 30 subjects (18 patients with pure nuclear cataracts and 12 age-matched controls). Contrast sensitivity was assessed using tow techniques: a conventional monitor method in which gratings were viewed through the cataract (overall spatial contrast sensitivity) and a laser interferometer method in which gratings were formed directly on the retina (interferometric spatial contrast sensitivity), thus reducing the effect of an opaque lens on grating contrast. The degree of lens nuclear opacity was measured by assessing the density of Zeiss Scheimpflug slit-lamp video camera images. A contrast sensitivity loss was found by using both methods; this reduction reached statistical significance only when monitor stimuli were used. There was a significant correlation between lens nuclear density and sensitivity loss at spatial frequencies from 4 to 16 cycles/ degree (r=.56 to .19 and P<.05 to <.001). A correlation coefficient of .82 (P<.001) characterized the relationship between visual acuity (log of the minimal angle of resolution) and lens density. Nuclear lens opacity significantly affects contrast sensitivity; pure nuclear cataracts produce spatial visual losses at intermediate and high spatial frequencies. *(Arch Ophthalmol 110:953-959, 1992) Reprint requests to Dr. Drews-Bankiewcz, Ophthalmic Genetics and Clinical Services Branch, National Eye Institute, National Institutes of Health, Bldg 10, Rm 10N226, Bethesda, MD 20892.*

ROTATION OF POSTERIOR CHAMBER INTRAOCULAR LENSES FOR MANAGEMENT OF LENS-ASSOCIATED RECURRING HYPHEMAS, GR John, WJ Stark. Management of recurring hyphemas associated with posterior chamber intraocular lenses may include a combination of medical, laser, and surgical modalities. Miotic and laser therapies have often failed, and surgical treatment has primarily relied on removal of the lens implant. The rotation of the intraocular lens,described herein, may provides an effective means of preventing recurrent intraocular hemorrhage. *(Arch Ophthalmol 110:963-964, 1992) Reprint requests to Dr. Stark, Maumenee 327, The Johns Hopkins Hosptial, 600 N Wolfe St, Baltimore, MD 21205.*

COMPLICATIONS OF GLAUCOMA SURGERY, OCULAR DECOMPRESSION RETINOPATHY, RD Fechtner, D Minckler, RN Weinreb, G Frangei, LM Jampol. In seven of four patients, retinal hemorrhages were observed following trabeculectomy under both local and general anesthesia. The hemorrhages were diffuse, both deep and superficial, and many had white centers when first observed. Two patients were young healthy male myopes undergoing primary trabeculectomy. The third patient was a young man with chronic uveitis. The fourth patients was an elderly man with primary open angle glaucoma who had an acute rise in intraocular pressure following cataract extraction. Intraocular pressure and visual results appeared unaffected by the hemorrhages. Retinal hemorrhages associated with ocular decompression appear to be relatively benign. *(Arch Ophthalmol 110:965-968, 1992) Reprint requests to Dr. Weinreb, UCSD/Shiley Eye Center-0946, 9415 Campus Point Dr, La Jolla, CA 92093-0946.*

FINE-NEEDLE ASPIRATION BIOPSY OF THE IRIS, HE Grossniklaus. Fine-needle aspiration biopsy (FNAB) specimens obtained from nine consecutive iris lesions were examined. The lesions included primary malignant melanoma (four cases), metastatic melanoma, metastatic adenocarcinoma, leukemic infiltrate, lymphocytic infiltrate, and epithelial ingrowth. Subsequent histopathologic correlation was performed in all cases. Patient treatment influenced by the results of the FNABs included enucleation (three cases), clinical observation (two cases), external beam irridation (two cases), resection, and radioactive plaque application. No complications occurred from the FNABs. Fine-needle aspiration biopsy of th iris can be performed with local anesthesia at the slit lamp as an outpatient procedure. In general, FNAB is a safe, effective method of obtaining diagnostic material from primary neoplastic, secondary neoplastic, and degenerative processes involving the iris. Limitations of the procedure include discrepancies in interpretation of the cytologic study and inadequate specimen. *(Arch Ophthalmol 110:969-976, 1992) Reprint requests to Dr. Grossniklaus, the L.F. Montgomery Ophthalmic Pathology Laboratory, Emory Eye Center, Room 1603, 1327 Clifton Rd NE, Atlanta, GA 30322.*

CONTRAST SENSITIVITY AND READING THROUGH MULTIFOCAL INTRAOCULAR LENSES, H Akustsu, GE Legge, M Showalter, RL Lindstrom, RW Zabel, VM Kirby. Multifocal intraocular lenses are intended to increase depth of focus for patients with cataracts, but optical considerations predict reduced retinal-image contrast. They evaluated visual performance through multifocal intraocular lenses by measuring contrast sensitivity functions and reading speed for age-matched groups with multifocal and

monofocal intraocular lenses and two normal control groups. Contrast sensitivity functions of the patients with multifocal lenses did not differ significantly for optical distances differing by 2.5 diopters, indicating substantial depth of focus. Normal and monofocal contrast sensitivity functions were nearly identical, and both were about a factor of two higher than multifocal lenses showed deficits in reading speed only for low-contrast text (<30%) and small letters (0.2^0 and 1.0^0). *(Arch Ophthalmol 110:1076-1080, 1992) Reprint requests to Mr. Akutsu, Department of Psychology, University of Minnesota, 75 E River Rd, Minneapolis, MN 55455-0344.*

VISUAL ACUITY CORRELATES WITH SEVERITY OF RETINOPATHY OF PREMATURITY IN UNTREATED INFANTS WEIGHING 750g OR LESS AT BIRTH, HA Mintz-Hittner, TC Prager, FL Kretzer. Visual acuity was assessed in 72 patients who weighed 750g or less at birth, had intact visual pathways as confirmed with computed tomography or magnetic resonance imaging, and had at least one eye evaluated for cicatricial sequelae after active, untreated retinopathy of prematurity without macular detachment (stage 4a or better). Visual acuities were obtained for 137 untreated, sighted eyes. Severity parameters for retinopathy of prematurity (stage of retinopathy of prematurity, refraction [in spherical equivalents], and vessel traction [in 30^0 sectors]) was were significant predictors of visual acuity (P<.0001) based on results of linear regression and stepwise regression analyses; however, parameters of retinal immaturity (birth weight, gestational age, and zone of retinopathy of prematurity) were not significant predictors of visual acuity. Visual acutiy of the study eyes was good (median, 20/30; geometric mean, 20/33.58), with no statistical differences between eyes evaluated on last examination with linear Allen figures and those evaluated with linear Snellen test types. *(Arch Ophthalmol 110:1087-1091, 1992) Reprint requests to Dr. Kretzer, Cullen Eye Institute, Baylor College of Medicine, 1 Baylor Plaza, Houston, TX 77030.*

MAGNETIC RESONANCE IMAGING, DIVERSE APPEARANCES OF UVEAL MALIGNANT MELANOMAS, PA Bloom, JD Ferris, DAH Laidlaw, PR Goddard. Fifteen patients with uveal malignant melanoma were studied by magnetic resonance imaging. The magnetic resonance imaging appearances varied from those that have been reported previously to be characteristic of these tumors. In our series, malignant melanomas were of high signal on the T_1 sequence and of variable but usually also of high signal on the T_2 and Short Tau Inversion Recovery (STIR) sequences, a signal combination rarely described before. They postulate that magnetic resonance imaging appearances may be dependent on variations in histologic factors and on the type and field strength of the scanner used. It is widely believed that the paramagnetic melanin in malignant melanomas gives these tumors characteristic magnetic resonance imaging appearances, but our finding of diverse magnetic resonance imaging appearances for proved malignant melanomas suggests that this may not always be the case. They advise caution in diagnosing malignant melanomas from magnetic resonance imaging appearances alone. *(Arch Ophthalmol 110:1105-1111) Reprint requests to Dr.Bloom, Moorfields Eye Hospital, 162 City Rd, London, England EC1 2PD.*

OFLOXACIN VS TOBRAMYCIN FOR THE TREATMENT OF EXTERNAL OCULAR INFECTION, A Gwon, for the Ofoxacin Study Group II. A multicenter, double-masked, randomized clinical investigation was conducted comparing 0.3% ofloxacin and 0.3% tobramycin for topical treatment of external ocular infection. One drop (1.35 μg) of either test solution was instilled six times daily for 2 days and thereafter four times daily for the next 8 days. At the day 3 to 5 follow-up examination, the severity of signs and symptoms based on a clincial summary score of 10 key variables was reduced from baseline values significantly (P<.05) more with ofloxacin (-6.4 ± 4.37; mean +SD) Than with tobramycin (-4.78 ± 3.13); by day 11, the difference between the groups was no longer significant. At days 3 to 5 and day 11 examinations, clinical, microbiologic, and overall improvement rates were similar, with no significant differences seen between the groups. Ofloxacin was found as effective, safe, and comfortable as tobramycin in patients with external ocular infection and may provide earlier symptom relief. *(Arch Ophthalmol 110:1234-1237, 1992) Reprint requests to Dr. Gwon, Allergan Pharmaceuticals, 2525 Dupont Dr, Irvine, CA 92713-9534.*

SUBCONJUNCTIVAL CYSTS AS A COMPLICATION OF STRABISMUS SURGERY, BJ Kushner. Six patients were operated on for large subconjunctival cysts that developed up to 35 years after strabismus surgery. In four of these patients the cyst was found to arise between the anterior edge of the muscle and the site to which the muscle had been sutured during previous surgery. The muscle was attached to the posterior wall of the cyst and not to the sclera. A pseudotendon was found running between the point on the sclera to which the muscle had been sutured and the undersurface of the muscle far posteriorly. In the other two patients a sudoriferous cyst was found that the referring ophthalmologist had mistakenly thought to represent an abscess when excision was attempted. *(Arch Ophthalmol 110:1243-1245, 1992) Reprint requests to Dr. Kushner, University Hospital and Clinics, Ophthalmology Department, 2880 University Ave, Madison, WI 53705-3631.*

★★★★★

Scholarship Schedules:

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To you have come signs from your Lord;
Whoever therefore sees,
Does so for himself;
And whoever remains blind,
Does so to his own loss.
-Holy Qur'an 6:105

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In Combination with
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Alhamra Art Center, Lahore
December 16 (Thursday) - 19 (Sunday), 1993

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2. Khan, MD, Islam, Z, Nawaz, K, Islam, Z, and Khan, MA: Perforating eye injuries caused by disposable syringes. Pak J Ophthalmol 6:97-99, 1990. *(Give names of all the authors, and do not use "et. al," etc.)*

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