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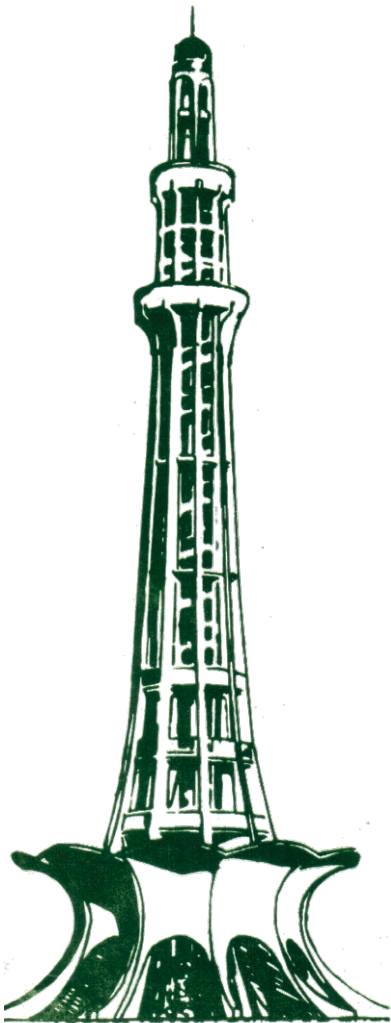
PAKISTAN JOURNAL OF OPHTHALMOLOGY

THE OFFICIAL JOURNAL OF THE OPHTHALMOLOGICAL SOCIETY OF PAKISTAN

VOL. 4 NO. 2

APRIL 1988

PUBLISHED QUARTERLY



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ISSN 0886-3067



BISMILLAHIR-RAHMANIR-RAHEEM

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Editor:

Khalid J. Awan, FPAMS

Vol. 4 No. 2

April, 1988

شعبان ۱۴۰۸ھ

ISSN 0886-3067

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INTERNATIONAL;
1921 Park Ave., S.W.
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238 Jinnah Colony
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Publisher: Khalid J. Awan, M.D., F.P.A.M.S.

Sponsor: Pakistan Academy of Medical Sciences

Manuscripts: Send manuscripts and all correspondence related to them to Khalid J. Awan, M.D., F.P.A.M.S. Editor, Pakistan Journal of Ophthalmology, 1921 Park Avenue, S.W. Norton, Virginia 24273 U.S.A.

Subscription: Non-members. Pakistan R. 400.00 per year; United States, \$50.00 per year; Elsewhere U.S. \$60.00 per year by surface mail and \$98.00 by air mail. Single copies: Pakistan Rs. 150; Elsewhere U.S. \$15. Send subscription with check or money order to Pakistan Journal of Ophthalmology, 1921 Park Avenue, S.W. Norton, Virginia 24273 U.S.A.

Replacement Issues-Policy: All requests for replacement of copies lost in the mail must be received within ninety (90) days of the last month the issue was published. After this period, a charge of \$10.00 per copy will be made, provided the copies are available.

Address changes: POSTMASTER please send address change to Pakistan Journal of Ophthalmology, 1921 Park Avenue, S.W. Norton, Virginia 24273 U.S.A.

Published quarterly in January, April, July and October.

Publication and Editorial Staff



Say: Are the blind and the seeing man equal, or are the darkness and the light equal?
Holy Quran 13:16

The Peshawar Congress

The Eleventh All-Pakistan Ophthalmological Congress was held in Peshawar, February 18-20, 1988. The Ophthalmological Society of Pakistan, with a membership of about 400, holds annual meetings in February when the weather is most agreeable and pleasant.

The scientific part of the Congress consisted of a number of symposia complemented by several free papers. The first symposium dealt with the application of lasers in ophthalmology. The state of the art expose was given by our chief editor, Dr. Khalid J. Awan. Other papers were by Prof. Foulds of Glasgow, Prof. Mortimer of Toronto and Prof. Naval of Manila.

Most interesting for me was the second symposium which dealt with community and preventive ophthalmology. Most informative was a report of Prof. Malik of India who presented a survey of his country's national program for the control of blindness. He told us that trachoma is also rare in India. More than one million cataract extractions are performed annually in that country. He favored the extension of eye camps, but only under proper guidelines. Several speakers, among them the distinguished president of the Society, Dr. J. Wania of Karachi, expressed a more critical view. They wanted an improved quality control - may be operating only under the supervision of a senior registrar before expanding the program. It seems that both India and Pakistan have a blindness prevalence of about 2% (though exact statistical data are not available in contrast to Saudi Arabia). The ratio of ophthalmologists to the population is in Pakistan about 1:300,000. The backlog of cataracts is great and the progressive aging of the population aggravates the situation. In view of the economic situation no easy or quick solution can be expected. Prof. Alan W. Johns from the Commonwealth Society for the Prevention of Blindness of London, gave an excellent review on the role of

international nongovernmental organizations in improving the eye health care of developing countries.

The discussion of the symposium brought out some interesting problems. Especially Prof. Mohammad Daud Khan of Peshawar emphasized the economic restraints of such preventive programs.

A most heart rendering report on ocular problems among Afghan refugees was given by Dr. H. Frisen and his group. War injuries dominate the picture. Dr. Frisen and his wife supervised an eye clinic for indigent Afghan patients in Kabul. With five million Afghans, they had to flee when the Russians invaded Afghanistan. This clinic in Peshawar is a model of what can be achieved by true and dedicated missionaries for the benefit of mankind.

Another symposium dealt with orbital diseases. It is difficult to argue with a man like Prof. Munirul-ul-Haq of the King Edward Medical College of Lahore, who sees each year orbital lesions by the hundreds. I had a chance to visit his clinic and saw 40 cases of orbital tumors.

A symposium on ocular trauma was chaired by Dr. D. Miller of Boston, who also spoke on some anterior segment problems. Mr. John Scott of Cambridge talked about the prevention of retinal detachments and some aspects of traumatic detachments.

On the evening preceding the Congress, the speakers were entertained by the Honorable Fida Muhammad Khan, the Governor of the North West Frontier Province. His house is a most elegant Victorian building and each one of us received a beautiful Pamathan dagger.

The inaugural session was attended by the President of the Islamic Republic of Pakistan, General Mohammad Zia-ul-Haq. First, the Society presented to the President a number of proposals and suggestions to improve the eye care delivery to the people of Pakistan. The President answered in a spirited way. He spoke mostly in Urdu (all

other communications were in English), but my friend, Khalid Awan, provided me with a simultaneous translation. The President first acceded to most of the proposals. He then stressed the medical needs of the rural population. His speech was interspersed with some witty remarks about the medical profession and he could even laugh at himself, e.g. when he complained about the sesquipedalian length of some medical terms. He joined us for dinner, freely mixing with the other participants.

The social events were crowned by an excursion to the Khyber Pass. It is an unforgettable trip and we were most royally welcomed by the Khyber Rifles.

The hospitality, kindness and cooperation of the Pakistani hosts were unsurpassed. They even organized for us the presidential plane so we could be flown to Islamabad and make our international connections in Karachi.

This Congress was a full success, both scientifically and socially. In addition, it gave the foreign guests a unique chance to learn more about Pakistan. I would urge everybody who has the slightest inclination for adventure to attend the next congress which will be held at the end of February 1989 in Karachi.

-Frederick C. Blodi, M.D.
Iowa City, Iowa, U.S.A.

For me, visiting Peshawar to attend the 11th All Pakistan Annual Congress of the Ophthalmological Society of Pakistan was a memorable event. All ceremonial, social, and scientific components of the meeting were expertly arranged, manifesting that the experiences gained from the past congresses had been put to use in enhancing the quality of the 11th Congress. Although hospitality is an impressive social trait of all Pakistanis, the generosity shown us at the home of Mian Javaid and his father Mian Abdul Hameed sahib was beyond description in cordiality and comfort. A Mercedes with a chauffeur was left at our disposal around the clock. The section of the house in which we stayed was attended to by meticulous daily preparation. The servants looked after all our needs. The breakfast and meals were prepared and served as not to interfere with our Congress schedule. It did not end there, and on the day of our departure, our hosts saw us off with gifts for our spouses and children. All of it was done with such warmth and unobtrusiveness that we never felt we were not in our own home. To sum up love of hospitality among residents of Peshawar, I wish to quote what

a Peshawari friend unaffectedly observed when he visited us at the Mian house: "It is embarrassing that these fancy hotels have popped up in Peshawar. It saddens us to see that now visitors have to pay to stay in Peshawar."

In professional sessions, all the topics were most adequately covered by the speakers of renown and experience. Many state of the art lectures were given. It would be nice if in the future one of such lectures is named as Ophthalmological Society of Pakistan Lecture, and the lecturer made an honorary member of the Society. I also would like to comment on a couple of things that may be looked into by the future organizers.

The scientific programme started out most impressively with a state of the art lecture on lasers. During the second session, some changes were made in presentations, probably due to the inability of some lecturers to attend the meeting. Unfortunately, this trend of alterations in the program continued, and too many changes were made at the last minute, leading to confusion in the minds of many people. I would like to strongly suggest that in the future minimum changes are made in the program and those too when absolutely unavoidable. May be commitments from the speakers should be reconfirmed before the program is given the final print. In scientific meetings, too many changes reflect poorly on the quality and the organization. In the event any change becomes unavoidable, it must be posted at least a day ahead of time at an appropriate location so that all the participants become fully knowledgeable about it.

The second thing which I noticed was that the announcement that with President's Dinner folk music would be presented as the Variety Show turned out to be misleading. Instead of the folk music a noisy local rock group who tried to imitate the popular Western music was presented. May be Pakistani delegates found it enjoyable, but I have no doubt our guests from abroad were utterly disappointed by it. In the future, the organizers should try to arrange for a mixture of the local folk items and the foreign imitations at the variety programmes for the enjoyment of all. I am sure that despite being a Pakistani, I would have enjoyed infinitely more if folk music and dances of Peshawar and North West Frontier were presented in place of the imitation Western rock.

In regard to Society business activities, the meeting of the Council was held too late in the night, making it difficult for many to attend and impossible for those who attended to concentrate.

Also, the meeting where policy for The Journal was discussed did not have full quorum, and many who attended that meeting were neither the members of the Editorial Board nor of the Council. I hope Dr. Mirza's volunteering to be an assistant to our Editor, Dr. Khalid Awan, brings about positive results for The Journal. In the future, more attention needs to be paid to the parliamentary process and the scheduling of business meetings.

Nonetheless, the Congress was a tremendous success on all counts, and all of the foreign delegates and invited speakers departed with a great deal of new knowledge and enthusiasm about our country and our specialty.

—Muhammad Humayun, FPAMS

Passing of a Pioneer

From time to time, there occur events of such great moment that an editorial becomes justified to underscore their significance. Professor Ramzan Ali Syed's decease, on March 11, 1988, is such an event in the history of the Pakistan ophthalmology. *Inna-lillahe-wa-inna-elaihe-rajioon!* (A panegyric honoring the memory of Professor Syed by his estimable colleagues and peer Professor Mahmud Ali Shah appears on page 42 of this issue.) Professor Syed was one of those fortunate individuals who receive education and master professional skills at the institutions of their native city, and then establish there to repay their alma mater by enhancing its prestige through their remarkable achievements and earn the love and respect of their hometown by rendering unparalleled services.

A glance at the curriculum vitae of Professor Syed makes one quickly appreciate that Providence singled him out for the future leadership in his field from the very start of his career. His birth took place in a small village called *Lakhdar* on the outskirts of Lahore on November 13, 1901. He matriculated from D.A.V. High, Lahore, in 1919; did F.Sc Premedical from Government College, Lahore, in 1921; finished M.B. B.S. at the King Edward Medical College, Lahore, in 1926, with awards in physiology, hygiene, and gynecology; and did D.O.M.S., London, in 1937, and D.O.L., London, in 1938. In 1939, Indian Public Service Commission held an all-India competition to select the Clinical Assistant to the Professor of Ophthalmology at the Kind Edward Medical College, Lahore. Young Dr. Syed applied and won the position, a remarkable feat for a Muslim in those days. When Pakistan wrested her freedom from the British Raj, he became the first Pakistani Professor of Ophthalmology, by amply qualifying

for the position through his credentials and not of necessity. He served in that capacity for ten years, fully realizing and commendably meeting the responsibilities of a pioneer ophthalmologist of Pakistan. During his service, he initiated the diploma courses in ophthalmology, trained young ophthalmologists to meet the pressing needs of our young Nation, and established the Ophthalmological Society of Pakistan as one of its leading founders.

In recognition of his services to the profession and nation, the President of Pakistan, General Muhammad Zia-ul-Haq instituted, in 1979, a Ramzan Ali Syed Gold Medal to be awarded by the Ophthalmological Society of Pakistan to its most outstanding and accomplished member for the year. The government also awarded him three squares of land (in Chak No. 487, G.B. Tehsil Samundri, District Faisalabad) to recognize his contributions. In 1987, four months before his demise, he was awarded the Commemorative Medal of Honor by the American Biographical Institute.

Professor Syed did not ignore, despite his immensely more demanding professional responsibilities than most of us have today, the research in ophthalmology. Hence, he published an original innovation in dacryocystorhinostomy (JPMA vol. 4, no. 3, 154); devised a new technique of partial sclerectomy with iridencleisis for glaucoma (Pak Med Forum, vol. 2, no. 1, 1967); reported the original technique of the removal of cataract in secondary glaucoma due to hypermature cataract or intumescent cataract in one stage (Medicus vol. 16, no. 1, 1958); demonstrated disseminated sclerosis for the first time in our people, in 1939 (Medicus vol 12, no. 6, 1956.); performed and reported on successful penetrating keratoplasty for the first time in Indo-Pakistan, in 1949 (Medicus vol, 1&3, no. 4, 1952); etc. After retirement, Professor Syed continued writing, but it was in extravocational fields. He published two books, "*Hadiyah Alwiyah*" and "*Muhammad, Prophet of Allah. The Prophet of Islam.*"

These literary and research interests and accomplishments of Professor Syed in the most demanding times of turmoil of a newborn nation are a beacon that lights the way to our more noble professional obligations, and removes the darkness of ignoble excuses of having no time or means to meet these obligations, and of pitiful pronouncements of "We don't need to follow the international standards" to rid our consciences of the guilt of unearned honors.

—Khalid J. Awan, FPAMS
Faisalabad, Pakistan



Camera Clinicals

In this section of the Journal, photographic documentation of interesting and challenging observations will be presented to the readers. They should make their diagnoses from the given information and compare these with the expositions given on pages 62 and 63—Editor

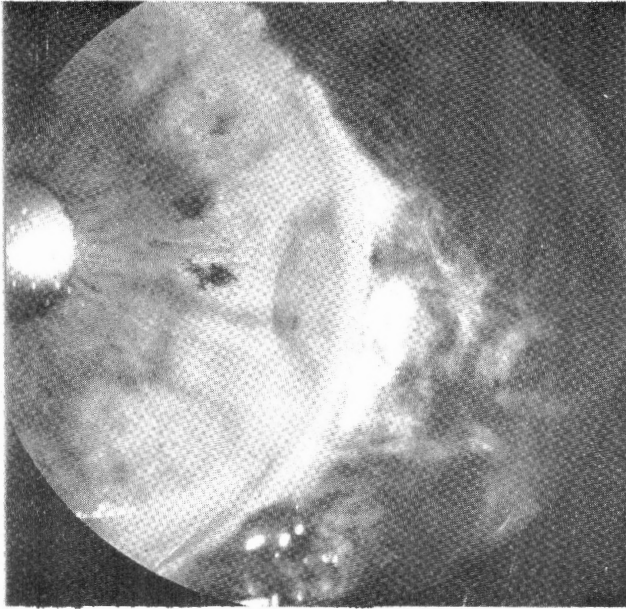


Figure 1

Figure 1: A 53-year-old woman came with complaint of severely red and mildly irritated right eye. The condition had developed rather suddenly, and the patient could not remember any specific incident that could have caused it. The visual acuity on examination was 20/20 (6/6) in each eye with here moderately high hypermetropic correction. The slit lamp and fundoscopic examinations were normal. The patient was a mild diabetic who had recovered from an episode of common cold a week before the condition developed.

Figure 2: A 47-year-old man came for eye examination for slight blurriness of his vision. His distant visual acuity was correctable to 20/20 (6/6) with minor hypermetropic astigmatic correction. The external, biomicroscopic, and extraocular muscle function examinations were normal. The intraocular pressure was 17 mm Hg in each eye by applanation tonometry. On

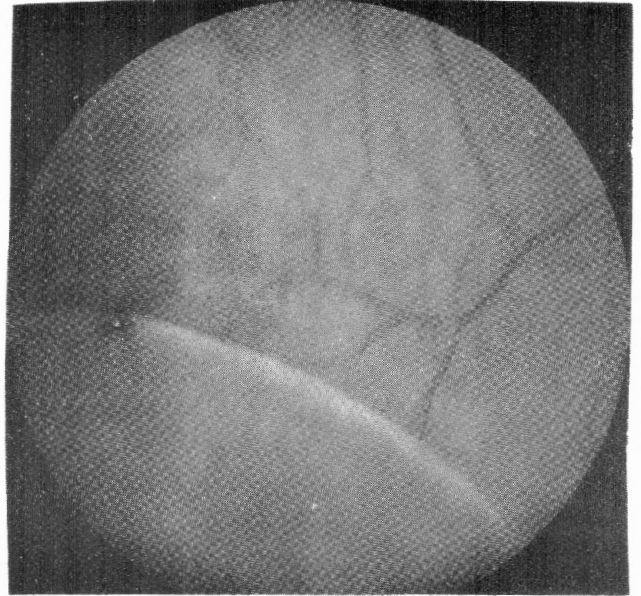


Figure 2

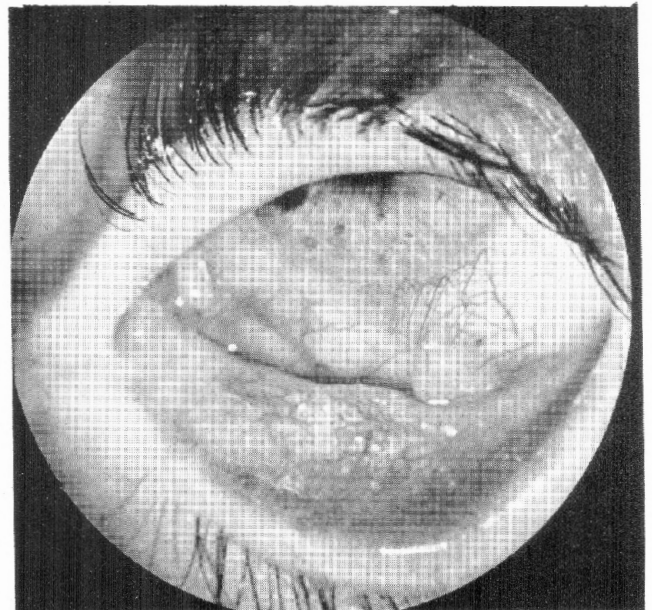


Figure 3

CAMERA CLINICALS

ophthalmoscopic examination the findings shown in this figure were noted in the right eye. The patient was placed under observation. After a 1½-year's follow up the fundus findings spontaneously disappeared without a trace, and have not recurred over the last ten years.

Figure 3: A 73-year-old woman came with complaint of pain, redness, and watering of her right eye. The redness was most prominent in the inferior cul-de-sac

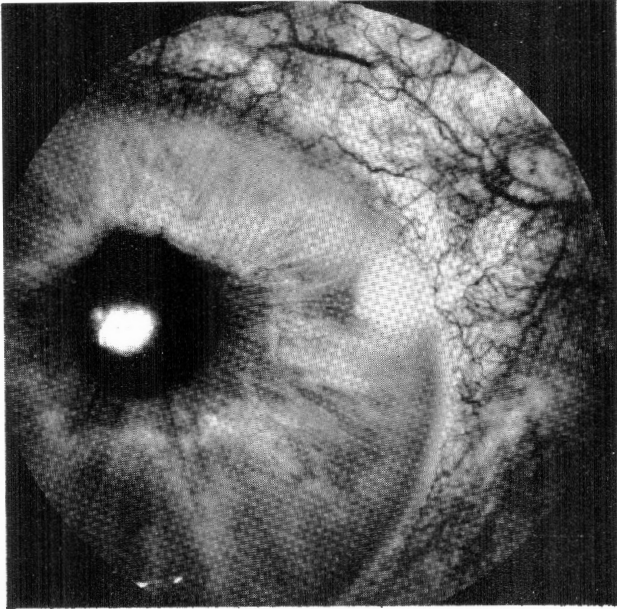


Figure 4

and a small mass was noted in the lower fornix. Her visual acuity was 20/20 (6/6) in each eye with her glasses. A week's topical antibiotic treatment reduced the redness, but the mass remained unchanged. There was no difficulty in the movements of the eyeball. The patient gave a history of having undergone excision of an irregular lesion from her right lower lid with good results about three years ago by a dermatologist. On the basis of the biopsy report of lesion in the lower fornix, the patient was

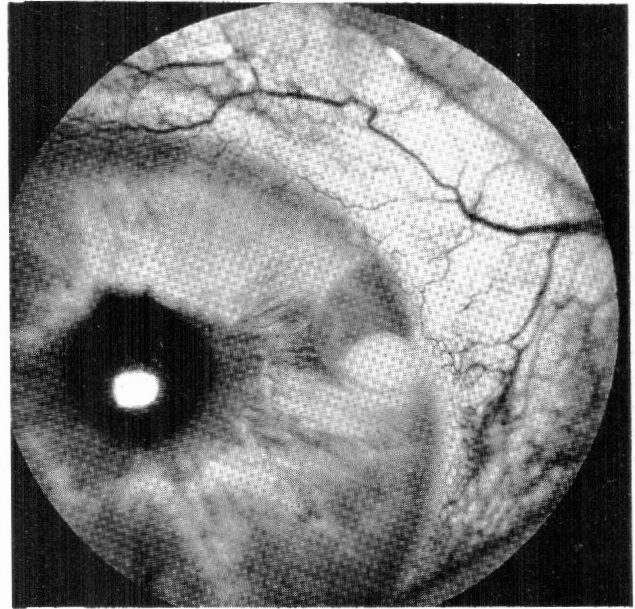


Figure 6

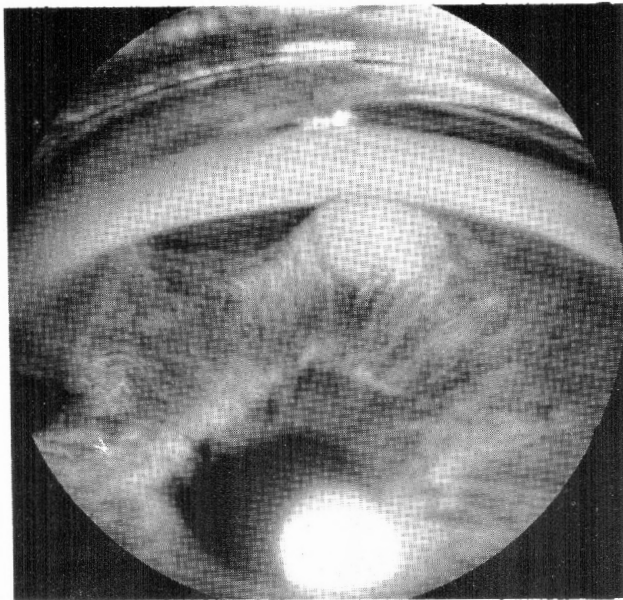


Figure 5

referred to a nearby university center where the right orbit was exenterated.

Figures 4-6: A 68-year-old man underwent an uncomplicated intracapsular cataract extraction on his left eye. A yellowish lesion developed in the angle at 2:30 o'clock position three months following the removal of cataract sutures. The lesion appeared solid and had fine blood vessels recurring across its surface. On gonioscopic examination, the lesion and other anterior synechia were noted to be at the sites of cataract sutures (Figure 5). The eye was red, painful, and profusely watering. An intensive local and systemic antibiotic therapy was started, but despite this the lesion kept enlarging. Finally, corticosteroids were added, which resulted in rapid clearing of the redness. After many weeks the lesion changed into a cyst mass which was partially filled with clear fluid (Figure 6).



Professor Ramzan Ali Syed

Professor Ramzan Ali Syed, pioneer of ophthalmology in Pakistan, passed away, at Lahore, on March 11, 1988 at the age of 86. Professor Syed was formerly Professor of Ophthalmology at King Edward Medical College, Lahore, and later at Fatimah Jinnah Medical College Lahore. I came to know Ramzan Ali in 1937, when I joined the Anatomy Department of the King Edward Medical College, Lahore as a demonstrator. Subsequently, he left for the United Kingdom for higher studies in ophthalmology. On his return, he was appointed assistant professor, and later, in 1948, promoted to professor at the King Edward Medical College, a post he held till attaining the age of superannuation. Even after retirement, he continued to teach as Professor at the Fatimah Jinnah Medical College, Lahore, for a number of years. I had the privilege of being a co-examiner with him for ophthalmology examinations of the University of the Punjab throughout the period that he was at the King Edward and the Fatimah Jinnah Medical Colleges.

Ramzan Ali was an erudite scholar, and progressive in professional outlook. He had unrivalled grasp of the diseases of the nervous system, as well as systemic disorders. He was one of the neatest surgeons, and I have not seen many like him. It was a pleasure to watch his deft fingers render a difficult operation into a simple one. He was the first to start keratoplasty in Pakistan, at Lahore, in 1948. At the time he used 5 mm trephine, covered the transplant with egg shell membrane, and gave basket sutures. His interest in glaucoma, and dacryocystorhinostomy resulted in his developing a number of innovative procedures. He had a very large consultation practice and soon after retiring established an eye hospital, the Ali Eye Hospital, at Lahore. He did not, however, let this interfere with his academic pursuits. His appearance at various national, and international conferences gave his erstwhile students and colleagues, a welcome opportunity to gain from his vast experience.

In recognition of Ramzan Ali's, outstanding professional services of over sixty years, Asia Pacific Academy of Ophthalmology awarded him the Jose Rizal Medal in 1979. To perpetuate the example of his notable contributions to ophthalmology, the President of Pakistan, General Mohammad Zia-ul-Haq, instituted the Ramzan Ali Syed Gold Medal in 1979, which is annually awarded to an ophthalmologist with significantly



Professor Ramzan Ali Syed
(1901-1988)

outstanding contributions to the art and science of ophthalmology.

He was soft spoken and of retiring undemonstrative nature. To those who did not know him well, he appeared austere. To his friends, however, he was a true friend in the best classical meaning of the word. For them he would always be ready not only to do whatever was in his power, but would be prepared to sacrifice his time, comfort and whatever else he was engaged in. Completely wedded to his profession, Ramzan Ali did not appear to have any hobbies. He had a happy family life, and all his children, two of them physicians, including an ophthalmologist, are highly educated and well settled.

In Ramzan Ali's death, the Pakistan Ophthalmology has lost an irreplaceable part of itself. To his friends, his passing on leaves a void in their lives impossible to be filled. They are consoled, however, by the thought that, like all the really great, Ramzan Ali during his lease of life conducted himself in a way as to leave a shining example, fit to be followed, and worthy to be proud.

*"They are gone who seemed so great
Gone; but nothing can bereave them
Of the force they made their own
Being here, and we believe them
Something far advanced in State,
And that they wear a truer crown
Than any wreath that man can weave them* (Tennyson)

— Mahmud A. Shah, M.D.

Former Professor of Ophthalmology and Dean, Dow Medical College, Karachi.



Combined Trabeculectomy and Intracapsular Cataract Extraction in the Pakistani Population

M. Saleem Akhtar, FRCS

ABSTRACT: The author performed combined trabeculectomy and intracapsular cataract extraction on 20 eyes of 15 Pakistani patients with glaucoma and cataract. Glaucoma was postoperatively controlled with or without additional medical treatment in 17 (85%) of the eyes. However, two years following the surgery, this percentage fell to 75% (15 eyes). Because of the extensive preoperative glaucomatous damage and other ocular diseases in many eyes, only 8 (40%) eyes achieved 20/40 (6/12) or better visual acuity. Overall, 13 (65%) eyes had better postoperative acuity. Comparing these results with other similar published studies from several parts of the world and considering the circumstances of a developing country like Pakistan, it appears that combined surgery for glaucoma and cataract is an acceptable alternative in the management of coexistent glaucoma and cataract in Pakistanis. (*Pakistan Journal of Ophthalmology* 4:43-46, 1988.)

Cataract and glaucoma often coexist but are usually dealt with separately when surgical treatment is needed. When the visual acuity is sufficiently reduced by cataract to warrant cataract extraction, the associated glaucoma can continue to cause damage to the visual fields and optic nerve head if it remains uncontrolled. On the other hand, initial successful surgery for glaucoma would not lead to patient satisfaction through improvement of visual acuity. The latter problem is a significant one in the developing areas with a poorly-educated population such as found in the rural areas in Pakistan, such as the one drained by General Hospital, Lahore. Such patients tend not to appear for the second procedure when cataract extraction and trabeculectomy are performed separately, particularly if cataract extraction is per-

formed first with restoration of some vision. The patients' lack of understanding of their disease and socio-economic problems result in the gradual development of blindness. Performing a combined procedure takes only 8-10 minutes more than cataract extraction alone, without additional expenditure of materials or hospital stay, which would otherwise be twice as great for two separate procedures.

In recent years, many authors from several countries have reported good results from combined filtering and cataract extraction procedures¹⁻⁶ The safety of such procedures is so well established that some surgeons are doing even the triple procedure of combined trabeculectomy, extracapsular cataract extraction and IOL implantation with satisfactory results.⁷⁻⁹ The author conducted a study to determine the risks and benefits of combined trabeculectomy and intracapsular cataract extraction in Pakistani patients with well established glaucoma and ad-

From the Department of Ophthalmology, Postgraduate Medical Institute, Lahore, Pakistan. Presented at the Ophthalmology 87, Lahore. Reprint requests to Dr. Akhtar at the above address.

vanced cataracts. The purpose of this paper is to report the findings of this study and comment on their implications.

Materials and Methods

This study included 20 eyes of 15 patients who had both cataract and glaucoma. Table 1 gives the type of glaucoma, age, and sex distribution of these patients. Out of a total of 20 eyes glaucoma was controlled in two with topical medication alone, in 10 with topical medication in combination with oral acetazolamide (Diamox), and in 8 it was uncontrolled. All the patients were operated on by the author between November, 1984 to August, 1986. The cataract was removed intracapsularly by cryoextraction after the trabeculectomy was completed.

All operations were done under local anesthesia. Three to four ml of 2% lidocaine (Lignocaine) solution were used for retrobulbar and facial blocks. For the facial block both Van Lint and O'Brien techniques were employed. Each eye received five minutes of globe massage to spread the anesthetic solution and to lower the intraocular pressure.

Table 1

Age, Sex and Type of Glaucoma
(20 Eyes in 15 Patients)

Glaucoma Type	No. of Patients	No. of Eyes	F	M	Mean Age
Open Angle	8	12 (60%)	5	3	58 yrs.
Narrow Angle	6	7 (35%)	3	3	56 yrs
Combined	1	1 (5%)	1	-	61 yrs.

The surgical technique involved making of a large limbus-based conjunctival flap starting at/or just anterior to the insertion of the superior rectus muscle. This was followed by the dissection of a superficial scleral flap of 5x5 mm that extended up to the limbus. A limbal groove was then extended on each side of the scleral flap for a total of 160°-170° of the planned corneal section. A full thickness tissue block of 3x3 mm was excised under the superficial flap to complete trabeculectomy. The cataract incision was completed before doing the peripheral iridectomy at the trabeculectomy site to avoid any accidental damage to the lens capsule by the scissors. Virgin silk sutures of 8-0 were placed at the corneo-scleral corners of the

superficial scleral flap before removing the lens with cryoextractor. After the intracapsular removal of the lens, the preplaced sutures were tied. Two more sutures were placed at the posterior edge of the flap. The remaining limbal wound was closed with four more interrupted sutures. Air was injected to reform the anterior chamber. Tenon's capsule was closed with interrupted sutures and the conjunctiva was closed over it with a running suture. Subconjunctival injections of gentamicin and corticosteroids were given at the conclusion of the procedure. Atropine 1% drops were also instilled before patching the eye.

Results

The visual results and overall post-operative glaucoma control are summarized in Tables 2 and 3. The control was defined as intraocular pressure of less than 22 mm Hg with or without additional medical treatment.

Table 2

6-Month Postoperative Visual Results
(20 Eyes).

Vision	Preoperative	Postoperative
20/40 (6/12)- or better	0	8 (40%)
20/60 (6/18)- 20/120 (6/36)	1 (5%)	5 (25%)
20/200 (6/60)- CF	6 (30%)	3 (15%)
HM-LP	13 (65%)	2 (10%)
NLP	--	2 (10%)

CF: Counting fingers at three feet, HM: and motion at three feet, LP: light perception, NLP: no light perception.

Table 3

Postoperative Glaucoma Control

Control	Follow-up Period		
	< 1 Year	1 Year	2 Year
Without treatment	12 (60%)	10 (50%)	8 (40%)
With drops (+Diamox)	5 (25%)	6 (30%)	7 (35%)
No Control	3 (15%)	4 (20%)	5 (25%)

Two eyes (10%) lost vitreous during surgery. The capsule ruptured in two (10%) other eyes, probably due to pilocarpine-included rigid miosis of the pupil. Four eyes (20%) had surgical hyphema. No attempt was made to wash it out at the end of procedure. But it cleared in 2-6 days

without any problem. A shallow anterior chamber was noticed in 10 (50%) eyes during the first 2 postoperative days. It was felt that it might have been due to excessive drainage from the 3x3 mm trabeculectomy fistula. In all but two eyes the anterior chamber attained reasonable depth by the 6th postoperative day, before the patient was discharged from the hospital. In the remaining two eyes it took about 10 days to regain full depth. These two eyes had choroidal detachment which settled spontaneously. Three eyes (15%) had severe uveitis needing subconjunctival corticosteroids (Depo-Medrol) in addition to topical treatment. The iris prolapsed in 2 (10%) eyes. In one case, it prolapsed through the trapdoor under the superficial scleral flap due to breaking of the one corner stitch. In the other case, it happened under the conjunctival flap at 10 o'clock, position. These were left alone. Table 4 summarizes the early postoperative complications.

One patient, a 35 year old juvenile diabetic with an only eye, developed neovascular glaucoma which could not be controlled and unfortunately left him blind. No patient developed retinal detachment, bullous keratopathy, or endophthalmitis during the follow up period. The postoperative astigmatism of more than two diopters was not seen in any eye.

Only 8 (40%) eyes achieved a corrected visual acuity of 6/12 or better (Table 2). The main factor accounting for the poor vision was preoperative glaucomatous visual damage. In a few eyes pre-existing macular changes accounted for it. Two eyes with very advanced glaucoma became NLP after the surgery. The overall control of the intraocular pressure (i.e. less than 22 mm Hg) at 6 months was achieved without medication in 12 (60%) eyes, at one year in 10 (50%) eyes, and at 2 years in 8 (40%) eyes. With topical antiglaucoma drops with or without acetazolamide (Diamox) the glaucoma was controlled at 6 months in 5 (25%) additional eyes, at one year in 6 (30%), and at two year in 7 (35%) additional eyes (Table 3).

Discussion

Cataract and glaucoma are often surgically dealt with as separate entities. When they coexist, not only the visual

acuity is reduced to low levels by the cataract, the associated glaucoma continues to damage the visual fields unabated if not treated in time. As stated by Awan,¹⁰ "The occurrence of cataract and glaucoma together is one of the most treacherous situations in ophthalmic practice. The presence of cataract makes the management and prognostic evaluation of glaucoma significantly more difficult.... The problem is compounded by the fact that in many instances either cataract or glaucoma can lead to the development of the other." Conversely, the treatment of only one condition, cataract or glaucoma, would certainly not provide the patient with optimum care. Lack of knowledge and socio-economic reasons led to these patients' presenting for surgery when vision in the only eye was threatened as well. The high frequency with which such potentially preventable blindness occurs in the population served by our hospital has been an extremely important factor behind the rationale for performing a combined procedure. Glaucoma is a big problem in the developing, poorly educated masses, as in the rural areas of Pakistan. It seems logical for many reasons to provide simultaneous surgical treatment for both conditions under such circumstances. The aims and objectives of such an approach in developing countries like Pakistan are: (1.) to deal with both cataract and glaucoma in one attempt; (2.) to cut down the cost and hospital stay; (3.) to reduce the socio-economic problems for the patients; (4.) to reduce the defaulters rate for second operation; and (5.) to restore and protect vision as early as possible.

Table 4

Postoperative Complications

Complications	No. of Eyes
HypHEMA*	7 (35%)
Shallow Anterior Chamber	10 (50%)
Flat Anterior Chamber**	2 (10%)
Choroidal Detachment	2 (10%)
Uveitis	3 (15%)
Iris Prolapse	2 (10%)

* Included 4 cases of surgical hypHEMA that did not clear. All eyes cleared in 4-10 days.

** Reformed in 7-10 days after patching only.

Our results compared favorably with the previous studies of trabeculectomy alone.¹¹ However, the proportion of our

patients requiring additional medical treatment for control of intraocular pressure rose from 25% at 6 months to 35% at two years. Fewer of those patients who were controlled preoperatively required any postoperative medication. Although the patients with open or closed angle glaucoma fared nearly equally well, the patient with combined glaucoma did not. The patient with juvenile diabetes and complicated cataract with glaucoma did very poorly, developing neovascular glaucoma within six months. His fundus showed fulminating proliferative diabetic retinopathy. The other eye was blind probably from similar more advanced changes.

The rate of 35% of hyphema in our series is more than double the rate quoted for trabeculectomy alone by Ridgway et al,¹¹ but is not much higher than similar studies of combined operation.^{12, 13}

The fact that an increasing percentage of patients required additional topical drops and/or acetazolamide (Diamox) therapy to control intraocular pressure with passage of time indicates the need for closer and regular follow up.

Seven (35%) patients had waited so long to seek medical help that their other eye had gone totally blind from glaucoma. They were under the impression that cataract was responsible for their gradual loss of sight, and had waited for the cataract to become mature. Two eyes in our study that had very advanced glaucoma became NLP after the surgery. In conclusion, the acceptable results of this study show that the wisdom lies in combined surgical treatment of glaucoma and

cataract in patients from rural areas of Pakistan, in some instances even on the first presentation of the patient.

Acknowledgement

Thanks are due to Prof. M. K. Rana.

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Ophthalmic "Pastpourri"

Indian "Eyelore" - Hollywood Style

A posse digs up the body of a recently dead American Indian. The hero pulls out his pistol and shoots a bullet in each eye of the corpse.

"What good did that do you?" asks a preacher in the party.

"By what you preach, none," retorts the hero. "But what that Comanche believes: aint got no eyes, he can't enter the spirit land. Has to wonder forever between the winds...."

John Wayne in the movie "The Searchers." - 1956



Modern Management of Penetrating Ocular Injuries

Robert J. Cooling, FRCS

ABSTRACT: This paper reviews current approaches to the management of penetrating ocular trauma. The author emphasizes the importance of the primary surgical repair and evaluates the role of closed microsurgery in the prevention of subsequent complications. (Pakistan Journal of Ophthalmology 4:47-50, 1988.)

Within the past decade, substantial changes have occurred in the management of penetrating ocular injuries such that the prospects for visual recovery have improved in selected categories of injury. Many of these changes reflect the development of more refined surgical instrumentation and improved surgical methodology leading to more radical and comprehensive treatment at an earlier stage in the hope of forestalling complications. Evidence obtained from standard and reproducible animal models of penetrating ocular trauma has largely confirmed clinical experiences and endorsed the rationale for early intraocular reconstruction.

We cannot of course ignore concurrent advances in diagnostic methods including high resolution ultrasound, computerized tomography and more lately magnetic resonance imaging techniques. These have come to play an important role in the determination of our surgical strategy.

In the evaluation of any individual injury, it is incumbent upon us to determine so far as we are able the initial extent and location of damage, to anticipate the likely complications and to formulate a surgical plan. It should also be recognized that sequential repair is often necessary

and that each step should have a defined set of surgical goals.

Attempts have been made to identify individual although inter-related factors associated with an unfavourable visual outcome.^{1,2} These have included poor initial acuity, the existence of a relative afferent pupil defect on presentation (although this requires careful interpretation) the contusional component of injury (eg. diffuse vitreous haemorrhage, major tissue expulsion or rupture of the globe) and the wound characteristics exceeding 10mm in length and extending beyond the rectus muscle insertions).

Microsurgical Wound Repair

Careful exploration of the wound to determine the posterior extent is an essential preliminary step and on occasions may require disinsertion of extraocular muscles. Accurate alignment and coaptation of the wound must be achieved together with removal of devitalized tissues and foreign material. Monofilament nylon should be used throughout the repair including the closure of scleral lacerations. Defective wound closure or the use of inappropriate materials may exaggerate wound healing, cause protracted hypotony and further intraocular damage and is likely to seriously hamper subsequent intraocular microsurgery.³

Presented at the 11th Congress of the Ophthalmological Society of Pakistan, February 18-20, 1988, Peshawar. Reprint requests to Mr. R. J. Cooling, 18 Wimpole Street, London W1M 7AD, U.K.

The occurrence of wound astigmatism may be a significant problem confined to lacerations exceeding 4mm or a third of the corneal diameter.^{1,4} In an attempt to reduce the degree of wound astigmatism, Rowsey⁵ has suggested the use of peripheral deep compressive sutures to offset central corneal flattening. Although theoretically attractive, the results of this technique are unproven but it is possible that this may reduce the need for secondary compression or relaxation keratorefractive techniques.

Role of Viscoelastic Materials

The availability of inert, non-osmotic and absorbable materials with high viscosity and elasticity facilitates several aspects of the immediate surgical repair. Maintenance of the anterior chamber facilitates alignment and repositioning of the wound with early restoration of ocular contours and the chamber angle. Earlier corneal deturgescence is achieved together with confinement of capillary bleeding improved visibility and allows safer intracameral manipulation.⁶ There are however a number of disadvantages including the effect on suture handling, vitreous admixture and confirmation of a water-tight repair not to mention the possibility of secondary hypertension. Drews⁷ has also drawn our attention to the value of these materials in performing capsulotomy in fresh penetrating lens injury. There are also a number of important applications in the course of secondary anterior segment reconstruction, which are discussed here.

Management of Iris and Lens Damage

There are sound optical and cosmetic reasons for preserving a normal iris diaphragm and pupil after penetrating injury. Mechanical repositioning of prolapsed iris is generally possible but if devitalised, sector excision should be followed by primary iris repair using polypropylene sutures. Relaxing incisions may be made in the adjacent iris to allow closure of the coloboma which may be accomplished by a McCannel closed approach or through the wound. Reformation of the diaphragm discourages periph-

eral adhesions to the corneal wound which impairs healing and encourages wound vascularisation. Early reformation of the drainage angle is obviously essential to avoid the problems of chronic angle closure glaucoma.

Failure to deal with a grossly disrupted lens at the time of primary repair carries important implications. Rapid intumescence and the release of flocculent lens material interferes with aqueous circulation and adversely affects wound healing. Careful assessment is required to determine the extent of damage including breach of the posterior capsule or zonular dehiscence. On occasions, the initial appearances may be confusing and the presence of fibrin and blood within the anterior chamber may mimic disruption of the lens.

The choice of surgical technique depends upon various factors but in all cases it is important to anticipate the likely method of optical correction of the resulting aphakia. Standard infusion aspiration techniques often suffice but in the case of through and through lens damage the use of a suction cutter with automated linear suction is required. As a general principle, primary intraocular lens insertion should be avoided and undertaken as a secondary procedure. Early establishment of clear media is obviously an essential aim particularly in early childhood to prevent amblyopia.

Various options are now open to us for the correction of traumatic aphakia. Our experience with the use of aphakic contact lens correction like that of many others has been disappointing. In a high proportion of patients contact lens wear is often abandoned for various reasons within a year of injury. Posterior chamber lens implantation provides better optical correction with greater possibilities of restoring full binocular vision. In a personal series, visual acuity of 6/12 or better was achieved in 73% of 22 eyes, the age range being 3-67 years with a mean of 19 years and a follow-up interval ranging from 6-36 months. Strict selection criteria must be applied particularly in those patients suffering posterior segment damage or with depleted corneal endothelial reserve. There are, however, no reported

long-term experiences on the use of intraocular lens correction of traumatic aphakia and the standing of such procedures in relation to other methods such as epikeratophakia are unknown.

Closed Microsurgery and Allied Techniques

The advent of closed microsurgery has provided unrivalled opportunities in the prevention or early management of posterior segment complications. Broadly speaking, these techniques are employed for 1) clearance of intraocular opacities including lens damage, cyclitic membrane or dense vitreous hemorrhage, 2) the prevention or elimination of certain types of vitreoretinal traction and 3) the repair of retinal detachment. Further objectives may include the removal of reactive intraocular foreign material, restoration of normal aqueous dynamics and as an adjunct in the treatment and diagnosis of infectious endophthalmitis.

It is important to appreciate that these techniques are often undertaken on a prophylactic basis. As such, they should be viewed against the significant operative risks. By the same token, the limitations of vitrectomy when dealing with advanced proliferative vitreoretinopathy and severe vitreous base pathology must be recognized.

At the time of immediate reconstruction, these techniques should be limited to revision of anterior and mid-segment damage. Primary posterior vitrectomy is particularly hazardous with difficulties of identifying damaged tissues and the possibility of displaced retina. Furthermore, attempts to cannulate the eye via the pars plana are best avoided and reformation of the posterior compartment should be achieved by the injection of physiological vitreous substitutes.

The benefits of primary scleral buckling and cryotherapy are open to question. Anterior encirclement may be considered but often interferes with subsequent intraocular microsurgery. Similarly, cryotherapy applied in the vicinity of the wound may simply enhance cellular proliferation,⁸ induce choroidal haemorrhage or increase congestion and in most cases the creation of a chorioretinal

adhesion is probably ineffective.

Undoubtedly the most contentious issue is the timing of vitrectomy. Early intervention within a period of 72 hours of injury has been strongly advocated by Coleman⁹ whereas most authorities recommend this be deferred for an indefinable period of approximately 2-3 weeks. In an attempt to resolve this issue, De Juan, Sternberg and Michels¹⁰ compared the visual outcome in two similar groups undergoing immediate and later vitrectomy. There was a trend towards better visual results in the immediate vitrectomy group but this did not achieve statistical significance. It was considered these differences were related to the types of injury rather than the timing of vitrectomy per se. Because of the number of variables, there is no optimal timing and in each individual case the criteria for intervention must be balanced against those for delay. Immediate or early vitrectomy may be associated with problems of surgical access, choroidal congestion, poor visibility because of anterior segment wounds or uncontrolled intraocular haemorrhage. Furthermore, complete vitrectomy is often difficult to achieve which in the view of most authorities is an essential surgical objective in most cases. In addition, established or impending posterior vitreous detachment carries important technical advantages. On the other hand, delayed vitrectomy may occasion greater risks of inoperable retinal detachment and in particular the difficulty of controlling peripheral retinal breaks. Fibrocellular repopulation frequently accounts for a disappointing outcome and is often unresponsive to further surgical measures.

Future Approaches

Although further surgical advances can be expected particularly in the field of laser micro-dissection or the closure of retinal breaks using tissue adhesives or retinal patching, the way forward must lie in the direction of pharmacological control or prevention of intraocular cellular proliferation. Considerable efforts have already been expended in the search for agents which may influence cell replication, fibroblast contraction or

modulate extracellular factors such as fibronectin. Most studies have been performed on an experimental basis using animal or in vitro models to explore the potential benefits and toxicity of these agents. Recently, some authors have reported favourable experiences with the use of intraocular infusion of Daunorubicin in cases of traumatic proliferative vitreoretinopathy.¹¹ This anthracycline antibiotic has complex biological effects which appear to be independent of the cell cycle and therefore brief exposure times may be sufficient to suppress cellular proliferation.

A further recent interesting approach has been the use of ionising radiation employing whole eye irradiation.¹² In 1986, Chakravarthy, Maguire and Ascher¹³ used localised gamma irradiation in the form of Cobalt 60 plaques in an experimental model of traumatic proliferative vitreoretinopathy. Dramatic reduction of cellular proliferation in the region of the penetrating wound was demonstrated with no significant effect upon normal wound healing. In the foreseeable future, it may be possible by pharmacological means to dampen the exponential inflammatory response to injury and contain the resulting intraocular cellular proliferation either alone or as an adjunct to surgical reconstruction.

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Ophthalmic "Pastpourri"

Ex

"Fatal Attraction"

A 76-year old farmer had a cataract extraction on his only eye on February 16, 1887. He developed "a condition akin to dementia on the second day, chemosis (of the eye) on the fourth day, well marked panophthalmitis on the eighth day, vomiting with loss of power over his sphincters on the twelfth day, and died on the twentieth day after the operation."

D. Webster, New York - 1888

117-25

The patients who receive inadequate postoperative care, particularly in the poorly organized and substandard eye camps, risk similar consequences even in today's era of modern antibiotic. - Editor.



Clinical Features of Choroideremia in a 5-Generation Pedigree

Franz Diekstatt
and
Ulrich Demeler

ABSTRACT: This report describes the clinical and morphological features of X-linked recessive chorioretinal disorder called choroideremia in five generations of one family. The pedigree shows the typical X-linked transmission. The fundus changes of carrier state, "salt and pepper" appearance of the ocular fundus, in one female twin of 25 and midperipheral pigmentation in the other, the typical appearance of choroideremia in two affected males of 53 and 54, and a beginning stage in a 4-year-old boy were found. This study demonstrates that due to the uncharacteristic features in the early stages of the disease in the afflicted males and the carrier state fundus changes that might not appear clinically important, the examination of family members is essential for accurate diagnosis and proper medical management of choroideremia. (Pakistan Journal of Ophthalmology 4:51-54, 1988.)

In 1872 "Choroideremia" was primarily described as a bilateral progressive disease of the choroid and the retina with night-blindness and constricted visual fields¹. As cases accumulated less extreme pictures were observed, which helped to establish, despite clinical similarities, choroideremia as a distinct clinical entity unrelated to either gyrate atrophy or retinitis pigmentosa^{2,3,4,5}.

In 1942, the intermediate X-linked genetic transmission of this disorder was postulated^{6,7}. In 1948 a pedigree was presented of 86 cases of choroideremia in a family of 600 members⁸. More pedigrees were published in the following years demonstrating choroideremia as a clinical entity with X-linked trait⁹⁻¹⁰.

Choroideremia is a slowly progressive disease beginning with granular clumping of the pigment epithelium similar to a "salt and pepper" fundus. The main feature initially is night-blindness. Further atrophy appears in the equatorial and paramacular areas. Focal areas of choroidal vessels and pigment epithelial atrophy demonstrate the next stage. These areas become larger and more numerous. In the final stage there is atrophy and progressive disappearance of choroidal vessels from the periphery to the center sparing the macular region the longest, and the fundus acquires the

characteristic appearance, uniformly yellowish-white with a pearly lustre, as if only the sclera was left behind.

Contrary to the progressive affliction in male, female carriers show mainly stationary fundus anomalies without functional morbidity^{11,12}. The ophthalmoscopic appearance is variable. Most frequently there is clumped pigmentation, grouped in the midperiphery, often associated with spotty areas of pigment epithelial atrophy. In other cases a retinopathy of the "salt and pepper" type has been noted. All visual functions remain normal, although there may be a mild degree of visual loss in adult life¹³.

Methods and Materials

Members of a family (3 generations) were examined by biomicroscopic and functional ophthalmologic methods, because a 4-year-old boy of this family showed night-blindness. Information on two more preceding generations was gathered from any available medical records and historical interviews with the family members. The corrected visual acuity was tested by Landolt rings. Visual fields were measured by Goldmann perimeter. Kinetic perimetry was performed using white test targets V/4, I/4 and I/2. Color vision was evaluated using the Farnsworth-Munsell 100 hue test¹⁷ and alternatively for examination of the two young boys the Panel D 15 test saturated and desaturated.

Accepted for publication on October 10, 1987.
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Germany.

Case I/1	anamnesitic	night-blindness since youth total blindness in adult life	Case IV/5	25-year-old female (twin) visual acuity color vision	normal (20/20) normal, no axis visible in the Farnsworth-Munsell 100 hue test; total error score 26 (normal < 90)
	diagnosis	choroideremia		dark adaptation ERG fundus	normal normal response midperipheral pigmentations (Figure 3)
Case III/2	54-year-old male visual acuity	RE 0.05 (20/400) LE 0.05 (20/400)		diagnosis	carrier state of choroideremia
	visual field color vision dark adaptation ERG fundus	strong constricted not recordable monophasic pathologic extinguished typical appearance of choroideremia	Case VI/1	4-year-old male visual acuity	RE 0.6 (20/30) LE 0.5 (20/40)
	diagnosis	choroideremia		visual field color vision	no cooperation no cooperation in the Farnsworth-Munsell 100 hue test; blue-yellow axis in the Panel D 15 test
Case III/3	53-year-old male visual acuity	RE 1/20 (20/200) LE light perception, light projection defect		dark adaptation ERG fundus	monophasic pathologic extinguished choroidal vessel atrophy (Figure 4)
	visual field color vision dark adaptation ERG fundus	not recordable severely dyschromatic monophasic pathologic extinguished typical choroideremia fundus (Figure 1)	Case V/2	diagnosis	choroideremia
	diagnosis	choroideremia		8-year-old female visual acuity	RE 1.0 (20/20) LE 1.0 (20/20)
Case III/4	57-year-old female visual acuity	RE 1.0 (20/20) LE 1.0 (20/20)		visual field color vision	normal normal, no axis in the Farnsworth-Munsell 100 hue test; total error score 102 (normal < 150)
	visual field color vision	normal normal, no axis visible in the Farnsworth-Munsell 100 hue test; total error score 62 (normal < 175)	Case V/3	diagnosis	normal
	ERG fundus diagnosis	normal response normal normal		4-year-old male visual acuity	RE 0.5 (20/40) LE 0.5 (20/40)
Case IV/2	27-year-old male visual acuity	RE 0.2 (20/100) LE 0.2 (20/100)		visual field color vision	no cooperation no cooperation in the Farnsworth-Munsell 100 hue test; no axis in the Panel D 15 test
	visual field color vision	dilated blind spot with partial central scotoma deuter axis in the Farnsworth-Munsell 100 hue test; total error score 250 (normal < 100)		dark adaptation ERG fundus diagnosis	normal response normal no signs of choroideremia
	dark adaptation ERG fundus diagnosis	normal normal response partial optic atrophy perinatal optic atrophy history of perinatal asphyxia			
Case IV/3	25-year-old female (twin) visual acuity	RE 1.0 (20/20) LE 1.0 (20/20)			
	visual field color vision	normal normal, no axis visible in the Farnsworth-Munsell 100 hue test; total error score 40 (normal < 90)			
	dark adaptation ERG fundus diagnosis	normal normal response "salt and pepper" appearance (Figure 2) carrier state of choroideremia			

Dark adaptation was tested by Goldman Wecker adaptometer. After light adaptation for ten minutes with illumination of approximately 2.500 lux, visual threshold was measured in dark for 60 minutes if possible, in two minute intervals for the first 15 minutes and five minute intervals for the rest. The measurements were taken at 15° of the upper retina, at which point a white test target of 11° was presented. The dark adaptation was tested binocularly in cases of poor visual acuity.

The single flash electroretinogram was recorded after 30 minutes of dark adaptation by Ganzfeld blue test flashes. The patients' eyes were dilated with tropicamide and phenylephrin hydrochloride eye drops. A reference

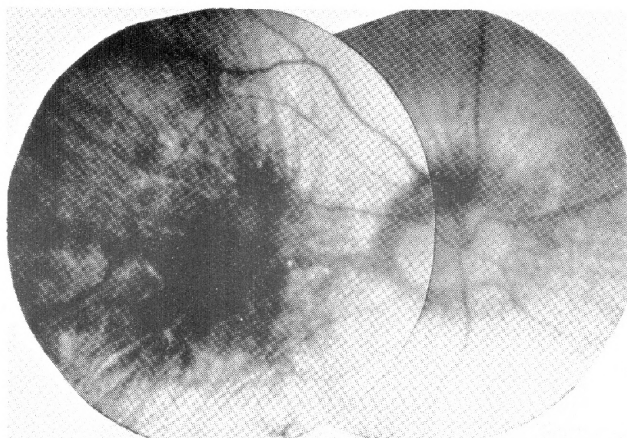


Figure 1 (Diekstall and Demeler): Choroideremia; final stage fundus appearance.

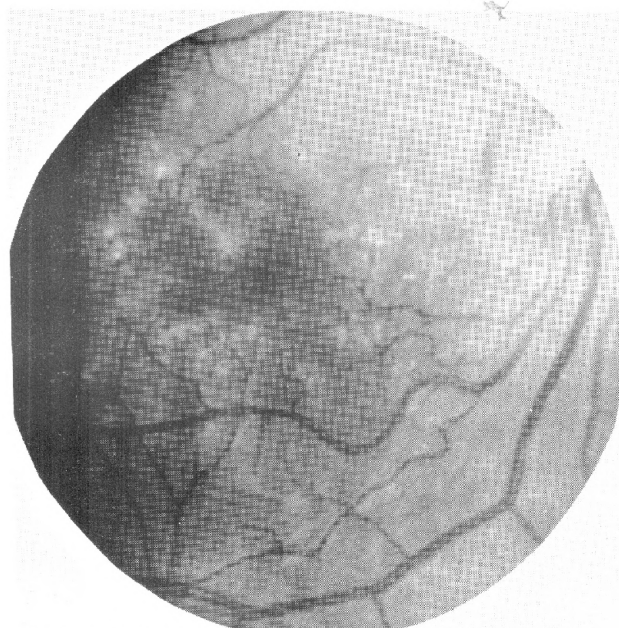


Figure 2 (Diekstall and Demeler): Carrier of choroideremia, "salt and pepper"—fundus.

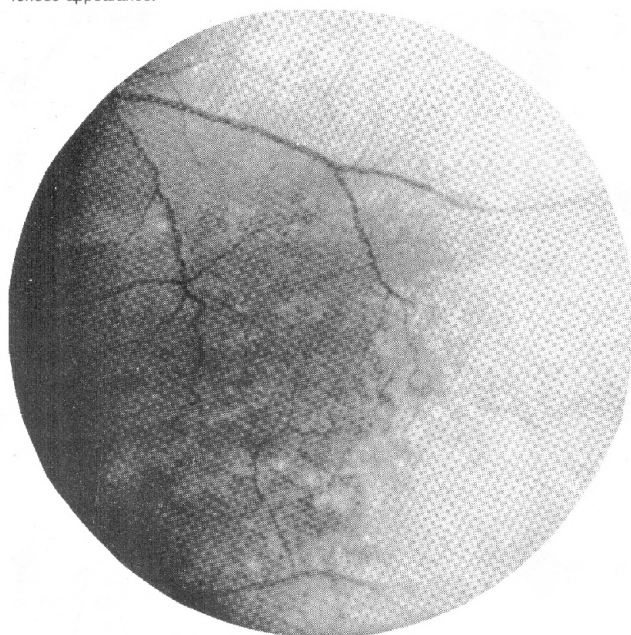


Figure 3 (Diekstall and Demeler): Carrier of choroideremia, midperipheral fundus pigmentation.

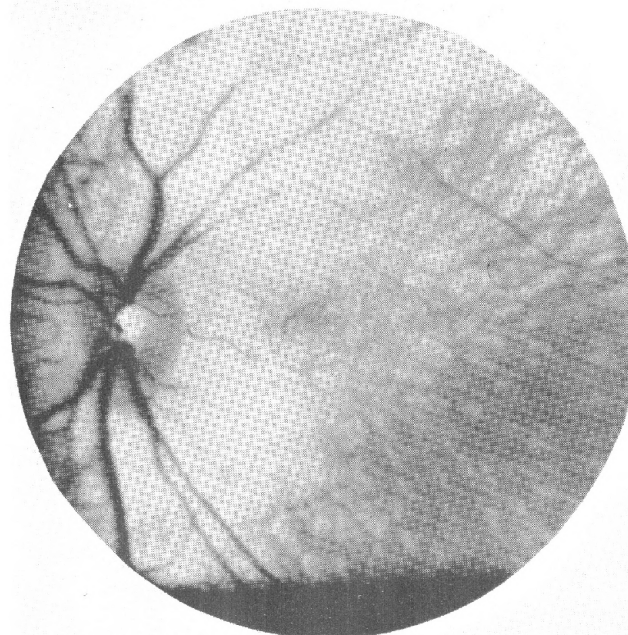


Figure 4 (Diekstall and Demeler): Choroideremia, early stage fundus.

electrode was placed on the forehead and a ground electrode on the earlobe⁴.

Results

Thirty years ago an atypical retinitis pigmentosa was diagnosed in three members of this family (Table I, case I/1, III/2, III/3). Our study revealed three males affected with choroideremia and three carriers of this disorder (Table I, case IV/3, IV/5, V/2).

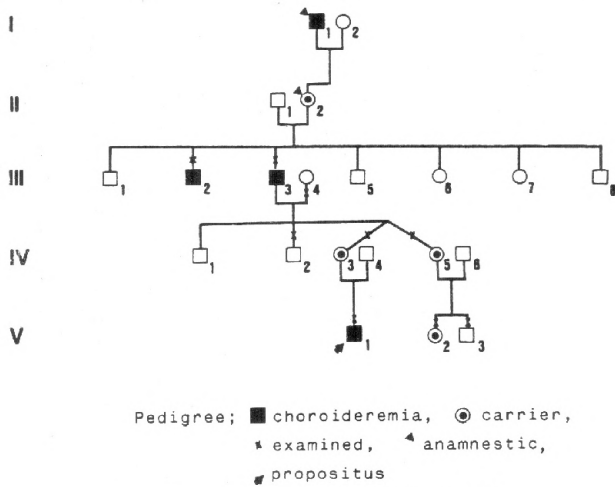
The color vision of all carriers of choroideremia was a trichromatic state. The 4-year-old boy demonstrated a blue-yellowish dyschromatopsia as a sign for degenerative disorders. In the three affected male patients a monophasic pathologic dark adaptation curve was found (Table II), whereas the carriers revealed a normal biphasic curve (Table II). Furthermore in the

carrier state a normal ERG was found, although the amplitude of the scotopic b-wave was at the lower limit (Table III). In cases of choroideremia the ERG was extinguished (Table III).

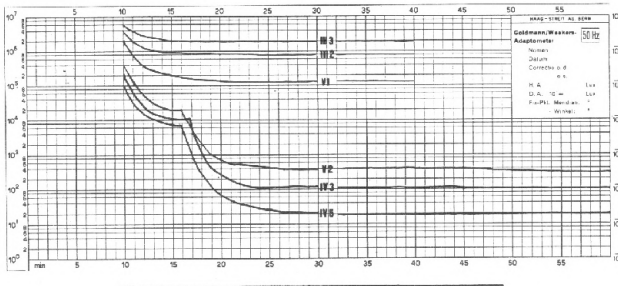
Comments

The serious nature of choroideremia and its social implications make early diagnosis highly desirable. Affected families must be told of the prognosis and a careful explanation of the hereditary transmission as X-linked recessive trait should be given. To identify car-

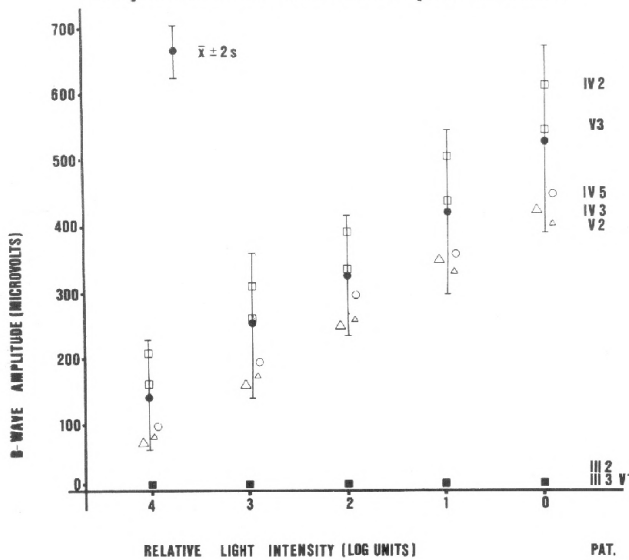
**Table I
Pedigree**



**Table II
Dark adaptation Curves**



**Table III
Elektroretinogram
amplitude of the scotopic b-wave**



riers of this disorder, all females in any family with choroideremia should be examined. The possibility of carrier state is considered in any female showing pigment fundus changes, even if there may be no functional symptoms.

In early stage, choroideremia poses a differential diagnostic problem due to the mild features of this disease. If choroideremia is suspected in a patient, an investigation of all members of his family is necessary to identify possible cases with the more advanced characteristic features of this disorder.

In recent years, investigations of the gene locus of X-linked retinal degenerations were successful. In 1984, the localization of the gene locus in X-linked retinopathia pigmentosa has been described.¹⁵ Analogous investigations also revealed the approximate gene locus of choiroideremia.¹⁶

Thus a method of prenatal diagnosis of choroideremia would be soon available. However, any useful therapeutic possibility still remains elusive.

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11th All-Pakistan Congress of the Ophthalmological Society of Pakistan

Mohammad Daud Khan, FRCS,
Jamshed H. Wania, MD
Mahmud A. Shah, FPAMS

ABSTRACT: This article includes summarized description of the social, ceremonial, and scientific proceedings of the 11th Congress of the Ophthalmological Society of Pakistan, held at Peshawar on February 18-20, 1988, the text of the Society President's address, excerpts from the Organizing Secretary's welcome address, and text of the citation for the 1988 Ramzan Ali Syed Gold Medal. (Pakistan Journal of Ophthalmology 4:55-61, 1988.)

The Congress was inaugurated by General Mohammad Zia-ul-Haq, President of the Islamic Republic of Pakistan, at 5 p.m. on February 18, 1988 at Hotel Pearl Continental, Peshawar. More than 700 dignitaries from all walks of life attended the inaugural session. (Figure 1) After recitation from the Holy Quran, Dr. Sheikh Muzaffar Iqbal, Chairman of the Organizing Committee, offered his Welcome Address and placed the following formal demands before Mr. President:

1. "Your government very graciously acceded to our request in 1980 for a separate eye hospital in Peshawar. A 337-bed eye hospital is now under construction at Hayat Abad and its first phase will be ready by the end of this year. We would now request you to grant it a status of the provincial Institute of Ophthalmology. We also request that the Provincial Government name it the Zia-ul-Haq Institute of Ophthalmic Medical Sciences for the North West Frontier Province."

2. "To achieve the goal of eye care for all the citizens of the province by year 2000, we would like to request that the number of District Ophthalmologists be increased to two, and one post be created at the tehsil level in the next five-year plan."

3. "There is an urgent need for a special grant for upgrading the district ophthalmic



Figure 1 (Khan): Inauguration. Left to right are Dr. Haseeb Alam; Governor Fida Mohammad Khan of NWFP; Dr. Jamshed Wania, President Zia, the Chief Guest; Dr. S. Muzaffar Iqbal; Chief Minister of NWFP; Professor Murad Ali; and Dr. Zia-ul-Islam.

departments so that they are equipped with at least basic and necessary ophthalmic diagnostic and surgical equipment."

4. "A cadre of ophthalmic technicians should be created who should not only be posted in all the hospitals but also in all basic health units where they can be helpful in the delivery of primary eye health care."

5. "The Institute for the Blind in Peshawar should be upgraded. All the blind should be

provided with a white cane, and they should be given, if resources permit, subsistence allowance from the Zakat Fund."

6. To keep abreast with modern trends in ophthalmic techniques, at least one or two ophthalmologists from each province should be funded to go abroad every year for a refresher course for a period of 4-6 weeks. Similarly, all the district ophthalmologists should be allowed opportunity to return to the teaching hospitals, at least once three years, for a refresher course."

The President graciously acceded to all the demands except one, that the Institute should not be named after him.

In his address, **Dr. Jamshed Wania**, the President of the Ophthalmological Society of Pakistan, stressed on raising the standards of postgraduate teaching and training in ophthalmology, making it uniform throughout the country. Such efforts, he suggested, should eventually lead to a an independent Pakistan College of Ophthalmology with its own board and standardized examinations.

President Zia presented to **Dr. Jamshed Wania** the **Society's 1988 Ramzan Ali Syed Gold Medal** for his distinguished services to ophthalmology in general and to the Society in particular. **Professor Mohammad Daud Khan** introduced the guest speakers from abroad to the guests. He also announced a biennial scholarship on behalf of **Dr. Akira Momose** to a postgraduate trainee in ophthalmology for 2-3 months in Japan. The first such scholarship will go to a candidate from the North West Frontier Province. The Organizing Secretary of the Congress, **Dr. Zia-ul-Islam** presented the vote of thanks and concluded the inaugural session.



Figure 2 (Khan): All scientific sessions were heavily attended.

Scientific Sessions (Figures 2-4)

The **first scientific session**, a symposium on laser, took place on the morning of February 18, 1988. **Dr. Khalid J. Awan**



Figure 3 (Khan): The second scientific session was chaired by Professor Sohrab Darougar (left), Co-Chairman was Professor Mahmud Ali Shah (middle), and the Secretary was Dr. Mohammad Yaqin (right).

opened the session with his State of the Art Lecture on Laser in Ophthalmology. It lasted for 45 minutes and covered the past, present and future of this burning topic in a language that was easy to understand but at the same time highly scientific and technical. The 2nd speaker was **Professor W. S. Foulds** from Glasgow, who spoke on the uses and limitations of laser in the management of diabetic retinopathy. The 3rd speaker was **Professor Clive B. Mortimer** from Canada who spoke on the uses of the neodymium: YAG laser in ophthalmology. The last speaker was **Professor C.I.N. Naval** from Phillipines. He spoke on treatment of early pterygium by laser. He also showed a video on this subject. **Professor Clive Mortimer** chaired the session on laser, **Professor Lateef Chaudhry** was the Co-Chairman, and **Dr. Muhammad Humayun** from Canada acted as the Secretary.

The **second session** was on Community and Preventive Ophthalmology. **Professor S. Darougar** from UK chaired the session. **Professor M. A. Shah** was the Co-Chairman, and **Dr. M. Yaqin** acted as the Secretary. Professor S. Darougar of London's Institute of Ophthalmology, **Professor S.R.K. Malik** from India, **Mr. J. D. Scott** from Cambridge, **Dr. Alan W. Johns** of Royal Commonwealth Society for the Prevention of Blindness were the main speakers of the session. The session covered almost all aspects of this very important subject, including the prevention of blindness from retinal detachment, which was dealt with in great detail by **Mr. J. D. Scott**.

The **3rd session** was a symposium on cataract surgery and the intraocular lens implants. **Professor Akira Momose** of Japan Chaired the meeting. **Professor Raja Mumtaz**

was the Co-Chairman and **Dr. Akhtar Jamal Khan** acted as the Secretary of this session. **Dr. David Miller**, **Dr. Akira Momose**, **Dr. Muhammad Humayun**, **Dr. Anisa Nazeer**, **Dr. M. Anwar**, **Dr. Jamshed Wania**, **Dr. K.S. Hassan** and **Dr. Zia-ud-Din Shiekh** were the main speakers of this session. Extracapsular extraction, anterior and posterior chamber lenses, and viscosurgery were discussed in great detail. **Dr. Khalid J. Awan** presented for the first time anywhere the exciting and original successful intraocular lens implantation in eyes that he had saved from expulsive choroidal hemorrhage during previous cataract operations.

The **fourth session** was a symposium on orbit. **Professor Frederick Blodi** from USA chaired this part of the meeting. **Professor Munir-ul-Haq** acted as Co-Chairman and **Professor Yasin Khan Duranni** acted as the Secretary

Professor Blodi was the main speaker of this session, and spoke beautifully and extensively on the acute and chronic orbital inflammations. **Professor Munir-ul-Haq** presented a very good paper on orbital involvement by tumors of the neighboring structures.

The **5th session** was based on free papers. It was chaired by **Professor W.S. Foulds**. **Dr. Jamshed Wania** acted as Co-Chairman and **Dr. Imtiaz Ali** acted as the Secretary. The session covered a variety of subjects such as glaucoma, melanomas, radial keratotomy, contact lens and dacryocystorhinostomy.

The **6th session** was on the important subject of ocular trauma. It was chaired by **Dr. David Miller** from Harvard. **Brig. Nasim Ahmed** acted as the Co-Chairman, and **Professor M. Aftab** was the Secretary. **Mr. R. J. Cooling** from Moorfields Eye Hospital, London, delivered the State of the Art Lecture on ocular trauma, covering almost all aspects. Other main speakers of this session were **Dr. J.D. Scott**, **Dr. David Miller**, **Mr. Mike Falcon** from UK and **Dr. Dil M. Mirza**.

The **last session** was on ocular infections. It was chaired by **Professor Sardar Ali Shiekh**. **Professor Akbar Haider Soomro** acted as Co-Chairman. The main speakers of this session were **Professor S.R.K. Malik**, **Dr. O.P. Van Bijsterveld**, **Dr. Akhtar Jamal** and **Dr. Mohammad Daud Khan**.

Concluding Session

In the **concluding session**, **Dr. Jamshed Wania**, President of the Society,



Figure 4 (Khan): Many international delegates participated in the congress. Shown here are Mrs. Mike Falcon, Mr. Mike Falcon, Professor Frederick C. Blodi, the Consultant Editor of The Journal, and Dr. Khalid J. Awan, F.P.A.M.S., Editor of The Journal.

Professor Murad Ali, President-Elect and **Dr. Sheikh Muzaffar Iqbal**, Chairman Organizing Committee, thanked the speakers, all the delegates, specially those who came from abroad, to attend this meeting, **Professor W.S. Foulds**, **Professor F. Blodi** and **Mr. J.D. Scott** thanked the organizers for invitation and congratulated them on organizing such an excellent meeting.

The dinners, the Cultural Show, the visit to Darra Adam Khel, and an excursion to Khyber Pass (Figure 5) were the social highlights of the meeting. A reception dinner was hosted in honor of the delegates by the Honorable Mr. Fida Mohammad Khan, the Governor of North West Frontier Province, in the prestigious Victorian building of the Governor House. The Governor



Figure 5 (Khan): A visit to Khyber Pass at the invitation of the renowned Khyber Rifles was the highlight of social activities.

personally welcomed each delegate and also presented a souvenir of a most beautiful dagger to each delegate. A second dinner was hosted by Alcon International. The banquet dinner was given by Allergan International. A musical evening was arranged in which souvenirs were

also distributed among the delegates and the speakers. Some of the delegates were able to visit Dara Adam Khel and watch the local craftsmen manufacturing guns and other ammunition. However, the most spectacular, in the words of the participants, was the visit to Khyber Pass, the historical passageway to the Pak-Indian sub-continent.

Central Council Meeting

The minutes of the last meeting were read and unanimously approved. The following subjects were discussed: 1. the Awarding of the Ramzan Ali Syed and the Narval Christy Gold Medals; 2. the Undergraduate and Postgraduate Educating; and 3. the Pakistan Journal of Ophthalmology.

After discussions, the following decisions were made: the Committee for Postgraduate Education should also study the undergraduate curriculum and report to the council next year. The criteria for the selection of suitable candidates for the awards of the Ramzan Ali Syed Gold Medal and the N. Christy Gold Medal be circulated among all the members. In a separate meeting held at about midnight, Dr. Khalid Awan brought up the subject of transferring the Journal to Pakistan. However, he strongly emphasized the requirement of maintaining the current editorial standards in doing so. At their insistent request, Dr. D.M. Mirza and Professor Lateef Chaudhry were assigned to produced a prototype of a comparable journal by the next January for examination by the present Editor and the central Council. The quorum was not complete for the last meeting and several non-councilors participated in the discussion. The Senior Editor of the Journal, Professor Mumtaz Raja was also not present at this meeting.

The following councilors attended the meeting Dr. Jamshed Wania, Professor Raja Mumtaz Quli Khan, Professor Murad Ali, Professor K.S. Hassan, Dr. Qamar, Professor M.A. Shah, Professor Akbar Haidar Soomro, Professor Lateef Chaudhry, Dr. Tahseen Ali, Professor Mohammad Daud Khan, Dr. Zia-ul-Islam, Dr. Khalid J. Awan, Dr. Muhammad Humayun, Dr. Mohammad Naseen, Professor Yasin Khan Duranni, and Brig. Nasim Ahmad.

General Body Meeting

Dr. Jamshed Wania thanked the Society members for their support and said "Khuda Hafiz" to them as their outgoing President. Professor Murad Ali, Chairman, Department of

Ophthalmology, Khyber Medical College, took over as the President of the Society for the year 89-90. Professor Mohammad Daud Khan, Head, Department of Ophthalmology, Postgraduate Medical Institute, Lady Reading Hospital, Peshawar was elected as the General Secretary. Dr. Mohammad Nasim, Head, Department of Ophthalmology, Bolan Medical College, Quetta, was voted in as the President-Elect. (Figure 6)



Figure 6 (Khan): The new officers of the Society. From left are Professor Mohammad Daud Khan, Secretary, Professor Murad Ali, President, and Dr. Jamshed Wania, immediate past President.

Society President's Address

In the name of God, most Merciful, Most Beneficent. President Mohammad Zia-ul-Haq, President of the Islamic Republic of Pakistan, the Honorable Governor and the Honorable Chief Minister of the N.W.F.P., members of the Ophthalmological Society of Pakistan, our visiting guests from abroad, ladies & gentlemen,

On behalf of the Council Members of the Society and myself, I say welcome to this XI Congress. To you Mr. President, our very special thanks for gracing this occasion inspite of your very busy schedule. To you Mr. Governor, for having lent your hearty support to our host branch in making their task much easier, and to the Chief Minister and his colleagues for the help and encouragement you have given.

President Zia-ul-Haq always gets a surprise when he finds that something or the other is not asked for when he is requested to inaugurate a seminar, a meeting or a congress of this nature. This time he should have no surprises. Our Chairman of the Organising Committee has put forward some requests which I am sure you, sir, would be very willing to grant since the burden falls on the Governor and the Chief Minister.

Here today, as I speak to you all as the President of the Ophthalmological Society of Pakistan, some very basic problems facing our country and our fraternity have engaged my mind. First of all it is the improving and raising the standard of teaching and training of our young ophthalmologists. I would like to put forward to you a few ideas for your consideration so that we could ensure improved standard of ophthalmology in general

and academic standards in particular.

It is evident that all the institutions in our country have varying standards of teaching and training of post-graduate students. Though, as has been noticed, it is improving year by year, it is not as yet happening uniformly.

Since we have sixteen medical colleges and a few other hospitals where the young doctors are trained, I would like to propose that under the leadership of the Ophthalmological Society one teacher from each institution and hospital should meet together one day before or after our Annual Congress and draw up a Residency Programme or curriculum of 3 years to train our younger colleagues before they embark upon the task of treating the patients and getting their diplomas or fellowships. At present what we have is not on a regular basis, and it is time now that we direct our attention and put in our energies towards achieving uniformly high standards of instruction, training and qualifications. If necessary, we may even constitute our own boards for qualifying the ophthalmologists. It is time we took the responsibility of giving the nation what it deserves in the field of eye care. The incidence of blindness can be considerably reduced.

This brings me to the second problem which is directly related to the first. For many years, we have noticed that eye camps have had a higher risk for the patients. To reduce this risk, it would be a great step forward to have a well trained third year resident, competent not only in knowledge but also in the skills, attend these camps and exposed to doing surgery under direct supervision. Numbers do not matter, and our total commitment must be to quality. Our results should be comparable, if not better, than those obtained at a standard eye hospital or an eye department of a teaching hospital. Tertiary eye care should be the domain of larger well-equipped units all over the country.

This is no easy task. It is easier said than done. Many hurdles will be there to cross. But if we put our hearts to it, it can be done and must be done.

Sir, at present we have been organising eye camps. It is well known that in these we can only take care of routine eye disorders and perform certain basic operations. What about those who need more intricate operations and more sophisticated investigations and treatment? It is our duty to look at this problem and to solve it. I would like to put a suggestion to you sir, and to the Ministry of Healths of the Centre and the Provinces. Fully equipped Tertiary Eye Care Centers, properly manned by highly qualified people, should be established in the rural areas which would serve the needs of a population in and around say 50 mile radius of that hospital.

If we do not have the resources to establish new centers, we may select some of the critically located District Headquarters Hospitals and up-grade these existing eye departments, or create new departments to serve this purpose. A District Health Officer is not

enough, a fully qualified ophthalmic surgeon, with higher training in anterior and posterior segment surgery, capable of giving what is required of him, should be made available to these selected hospitals, preferably on full time basis. This would go a long way in preventing a large proportion of our preventable blindness in a cost effective manner.

If during the next year, we are able to achieve these two goals, I would say that our Society deserves not only credit for it but national recognition of the highest degree.

With these thoughts and ideas, I wish to say "Khuda Hafiz" to you all as your President. I thank all the members for their help and support during my tenure. I wish you all and my successor success in your endeavours. May God give our Society unity of action and strength to go forward in accomplishment of our desire to have a College of Ophthalmology in the near future, to raise the standard of ophthalmology students which will be our pride and envy of others.

Thank you all for your patient hearing.

— Jamshed H. Wania, M.D.

Citation for the 1988 Ramzan Ali Syed Gold Medal

In the name of God, Most Gracious, Most Merciful.

Dr. Jamshed Hormuzshaw Wania (Figure 7) was born in Karachi on 5th May 1929 to late Dr. Hormuzshaw Wania and Mitha Bai.

After schooling at B.V.S. Parsi High School, and Matriculating from the University of Bombay, he passed his Inter-science from D.J. Sind College in 1948 to join Dow Medical College and graduate in 1953.

Throughout his under-graduate medical studies he impressed his teachers, not only by his diligence in studies, regularity of attendance, exemplary behaviour and good turn out, but also impressed his classmates by striking a healthy balance between studies and sports. On the one hand he passed all his professional examinations in the minimum period and at first attempt on the sports side he represented his Universities of Sind and Karachi in 'badminton' and 'swimming' in which he was college champion.

In addition he was tennis secretary for the Universities tennis championships. Hockey and cricket also claimed him in college teams.

After obtaining the qualification of Bachelor of Medicine, Bachelor of Surgery, and completing his tenure as Junior House Surgeon, Senior House Surgeon, and Registrar in the professional unit of ophthalmology at Dow Medical College and Civil Hospital, he proceeded to London where he got the Diploma of Ophthalmology.

Realizing that mere academic decorations do not make a doctor, he gained practical clinical experience by working in number of hospitals in the U.K. There he was House Officer at the Royal Infirmary Stockport; Clinical Assistant and Post-graduate student at Moorfields Eye Hospital and Institute of Ophthalmology University of London, Senior House Surgeon at



Figure 7 (Khan): Dr. Jamshed H. Wania is receiving the 1988 Ramzan Ali Syed Gold Medal from the Chief Guest, General Mohammad Zia-ul-Haq, President of the Islamic Republic of Pakistan.

Nottingham Eye Hospital, and Locum Registrar in Ophthalmology Royal Infirmary Aylesbury and Oxford Group of Hospitals.

He went to USA in 1957 and worked as Intern at Ellis Hospital, Schenectady, New York, for a year. He was a fellow in Neuro-ophthalmology with Prof. Frank Walsh at Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore.

He did so well that he was the first Pakistani to get the grant of 'Fight for Sight Fellowship'.

On returning home in 1959 he followed in the footsteps of your illustrious father late Dr. Hormuzshaw Wania, also an eye specialist of repute. Like him he started his private practice and got busy in honorary professional and social works. He worked for two years as Honorary Surgeon at Spencer Eye Hospital and organised the first eye camp at Than Bullax Khan.

He has been working as Honorary Ophthalmic Surgeon since 1960 at the Parsi General Hospital and at Masoomeen Hospital, Karachi.

Currently he is one of the Trustees of Layton Rahmatulla Benevolent Trust, a Trust dedicated to the provision of quality eye-care to the poorest of the poor, free of cost in villages, at a level only obtainable in private clinics. He also attends Layton Rahmatulla Benevolent Trust Base Eye Hospital at Korangi for treating patients and taking part in teaching.

Against the generally bleak landscape of medical research in our country, it is refreshing to note his continued efforts in this unattractive and neglected field.

He published his first paper with his Professor of Ophthalmology, while still a House Surgeon, way back in 1955. His latest paper is under publication this year. Out of more than a dozen papers of topical interest that he has published so far, the outstanding is the one he published with Prof. Frank Walsh in the Archives of Ophthalmology.

His technique of cannaliculo-dacryocystorhinotomy, presented at Kyoto, Japan, in 1978, has earned a place as "Wania's operation" in a book "Recent Advances in the Surgery of Lacrimal Apparatus," published in 1979.

His keen interest in matters medical is evinced by the fact that nationally he has been an active life member of the Pakistan Medical Association since 1960, acting as a member of its executive, Honorary Secretary of PMA Karachi, Honorary Treasurer of PMA Centre, and for eight years, President, PMA, Sind. He also represented the profession for five years as a member of Governor's Council of Sind Province.

He has been a life member of the Ophthalmological Society of Pakistan, and its Honorary Secretary for a number of years. He organized the first international meeting of Asia Pacific Academy of Ophthalmology at Karachi in 1979, and also extended help to the organizers of the Afro-Asian Congress in 1984 at Lahore as its President.

He also organized a highly successful microsurgical workshop at Karachi in 1987. Internationally, he has striven to bring Pakistan Ophthalmology on the world map by his frequent trips to all corners of the world in connection with presenting papers, chairing sessions, or learning new techniques.

He was been a member of the Councils of Asia Pacific Academy of Ophthalmology and the Afro-Asian Congress of Ophthalmology. Currently he is the Vice President of both the Academy and the Congress.

He was elected Fellow of the American College of Surgeons in 1985, and a member of the American Academy of Ophthalmology in 1986. He was elected a member of the Council of the International Agency for the Prevention of Blindness and its regional Co-Chairman for Pakistan.

All that he has done and is doing in the service of ophthalmology could only have been possible by help and encouragement of his good wife, Shireen, whom he married in 1960. He blessed with an ideal home life and children to be proud of. His daughter Niloufer evinces the genetic proclivity for social service, while his son Hormuzshaw appears set to carry on the family tradition of being an ophthalmologist.

After going through his curriculum-vitae and the details of his efforts spread over more than 30 years in the service of ophthalmology, the selection committee has unanimously selected him as a fit person for the award of the 1988 Ramzan Ali Syed Gold Medal.

It is with deep personal pride that I, his erstwhile teacher and Chairman of the Selection Committee, respectfully commend him to General Mohammad Zia-ul-Haq, President of the Islamic

Republic of Pakistan, for the award of the prestigious Ramzan Ali Syed Gold Medal, which the President so graciously instituted in 1979.

-Mahmud A. Shah, FPAMS



Scholarship Schedules

Convocation 1988 of the Pakistan Academy of Medical Sciences December, 1988

For details please contact: Professor Najib Khan, F.P.A.M.S., Said Clinic, I.I. Chundrigar-Burns Road, Karachi, Pakistan and Muhammad Shoaib Akhtar, F.P.A.M.S., Department of Physiology and Pharmacology, University of Agriculture, Faisalabad, Pakistan.

Ophthalmological Society of Pakistan 12th All Pakistan Congress, Karachi February, 1989

The 12th All Pakistan Congress of the Ophthalmological Society of Pakistan will be held in Karachi in February, 1989. The program is divided into eight sessions which are spread over three days. Symposia are scheduled on 1. Community and Preventive Ophthalmology, 2. Cataract Surgery, 3. Glaucoma, 4. Ocular Trauma, 5. Ocular Infections, and 6. Strabismus. State of the Art lectures will be given. The speakers from abroad will be provided free lodging and board. For full details contact: M. Daud Khan, FRCS, Secretary, Organizing Committee, Department of Ophthalmology, Post Graduate Medical Institute, Lady Reading Hospital, Peshawar, Pakistan. Telephone 60201, 60208 or 60812 (R).

Eye Hospital Rotterdam: Third Course Silicone Oil in Vitreoretinal Surgery September 12 and 13, 1988

The Eye Hospital Rotterdam will present the Third Course, Silicone Oil in Vitreoretinal Surgery, Sept. 12 and 13, 1988, in Rotterdam, The Netherlands. For further information, write Dorine Verhoeven, Course Secretary, Eye Hospital Rotterdam Schiedamsevest 180, 3000 LM Rotterdam, The Netherlands.

International Society for Ophthalmic Ultrasound

August 28 - September 2, 1988

The International Society for Ophthalmic Ultrasound will hold its meeting Aug. 28-Sept. 2, 1988, in Iguazu Falls, Argentina. For further in-

formation, write Prof. Dr. Roberto Sampaolesi, Parana 1239, 1° Piso, 1018 Buenos Aires, Argentina.

Intraocular Lens Convention January 4-5, 1989

The Eye Research Centre will present an Intraocular Lens Convention, Jan. 4-5, 1989. For further information, write Dr. Chander Neroor, Director, Dr. Agarwal's Eye Institute, 13, Cathedral Road, Madras 600 086, India.

American Academy of Ophthalmology: 1988 Annual Meeting October 8-12, 1988

The Annual Meeting of the American Academy of Ophthalmology will be held Oct. 8-12, 1988, in Las Vegas, Nevada. For further information, write Meetings Department, American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120.

Cornell University: Quantitative A- and B-Scan Ultrasonography and Diagnostic Imaging of the Eye and Orbit June 2 and 3, 1988

Cornell University will hold a course, Quantitative A- and B-scan ultrasonography and Diagnostic Imaging of the Eye and Orbit, June 2 and 3, 1988, in New York, New York. For further information, write Mary P. Whalen, Course Coordinator, USG '88, Cornell University, 525 E. 68th St., New York, NY 10021.

Fourth International Symposium of The Northern Eye Institute July 14-16, 1988

The Northern Eye Institute will sponsor Glaucoma, the Fourth International Symposium, July 14-16, 1988, in Manchester, England. For further information, write Dr. R. P. F. Gregory, Department of Biochemistry and Molecular Biology, The Medical School, Oxford Road, Manchester M13 9PT, England.



Figure 1:

Corneal Dellen from Subconjunctival Hemorrhage

ABSTRACT: A 53-year-old woman developed a typical corneal dellen, a saucerlike thinning of the cornea or sclera, near the limbus as a result of localized dehydration adjacent to the hemorrhagic elevation of the conjunctiva. It temporarily responded to patching, but permanently disappeared when the conjunctival hemorrhage resolved. (Pakistan Journal of Ophthalmology 4:40 and 62, 1988.) Reprint requests to Khalid J. Awan, FPAMS, 1921 Park Avenue, SW, Norton, Virginia 24273 USA.

Dellen, a plural for delle erroneously used as a singular in the ophthalmic literature, is a pit formed by the thinning of the cornea due to its localized dehydration when the precorneal oily tear film layer is interrupted by the elevation of the adjacent limbal tissue from various causes, such as epscleritis, tumors, filtering blebs, large pterygium etc.¹ The epithelium over the thinned area though intact shows irregular punctate staining by fluorescein. In the past, controversy existed in the origin of dellen, when many authors thought it had a vascular or neurotrophic etiology. If left untreated, dellen may follow two

courses: it may spontaneously disappear with the resolution of the primary condition, or it may become vascularized after a long time. A longstanding dellen also leads to tissue degeneration. It is, hence, important to treat dellen when first noticed. Rehydration of dellen can be achieved by removing the primary cause, patching the eye, and the use of the artificial corneal lubricants. Dellen may appear in the cornea or the sclera, the latter being rarer.

References

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Figure 2:

Spontaneous Resolution of Unilateral Degenerative Retinoschisis

ABSTRACT: Unilateral degenerative retinoschisis in the right eye of a 47-year-old man spontaneously resolved after 1¹/₂ years. This rare reattachment of the inner layer proved permanent over a 10-year follow up. (Pakistan Journal of Ophthalmology 4:40, 41 and 62, 1988.) Reprint requests to Khalid J. Awan, FPAMS, 1921 Park Avenue, SW, Norton, Virginia 24273 USA.

The incidence of degenerative type of retinoschisis is 1% to 4% in the adult population in the West.¹⁻³ Usually, the retinal layers show a splitting at the outer plexiform layer, but it may develop more superficially. Typically, it presents as a bilateral smooth, well delineated elevation in the inferotemporal retina, as is shown in the Figure 2. More rarely, it may present as reticular formation than a single smooth elevation. The macula is only rarely involved and this happens usually in the reticular form. Sometimes retinal tears may develop in the inner and outer layers. In the latter case frank retinal detachment may develop. The incidence of retinal detachment in degenerative retinoschisis has been determined to be 0.07%.³ Whereas sex-linked juvenile retinoschisis is commonly accompanied by mac-

ular abnormalities, no such changes occur in the degenerative retinoschisis. Degenerative retinoschisis, a condition of unknown pathogenesis, should be differentiated from retinal detachment. Unless retinal detachment, or retinal tears threatening full thickness retinal detachment develop, no treatment seems necessary for the degenerative type of retinoschisis.

References

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Figure 3:

Orbital Extension of the Eyelid Basal Cell Carcinoma

ABSTRACT: In a 73-year-old woman small basal cell carcinoma of the right lower eyelid recurred after treatment by a dermatologist. It invaded the orbit and eventually led to the exenteration of the orbit containing a globe with 20/20 (6/6) visual acuity and full fields. (*Pakistan Journal of Ophthalmology* 4:40, 41 and 63, 1988.)

Reprint requests to Khalid J. Awan, FPAMS, 1921 Park Avenue, SW, Norton, Virginia 24273 USA.

Of all the eyelid tumors, basal cell carcinoma accounts for 85% to 90% of the lesions.^{1,2} The specialists in various systems have different therapeutic approaches to the treatment of basal cell carcinoma, such as dermatologists may take smaller lesions less seriously and try to treat them by local cryoapplication, curettage, or punch biopsy. This approach is unsatisfactory for the tumors in the eyelid area, because the recurrence could prove most serious as demonstrated by this case. Once the orbit is invaded, exenteration remains the safest modality of treatment, even if an otherwise healthy and normally functioning eye has to be sacrificed. In a series of 273 cases, eight patients required exenteration. What is even more important is that out of these eight, four developed another

recurrence, with one death.³ Hence, it is very important that as soon as detected, a basal cell carcinoma around the eye must be surgically excised and its total removal histopathologically confirmed. Although Mohs's technique is once more gaining popularity, it is not suited for lesions involving the margin of the eyelid.⁴

References

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2. Awan, KJ: Rare basal cell carcinoma of the eyelid in an adolescent. *Pak J Ophthalmol* 3:49, 62, 1987.
3. Payne, JW, Duke, JR, Butner, R, and Eifrig, DE: Basal cell carcinoma of the eyelid. A long-term follow-up study. *Arch Ophthalmol* 81:553, 1969.
4. Mohs, FE: Micrographic surgery for the microscopically controlled excision of eyelid cancers. *Arch Ophthalmol* 104:901, 1986.

Figure 4-6:

Iris Pearl-Serous Implantation Cyst

ABSTRACT: A 68-year-old man developed a typical implantation pearl cyst of the iris four months after intracapsular cataract extraction from his left eye. Many weeks later, it transformed into a transparent cavity that in upper two thirds was filled with clear watery fluid. The pearl cysts after cataract surgery are rare, but the dual pearl-serous character of this cyst is even more unusual. (*Pakistan Journal of Ophthalmology* 4: 41 and 63, 1988.) Reprint requests to

Khalid J. Awan, FPAMS, 1921 Park Avenue, SW, Norton, Virginia 24273 USA.

Through a traumatic communication the outer epithelium may invade the anterior chamber. The invading epithelium may assume the shape of a solid greyish-white tumor, called a pearl cyst, form a clear-walled cystic mass containing watery fluid, called a serous cyst, or grow over the tissues as a flat sheet, known as epithelial ingrowth. All forms have a serious prognosis if not treated at the earliest stages. These traumatic implantation cysts develop in less than 1% of the trauma cases.¹ Although corneoconjunctival epithelium is mostly responsible for epithelial invasion of the anterior chamber structures, some authors also consider the cells of the root sheaths and follicles of the cilia to be the source, because in many instances cysts developed only in eyes that had eyelashes transported into them by trauma.²

These cysts are generally lined by nonkeratinized stratified squamous epithelium.³

Although in exceptional cases these cysts may remain unchanged, or even disappear, in the overwhelming majority of the cases they go on growing with eventual loss of the eye to iridocyclitis or secondary glaucoma.⁴ Hence, all cysts must be treated by surgical excision as soon as possible. Argon laser photocoagulation of smaller implantation cysts has also proved successful.¹

References

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WALSH AND HOYT'S CLINICAL NEURO-OPTHALMOLOGY. Edition 4, volumes 1, 2, and 3. By Neil R. Miller, Baltimore, Williams and Wilkins, 1982-1985-1988. 1,870 total pages, each volume with its own index, profusely illustrated with black and white figures, hardcover, U.S. \$79.00 (vol 1), \$111.00 (vol 2), \$122.00 (vol 3).

According to the initial scheme, this monumental task was to be completed in three volumes. However, the burgeoning amount of current material and Dr. Miller's tenacity for precision and completeness has so expanded the work that at the time of this review at least two more volumes are in the plans. The publisher has produced the book most handsomely on very high quality paper. The writing is easy to read and the print pleasing to the eye. Despite high quality production, the price is very reasonable.

That the late Professor Walsh chose Dr. Miller to revise his great classic in ophthalmology further confirms his uncommon ability of discernment. Dr. Miller has completely revised and added substantial amount of fresh and current material with expertise enough to astound anyone to any level. That in this era of multiauthorism a single writer should accomplish such a herculean feat is absolutely mind-boggling. Ophthalmology of today is most fortunate to have among us a man of Dr. Miller's ability, energy, and stamina. He is today's new Duke-Elder. He has very successfully transformed Walsh and Hoyt's one of the most valuable ophthalmic texts to Miller's one of the most ownable ophthalmic texts. I hope all future authors of ophthalmic books would go over this edition of Walsh and Hoyt's Clinical Neuro-Ophthalmology to familiarize themselves with the publishing standard they must aim for before embarking upon their ventures.

As a reviewer of the ophthalmic books, I can categorically say that this book has the most exhaustive lists of the latest and the most significant references I have ever come across in the last five years. The book's usefulness is not limited to the ophthalmologists alone; it can immeasurably benefit even those whose primary interest is in other systems of medicine. Hence, every ophthalmologist and every medical library, no matter how small, must have this book on their shelves.

In format, the book is divided into Sections. The present three volumes consist of the first six Sections. Volume One contains Section 1: The Vi-

sual Sensory System, providing a detailed and up to date account of the anatomy and physiology of the visual pathways, and Section II: The Optic Nerve, describing the afflictions and anomalies of the nerve of sight. The Volume Two is much larger than the first, and contains Section III: The Autonomic Nervous System: Pupillary Function, Accommodation and Lacrimation, detailing their related embryologic, anatomic, physiologic, and pharmacologic facts as they are known today; Section IV: The Ocular Motor System: Embryology, Anatomy, Physiology, and Topographic Diagnosis; and Section V: Sensory Innervation of the Eye and Orbit, including an impressive discussion of trigeminal nerve disorders, pains and neuralgias of different types, and headache. The Volume Three is made up of only a single section, Section VI: Ocular, Orbital, and Intracranial Tumors and Related Conditions. The last chapter of this section is an excellent account of phakomatoses. In the preface to the Third Volume, Dr. Miller clarifies that "Volume Four will cover vascular disease and trauma, and Volume Five will be concerned with inflammatory and infectious processes and functional disease." We most eagerly, and gratefully, look forward to their appearance.

This reviewer strongly urges everyone who is even remotely interested in the topics covered in this book, no matter where he practices on earth, and all the medical librarians to immediately acquire, if they as yet have not, a copy of Miller's Walsh and Hoyt's Clinical Neuro-Ophthalmology.

-KJA

RETINAL DISEASES. Biomedical Foundations and Clinical Management. Edited by Mark O.M. Tso, Philadelphia, J.B. Lippincott Company, 1988. 480 pages, 288 black and white illustrations, hard cover, U.S. \$65.00.

The editor has collaborated with 30 other very experienced clinicians and researchers of international standing, 24 from various leading ophthalmic centers in the United States, four from Taiwan, one from Japan, and one from The Netherlands. This book was written "for ophthalmologists who are interested in the basic biomedical information" and the researchers interested in the retina. The editor's hope is that the information in this book is stimulating to the reader and plunges him "into a search for new answers in pathogenetic mechanisms, diagnosis, and therapy of retinal diseases in the 1980s and be-

yond." The contents of the book are based on the International Symposium on the Retina: Clinical and Basic Aspects held in the summer of 1983, in Taipei, Taiwan.

The text is divided into seven parts: Part 1, Retinal Pigment Epithelium-Photoreceptor Complex, Part 2, Functional Organization and Development of the Retina, Part 3, Retinal and Choroidal Circulatory Regulation and Vascular Diseases, Part 4, Degenerative Diseases of the Macula and Retina, Part 5, Retinal Inflammatory Diseases, Part 6, Retinal Detachment and Vitreal Diseases, and Part 7, tumors of the Retina and Choroid. Although much of the material presented in basic and advanced, there is also a fair amount of it that is highly beneficial even to a non-research orientated ophthalmologist. Most of the clinical material is presented in very lucid fashion with just the right touch of conciseness. However, some sections of the book, such as the chapter on the Diagnosis and Management of Intraocular Foreign Bodies, leaves great deal to be desired, particularly when compared with other clinically orientated material. This kind of incongruity of style and content isn't unexpected in a multiauthored book. I would recommend that at least the first three parts of the book are made a required study by the residents in training. I have no reservation in recommending this book to its intended audience.

-KJA

SURGICAL ANATOMY OF THE ORBIT. By Barry M. Zide and Glenn W. Jelks, Craig Luce, illustrator, New York, Raven Press, 1985. 87 pages, most beautiful color illustrations throughout, indexed, hardcover, U.S. \$85.00.

According to the authors this book is "targeted for the clinical surgeon." After going through its pages, I heard myself saying thank you. I have no doubt most ophthalmic surgeons would feel the same way.

The format of the book includes photographs of step by step actual and meticulous dissection of the orbital structures. These photographs are accompanied by exquisite matching color drawings and concise text to further enhance the comprehension of the anatomy. A review of this text the day before the scheduled surgical procedure will prove of great value to all eye surgeons, particularly those who are interested in plastic repairs. I agree with Dr. McCarthy's statement in the foreword that the "reader will benefit immensely from" this book.

-KJA

COLOR ATLAS OF INFECTIOUS AND INFLAMMATORY DISEASES OF THE EXTERNAL EYE. By H. Bruce Ostler, Chandler R. Dawson, and Masao Okumoto, Baltimore, Urban & Schwarzenberg, 1987. 166 pages, profusely illustrated with excellent color figures, indexed, hardcover, U.S. \$139.50.

This excellent atlas is the result of combined efforts of three very distinguished and experienced scholars of the Francis I. Proctor Foundation of the University of California. The book is in reality the first part of a proposed two-volume project. This volume contains the clinical descriptions and diagnostic approaches to the external diseases of the eye. The exquisitely beautiful and clear color photographs are accompanied with concise text. The second volume will deal with currently available therapeutic modalities and management of the entities described in the first part.

This book contains some of the best illustrated materials this reviewer has ever set his eyes upon. The value of the book is further immeasurably enhanced by the written comments from a couple of world renowned experts on the external diseases of the eye. They are most commendably assisted by a microbiologist of great experience in making this volume one of the most desirable items on the bookshelves of all ophthalmologists and the medical libraries. It is very difficult, particularly in the developing nations like Pakistan, to find such a wealth of visual learning material in one place. I wish some of the figures had been reproduced in larger size, because despite their excellent quality the small-sized reproductions have hindered full elucidation of what they are supposed to illustrate, such as Figure 4-62A on page 98, which fails to clearly show the fuzzy edges of the central ulcer and the vascularization. This criticism is only meant to assist the publisher in improving the future editions. I urge all the medical libraries in Pakistan and elsewhere to acquire this book. On the shelf of any ophthalmologist, this book will be one of the most useful and delightful addition.

-KJA

OPHTHALMIC PATHOLOGY. AN ATLAS AND TEXTBOOK. Third edition, Volume 1 and Volume 2. Edited by William H. Spencer, Philadelphia, W.B. Saunders Company, 1985, 1,351 pages, profusely illustrated with black and white figures, many color plates, each volume indexed, hardcover, U.S. \$65.00 (vol. 1), \$85.00 (vol. 2).

BOOK REVIEWS

A review of the Volume 3 of this book appeared in the October 1986 issue of *The Journal*. (We received the review copy of the Volume 3 before these two volumes reached us.) The complete set of three volumes of *Ophthalmic Pathology. An Atlas and Textbook* is definitely the most authentic and exhaustive work on pathology of the eye diseases. This monumental work is a result of collaboration of the finest ophthalmic pathologists of today, Ramon L. Font, Professor of Pathology and Ophthalmology at the Cullen Eye Institute of Baylor College of Medicine, W. Richard Green, Professor of Ophthalmology and Associate Professor of Pathology at Johns Hopkins, Edward L. Howes, Jr., Professor of Pathology and Ophthalmology at the University of California, Frederick A. Jakobiec, Professor of Clinical Ophthalmology and Clinical Pathology at the Columbia University, Lorenz E. Zimmerman, Professor of Pathology and Ophthalmology at the Georgetown University, and Dr. Spencer himself, who is currently the Director of Ophthalmic Pathology Laboratory at the Pacific Medical Center in San Francisco.

The Volume 1 is divided into six chapters, "Basic Mechanism in Pathology," "Conjunctiva," "Cornea," "Sclera," "Lens," and "Glaucoma." The Volume 2 consists of chapters on "Vitreous" and "Retina." The contents and writing are consistently of most impressive quality. The references are extensive and most up to date, except in Chapter 1 of Volume 1 where most of the references are before the 1980s. The figures, clinical as well as photomicrographic, are simply superb. I believe, however, that more arrows and other markings would have helped the non-pathologists to benefit more from the legends accompanying the figures. I also had difficulty with the indices in all the volumes in finding many of the entities. These were described in the text but not included in the indices. Considering the stragging dimensions of the task at hand, these are only minor distractions. The book is produced most beautifully on the finest quality paper.

Any medical library, personal or institutional, that does not have *Ophthalmic Pathology. An Atlas and Textbook* on its shelves is pathetically inadequate. This deficiency in the library of a teaching institution is tantamount to a lack of concern for good education in my view. Ophthalmology owes a debt of gratitude to the authors, the American Academy of Ophthalmology, the American Registry of Ophthalmic Pathology of the AFIP, and W.B.

Saunders for this mother lode of the latest information on ophthalmic pathology. -KJA

OPHTHALMOLOGY ANNUAL 1988.

Edited by Robert D. Reinecke, New York, Raven Press, 1988, 246 small size pages, many black and white figures and tables, index, hardcover, U.S. \$73.00.

This new volume in the *Annual* series is prepared by 18 authors, and the material presented ranges from everyday topics of angle-closure glaucoma and intraocular lens implantation to more esoteric problems of contact lenses in aphakic infants and the infantile glaucoma. Both the writing and the material covered vary in quality and standard. The best reading is the chapters on Surgery of the Lacrimal System in Children, Current Uses and Technical Updates of Phacoemulsification, Functional Amblyopia, and The Ocular Ischemic Syndrome. It is emphasized in the preface that the articles were written in a "teach-to-student manner rather than in a scientific format." However, the chapter on IOL explantation is purely scientific in format and the chapter on pupil overly didactic. It would have been more helpful if the author of the former had summarized indications for explantation and his comments on them as a separate section and the author of the latter made it a bit more scientific. A good example of this balance is seen in chapter on functional amblyopia where the author has based the writing on his 847 cases. There are several statements with which this author disagrees, such as the statement on page 4 that it is "common practice among ophthalmologist to use...strongest miotics" in the treatment of acute attack of angle-closure glaucoma and on page 5, that trabeculectomy "does not seem to carry much greater morbidity than surgical iridectomy." Also, I feel that to use too many applications of 2% cyclogyl as the author of chapter on phacoemulsification does is risky. This reviewer noted several typographical errors, such as the visual acuity of the patient in Figure 1 on page 175 is 20/50 in the legend but 20/40 in the text, optic nerve "hyperplasia" instead of hypoplasia in table on page 196, etc. Although book is excellently produced by the printer, the price might be prohibitive for its main intended audience, residents and trainees. Nonetheless, I recommend that the *Annual 1988* should be read by all who can afford it or can loan it from a library.

-KJA



Ophthalmic Surgery

PLUS MERIDIAN INCISION FOR SECONDARY IMPLANTATION. JR Karickhoff.

The author studied 25 consecutive secondary implantations with a minimum of 4 months follow-up to learn the effect on astigmatism of passing or not passing the incision through the most plus corneal meridian. Eighteen of the 19 cases having a most plus meridian incision had postoperative astigmatism of 1 diopter or less, and their average astigmatism was reduced by surgery. All six of the cases with the incision not passed through the most plus meridian had postoperative astigmatism greater than 1 diopter, and their average astigmatism was doubled by surgery. The astigmatic difference between the two patient groups was highly significant. The author recommends incision in the most plus meridian. (*Ophthalmic Surg 18:658, 1988. Requests for reprints should be addressed to John R. Karickhoff, M.D., 200 Little Falls Street, Falls Church, Virginia 22046.*)

DELAYED NONEXPULSIVE SUPRACHOROIDAL HEMORRHAGE AFTER TRABECULECTOMY. ML Ariano, SF Ball. The authors report five cases of delayed nonexpulsive suprachoroidal hemorrhage after trabeculectomy in aphakic eyes. Four cases were done under general anesthesia and in three there was straining and bucking at extubation. The most common presentation was sudden severe ocular pain one day postoperatively, associated with marked decrease in vision and low intraocular pressure. The prognosis was related to the extent of the hemorrhage; where suprachoroidal hemorrhage was extensive, surgical drainage appeared to help. Their last two patients, both with massive postoperative nonexpulsive suprachoroidal hemorrhage, underwent surgical drainage of suprachoroidal blood and recovered preoperative visual acuity. (*Ophthalmic Surg 18:661, 1988. Requests for reprints should be addressed to Stuart F. Ball, M.D., LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, Louisiana 70112.*)

LIMBUS-BASED VERSUS FORNIX-BASED CONJUNCTIVAL FLAPS IN TRABECULECTOMY. R REICHERT, W STEWART, MB SHIELDS. One surgeon performed 40 consecutive

trabeculectomies, utilizing a limbus-based conjunctival flap in the first 20 eyes and a fornix-based flap in the remaining 20. A success rate of 90% was achieved in both groups, although eyes with limbus-based flaps had slightly better postoperative intraocular pressure control. (*Ophthalmic Surg 18:672, 1988. Reprint requests should be addressed to M. Bruce Shields, M.D., Duke University Eye Center, Box 3802, Durham, North Carolina 27710.*)

AN ANTERIOR LIMBAL APPROACH TO VITRECTOMY FOR THE SURGICAL MANAGEMENT OF INFECTIOUS ENDOPHthalMITIS. RM Davis, JJ Rowsey, HG Jensen. The authors present two cases illustrating a surgical approach to the diagnosis and treatment of infectious endophthalmitis following extracapsular cataract extraction with insertion of a posterior chamber lens. In both cases, a vitrectomy was initiated through a limbal approach after clearing the anterior chamber, thus allowing improved visualization of the vitreous cavity. The vitrectomy probe was then passed through a peripheral iridotomy, the peripheral posterior capsule and/or zonules, and into the anterior vitreous. The peripheral iridotomy allowed access to the vitreous cavity for an anterior vitrectomy. The entire anterior chamber and vitreous aspirate was then analyzed for culture and sensitivity. This technique minimizes the risks of pars plana vitrectomy for endophthalmitis by improving visualization and possibly decreasing the risk of retinal detachment. (*Ophthalmic Surg 18:683, 1988. Reprint requests should be addressed to J. James Rowsey, M.D. The Dean A. McGee, 608 Stanton L. Young Blvd., Oklahoma City, Oklahoma 73104.*)

A NEW SURGICAL TECHNIQUE FOR MANAGING SUNSET SYNDROME. R David Allara, GW Weinstein. The authors describe a new, relatively simple technique for managing subluxated posterior chamber intraocular lenses, in which the lens implant is "dialed" forward into the anterior chamber, bringing its haptics to rest in the chamber angle. (*Ophthalmic Surg 18:811, 1988. Reprint requests should be addressed to George W. Weinstein, M.D. Department of Ophthalmology, West Virginia University Medical Center, Morgantown, West Virginia, 26506.*)

SURGICAL MANAGEMENT OF THE SECONDARY GLAUCOMAS: PART I. L Katz, GL Spaeth. The authors review neovascular glaucoma management. Panretinal ablation by laser or cryopexy and goniophotocoagulation used to re-

verse neovascularization are helpful, but not permanently curative. Filtering surgery is not as successful for neovascular glaucoma as it is for the primary adult glaucomas. Therefore, modification using 5-fluorouracil, carbon dioxide lasers, and alloplastic implants have been investigated. Although ciliary body ablation using cryotherapy or photocoagulation may reduce intraocular pressure, vision may still deteriorate. (*Ophthalmic Surg* 18:826, 1988. Requests for reprints should be addressed to Jay Katz, M.D., Wills Eye Hospital, Ninth and Walnut Streets, Philadelphia, Pennsylvania 19107-5599.)

RELATIVE AFFERENT PUPILLARY DEFECT IN EYES WITH RETINAL DETACHMENT. JC Folk, HS Thompson, SG Farmer, TW O'Gorman, RF Dreyer. The authors measured relative afferent pupillary defects before and after surgery in 38 patients with unilateral rhegmatogenous retinal detachment. All 38 patients were measured preoperatively and the mean (\pm SD) pupillary defect was 1.4 ± 0.7 log units. The afferent pupillary defect decreased in 36 of the 38 patients after successful scleral buckling operations (postoperative mean = 0.4 ± 0.3 log units). Twenty patients had defects postoperatively of 0.3 log units or less, and seven of these had no measurable defects at all.

A prediction model, using the variables of total number of peripheral quadrants detached and whether the macula was detached, yielded the following prediction equation: Relative afferent pupillary defect (log units) = $0.35 \times$ (total quadrants) + $0.68 \times$ macula detachment. This means that the detachment of each peripheral quadrant of retina caused about 0.35 log units of defect, whereas detachment of the macula caused 0.68 log units. The standard error of this estimate was rather large (± 0.65 log units); therefore, the size of the afferent pupillary defect can only roughly predict the extent of the retinal detachment and vice versa. (*Ophthalmic Surg* 18:757, 1988. Reprint requests should be addressed to James C. Folk, M.D., C.S. O'Brien Library, Department of Ophthalmology, University Hospitals, Iowa City, Iowa 52242.)

AUTOGENOUS DERMIS-FAT "BASEBALL" ORBITAL IMPLANT. JD Bullock. The author has devised a new procedure for the construction of an autogenous dermis-fat orbital implant, in which two figure-eight-shaped dermis-fat grafts are sutured together into a baseball shape. Correct implant size can be determined by preplacement of different-sized Mule spheres and testing for accurate fit. The

"baseball" implant eliminated deep orbital fat which is distant from a vascular supply, and because it is covered with dermis, it maximizes graft vascularization, thus promoting survival of the implanted tissues. In eight patients, followed postoperatively for as long as 28 months, baseball implants have produced highly satisfactory results. (*Ophthalmic Surg* 18:30, 1988. Requests for reprints should be addressed to John D. Bullock, M.D. F.A.C.S., Intermed Building, Suite 230, 1520 South Main Street, Dayton, Ohio 45409.)

VITREORETINAL CHANGES ASSOCIATED WITH RISE IN INTRAOCULAR PRESSURE AFTER ND: YAG CAPSULOTOMY. HD Schubert. In a chart review of 100 consecutive Nd:YAG laser capsulotomies, six presumed risk factors of the rise in intraocular pressure (IOP) after capsulotomy were identified. A group of 15 patients in which the pressure rose to at least 10 mmHg above baseline postoperatively showed a significant ($P \leq 0.01$) association with myopia, vitreoretinal disease, and vitreous prolapse into the anterior chamber. The previously known association of high pressures with glaucoma, a large capsular opening, or absence of a posterior chamber lens were also confirmed. There was no correlation between the energy used and IOP. These retrospective findings are suggestively consistent with the concept that injury to a liquefied vitreous may contribute to the IOP rise after capsulotomy. (*Ophthalmic Surg* 18:19, 1988. Requests for reprints should be addressed to Hermann D. Schubert, M.D. Retina Service, Wills Eye Hospital, Ninth and Walnut Streets, Philadelphia, Pennsylvania 19107.)

LATE ONSET, PROGRESSIVE, PERIPHERAL ANTERIOR SYNECHIAE WITH POSTERIOR CHAMBER INTRAOCULAR LENSES. EM Van Buskirk. Four eyes of three patients who had had posterior chamber intraocular lens implantation developed peripheral anterior synechiae overlying the lens haptics many months after the original implantation. The synechiae progressed over time, but a portion of the chamber angle remained open in all cases. Two of the three patients had had an underlying open-angle glaucoma and were on pilocarpine therapy prior to the implantation surgery. The exacerbation of their glaucoma from new peripheral anterior synechiae required advancement in medical therapy in three of four eyes with the fourth requiring filtration surgery. Patients with posterior chamber intraocular lenses should have gonioscopy preoperatively and on a regular basis following implantation surgery. (*Ophthalmic Surg*

18:115, 1988. Requests for reprints should be addressed to E. Michael Van Buskirk, M.D. Department of Ophthalmology, Oregon Health Sciences University, 3181 SW Sam Jackson Park Road, Portland, Oregon 97201.)

EYELID NECROSIS FOLLOWING INTRALESIONAL CORTICOSTEROID INJECTION FOR CAPILLARY HEMANGIOMA. FC Sutula, AT Glover. The intralesional injection of corticosteroids has been employed successfully in treatment of adnexal neonatal hemangiomas since 1979. This form of treatment is easily administered, is repeatable and free from serious complications. The authors present an exceptional case in which full-thickness eyelid necrosis ensued following intralesional injection of corticosteroids in a capillary hemangioma. After eyelid reconstruction the patient's visual axis has remained unobstructed, and amblyopia has been thus far averted. (*Ophthalmic Surg* 18:103, 1988. Requests for reprints should be addressed to Francis C. Sutula, M.D., 3 Hawthorne Place, Suite 106, Boston, Massachusetts 02114.)

A COMPARISON OF RETROBULBAR BLOCK PRODUCED BY ETIDOCAINE 1% AND BY A MIXTURE OF LIDOCAINE 2% AND BUPIVACAINE 0.75%. PH Smith, P Kemp, ER Smith. In this double-blind study, the authors produced retrobulbar block for cataract surgery in 43 patients with etidocaine 1% and in 37 patients with a mixture of equal volume of lidocaine 2% and bupivacaine 0.75% (final concentrations of 1% and 0.375%, respectively). While a greater proportion of etidocaine-treated patients needed supplemental drug for block, the times of onset of sensory and motor block were not different for the two groups. Compared to treatment with etidocaine, patients treated with the mixture had a slower recovery of motor function. While the proportion of patients reporting postoperative pain was about the same in each group, both the onset of pain and the use of analgesic agents occurred earlier in the group treated with etidocaine. Thus retrobulbar blocks produced by the combination of lidocaine and bupivacaine occurred as rapidly as those produced by etidocaine but had a longer duration. (*Ophthalmic Surg* 18:106, 1988. Requests for reprints should be addressed to Porter H. Smith, M.D., Chief, Anesthesia Department, Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, Massachusetts 02114.)

SUCCESSFUL TREATMENT OF PAECILOMYCES LILACINUS ENDOPHTHALMITIS FOLLOWING CATARACT EXTRACTION

WITH INTRAOCULAR LENS IMPLANTATION. PS Levin, WE Beebe, RL Abbott. The authors report a case of mycotic endophthalmitis caused by *Paecilomyces lilacinus* after cataract surgery. Treatment consisted of early vitrectomy, multiple intravitreal injections of amphotericin B and miconazole, intravenous miconazole and, later, oral ketoconazole. The intraocular lens, which initially appeared uninvolved, was removed six weeks after initiation of therapy and found to contain causative organisms. Final visual acuity was 20/20. The authors recommend aggressive therapy consisting of early vitrectomy, intravitreal injections repeated as necessary, removal of the intraocular lens, avoidance of intraocular steroid, and administration of systemic antifungal agents. (*Ophthalmic Surg* 18:217, 1988. Requests for reprints should be addressed to Richard L. Abbott, MD, Pacific Presbyterian Medical Center, 2100 Webster Street, Suite 214, San Francisco, California 94115.)

NEOVASCULAR GLAUCOMA; A RETROSPECTIVE ANALYSIS OF TREATMENT WITH PERIPHERAL PANRETINAL CRYOTHERAPY. LP Brodell, RJ Olk, NP Arribas, E Okun, GP Johnston, I Boniuk, RF Escoffery, MG Grand, DB Burgess, LH Schoch. The authors performed a retrospective analysis of thirty-one eyes in thirty patients with neovascular glaucoma (NVG) associated with proliferative diabetic retinopathy or venous occlusive disease was performed. Eyes treated with transconjunctival peripheral panretinal cryotherapy alone, or in combination with limited cyclocryotherapy had improvement or stabilization of visual acuity in 55%, reduction of intraocular pressure in 55%, and stabilization or regression of iris neovascularization in 70% of eyes at 12-14 months post-treatment. Transconjunctival peripheral panretinal cryotherapy alone, or in combination with limited cyclocryotherapy is recommended in the treatment of eyes with NVG and media opacities precluding photocoagulation therapy, or in eyes unresponsive to previous photocoagulation therapy. (*Ophthalmic Surg* 18:200, 1988. Requests for reprints should be addressed to R. Joseph Olk, MD, Retina Consultants Ltd., 4949 Barnes Hospital Plaza, Suite 17413, St. Louis, Missouri 63110.)

FILTRATION SURGERY IN BLACK PATIENTS: EARLY RESULTS IN A WEST INDIAN POPULATION. BJ Shingleton, JA Distler, BH Baker. The authors reviewed the early results of 80 filtration procedures when

ABSTRACTS FROM ELSEWHERE

used as the initial surgical treatment in a Saint Lucian West Indian black population with primary open angle glaucoma. Two techniques were used: trabeculectomy under a scleral flap with fornix-based conjunctival flap (Group 1) and full thickness posterior lip sclerectomy with limbal-based conjunctival flap (Group 2). Postoperatively, with an average follow-up of six months, Group 2 had significantly lower intraocular pressures, reduced glaucoma medication requirements, and increased cystic bleb formation. Vision did not differ significantly between the two groups postoperatively, although two Group 1 patients developed progressive glaucomatous visual loss. Complications were slightly more frequent in Group 2. The results for this study suggest that a full thickness sclerectomy technique merits consideration as the initial filtration procedure of choice in West Indian blacks with advanced open angle glaucoma. (*Ophthalmic Surg* 18:195, 1988. Requests for reprints should be addressed to Bradford J. Shingleton, MD, 50 Staniford Street, Boston, Massachusetts 02114.)

ELECTRICAL CATARACTS; A CASE REPORT AND REVIEW OF THE LITERATURE. E Van Johnson, LB Kline, HW Skalka. The authors report a case of electrically-induced cataracts and a review of the literature is presented. Awareness of the possibility of this complication and screening of highrisk patients is stressed. The majority of cases respond well to surgery, but final visual acuity may be decreased secondary to retinal or optic nerve injury caused by the electrical current. (*Ophthalmic Surg* 18:283, 1988. Requests for reprints should be addressed to Lanning B. Kline, MD, 1600 7th Avenue South, Suite 555, Birmingham, Alabama 35233.)

A NEW TECHNIQUE OF TREATING RHEGMATOGENOUS RETINAL DETACHMENT USING THE Q-SWITCHED ND: YAG LASER. L Berglin, S Stenkula, S Crafoord, A Ohrstrom. The authors relieved the vitreous traction in eyes with retinal detachment and a horseshoe break by severing the flap of the break with the aid of the Q-switched Nd:YAG laser. The retina often flattens in eyes with shallow retinal detachment after this treatment; the breaks then can be sealed off with argon laser. In cases of retinal detachment treated with expanding gas, fewer recurrences were observed when vitreous traction had been relieved by Nd:YAG laser treatment. (*Ophthalmic Surg* 18:890, 1988. Reprint requests should be addressed to Lennart Berglin, MD, Department of Ophthalmology, Ore-

bro Medical Center Hospital, S-701 85 Orebro, Sweden.)

INFLAMMATORY RESPONSE TO VISCOELASTIC MATERIALS. SJ McKnight, J Giangiacomo, E Adelstein. The authors injected Healon^R, Amvisc^R, or Viscoat^R into the corneal stroma of 36 normal rabbit eyes. Twelve additional rabbit eyes were used as controls by performing a sham procedure. Twelve rabbits were euthanized at one day and the remainder seven days after injection. The eyes were enucleated and examined by light microscopy. No control eyes had detectable inflammation. Only Viscoat produced mild inflammation at seven days, but this was statistically significant only at $p=0.182$. There appears to be little difference in the inflammatory response of these three viscoelastic substances. (*Ophthalmic Surg* 18:804, 1988. Reprint requests should be addressed to Joseph Giangiacomo, MD, University of Missouri-Columbia, Mason Institute of Ophthalmology, One Hospital Drive, Columbia, Missouri 65212.)

COMBINED PENETRATING KERATOPLASTY, EXTRACAPSULAR CATARACT EXTRACTION, AND POSTERIOR CHAMBER INTRAOCULAR LENS IMPLANTATION. M Busin, RC Arffa, MB McDonald, HE Kaufman. The authors reviewed 22 cases of triple procedure in the last two years at our institution. Six months postoperatively 21 of the 22 transplanted corneas were clear. One graft for herpetic corneal scarring failed. Best corrected visual acuity was 20/40 or better in 14 patients. The average refractive error was -1.31 ± 2.30 diopters. Refractive astigmatism was 4 diopters or less in 80% of patients. These results, which compare favorably with previous series, indicate the efficacy and safety of this procedure. (*Ophthalmic Surg* 18:272 1988. Requests for reprints should be addressed to Herbert E. Kaufman, MD, LSU Eye Center, 2020 Gravier Street, Suite B, New Orleans, Louisiana 70112.)

THE MANAGEMENT OF ENDOPTHALMITIS: DIAGNOSTIC AND THERAPEUTIC GUIDELINES INCLUDING THE USE OF VITRECTOMY. R Oik, GM Bohigian. The authors set forth both diagnostic and therapeutic guidelines in the management of endophthalmitis cases, with emphasis on management techniques for those cases requiring vitrectomy. (*Ophthalmic Surg* 18:262, 1988. Requests for reprints should be addressed to R. Joseph Oik, MD, Suite 17413 East Pavilion, 4949 Barnes Hospital Plaza, St. Louis, Missouri 63110.)

AB INTERNO AND AB EXTERNO FILTERING OPERATIONS BY LASER CONTACT SURGERY. DE Gaasterland, DR Hennings, TA Boutacoff, C Bilek. The authors describe a new method to create filtering tracts ab interno or ab externo which may eventually prove useful in eyes with poorly controlled glaucoma is described. Fiberoptics of 200 um diameter, with either cleaved or 500 um ball lens tips, were coupled to the output of an argon gas laser emitting a number of radiation lines in the ultraviolet ((333 to 363 nm) wavelengths. This system was used to perforate the corneoscleral limbal tissue of enucleated bovine eyes with a small number of laser applications to create a filtering fistula. Corneoscleral limbal perforation with a 200 um cleaved fiber required 0.6 to 1.1 J total energy, delivered with a laser power of 0.5 W, or greater, for 0.1 second. With a 500 um ball lens fiber tip a tract of nearly 0.5 mm diameter was created, requiring 5.1 to 10.4 J total energy, delivered with a laser power of 2.0 W, or greater, for at least 0.1 second. The energy required for perforation from the external surface to the anterior chamber was the same as the energy required for ab interno perforation. (*Ophthalmic Surg* 18:254, 1988. Requests for reprints should be addressed to Douglas E. Gaasterland, MD, 5 Kober-Cogan, Georgetown University Medical Center, 3800 Reservoir Road, NW, Washington, DC 20007.)

GIANT CYSTS OF THE CONJUNCTIVA FOLLOWING SCLERAL BUCKLING. JC Newton, RC Pruett, KE Merhige, PJ Maris. Four patients developed giant conjunctival cysts following scleral buckling for retinal detachment. Histologically these cysts showed a core of fibrous tissue lined by stratified, non-keratinizing epithelium and with goblet cells. They probably arose from inadvertent implantation of epithelium during surgery. In three cases the cysts were surgically excised without recurrence. The authors discuss alternate modes of therapy. (*Ophthalmic Surg* 18:295 1988. Requests for reprints should be addressed to James C. Newton, MD, Department of Ophthalmology, St. Luke's Hospital, Amsterdam Avenue & 114th Street, New York, New York 10025.)

CORRECTION OF HYPEROPIA FOLLOWING RADIAL KERATOTOMY: QUANTIFICATION IN HUMAN CADAVER EYES. TD Lindquist, JB Rubenstein, RL Lindstrom. Overcorrection is a significant complication following radial keratotomy (RK). This study using human cadaver eyes demonstrates that the use of interrupted sutures placed across radial inci-

sions coincident with a 7-mm optical zone mark can induce a wide range of central corneal steepening and can therefore correct varying amounts of hyperopia following RK. A case presentation confirms the effectiveness of using interrupted sutures to steepen the cornea following RK, but it also shows that significant regression of the effect must be considered at the time of suture placement. Since placement of interrupted corneal sutures is a routine procedure, it is a very convenient technique for treating overcorrection following RK. (*Ophthalmic Surg* 18:432, 1988. Requests for reprints should be addressed to Thomas D. Lindquist, MD, PhD, Department of Ophthalmology, University of Minnesota, Box 493 Mayo Memorial Building, 516 Delaware Street, SE, Minneapolis, Minnesota 55455.)

IDIOPATHIC CENTRAL SEROUS RETINOPATHY IN CHINA: A REPORT OF 600 CASES (624 EYES) TREATED BY ACUPUNCTURE. J Lu, TR Friberg. The authors treated 600 Chinese patients (624 eyes) with clinically diagnosed central serous retinopathy by consecutive courses of acupuncture. Eighty-six percent of patients had resolution of their subretinal fluid within 3 months of treatment, a result similar to the natural history of the disease as reported by others in non-Chinese patients. Central serous retinopathy was most common in the 30 to 50 year age group, occurred in males seven times more frequently than in females, and was bilateral in 4% of patients. (*Ophthalmic Surg* 18:608, 1988. Request for reprints should be addressed to Thomas R. Friberg, MD, Department of Ophthalmology, Retina Service, University of Pittsburgh, 230 Lothrop Street, Pittsburgh, Pennsylvania 15213.)

PANRETINAL PHOTOCOAGULATION FOR RADIATION-INDUCED OCULAR ISCHEMIA. JJ Augsburger, SE Roth, LE Magargal, JA Shields. The authors present preliminary findings on the effectiveness of panretinal photocoagulation in preventing neovascular glaucoma in eyes with radiation-induced ocular ischemia. Our study group consisted of 20 patients who developed radiation-induced ocular ischemia following cobalt-60 plaque radiotherapy for a choroidal or ciliary body melanoma. Eleven of the 20 patients were treated by panretinal photocoagulation shortly after the diagnosis of ocular ischemia, but nine patients were left untreated. In this non-randomized study, the rate of development of neovascular glaucoma was significantly lower (p=0.024) for the 22 photocoagulated patients than for the nine who were left untreated.

(*Ophthalmic Surg* 18:589, 1988. Requests for reprints should be addressed to James J. Augsburger, MD, Oncology Service, Wills Eye Hospital, Ninth and Walnut Streets, Philadelphia, Pennsylvania 19107.)

TREATMENT OF MOOREN'S AND MOOREN'S-LIKE ULCER BY LAMELLAR KERATECTOMY; REPORT OF SIX EYES AND LITERATURE REVIEW. NF Martin, WJ Stark, AE Maumenee. The authors present three cases of Mooren's ulcer (four eyes) and one case of marginal corneal ulcer associated with relapsing polychondritis (two eyes) with decrease in ocular inflammation following extensive lamellar keratectomy or lamellar keratoplasty. Tissue adhesive was needed in two cases to maintain ocular integrity. The procedure may work by the removal of a corneal antigenic stimulus to a self-perpetrating autoimmune phenomenon that causes corneal melting. More cases are needed to evaluate the therapeutic efficacy of lamellar keratectomy for Mooren's and Mooren's-like corneal ulcers. (*Ophthalmic Surg* 18:564, 1988. Requests for reprints should be addressed to Walter J. Stark, MD, Maumenee Building, The Wilmer Institute, The Johns Hopkins Hospital, 600 N. Wolfe Street, Baltimore, Maryland 21205.)

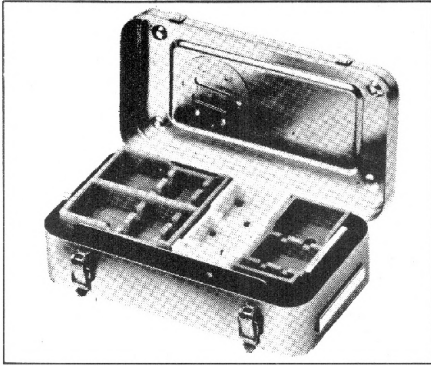
CORNEAL WEDGE RESECTION FOR HIGH ASTIGMATISM FOLLOWING PENETRATING KERATOPLASTY. M Lugo, ED Donnenfeld, JJ Arentsen. The authors performed 14 corneal wedge resections between April 1980 and January 1986 at the Wills Eye Hospital were retrospectively reviewed. Mean preoperative refractive (subjective) astigmatism was 8.13 diopters (D), with a range of 3.75 to 15.0 D. Following wedge resection, the mean residual astigmatism was 3.04 D, with a range of 0 to 5.0 D. Although the mean keratometric astigmatism measurements were generally similar to the astigmatism measured during refraction, there was little correlation between them on a case-by-case basis. Corneal wedge resection appears to remain an effective and moderately predictable technique for managing high astigmatism following penetrating keratoplasty. (*Ophthalmic Surg* 18:650, 1988. Requests for reprints should be addressed to Juan J. Arentsen, MD, Cornea Service, Wills Eye Hospital, Ninth and Walnut Streets, Philadelphia, Pennsylvania 19107.)

REDUCTION OF INFLAMMATION FOLLOWING CATARACT SURGERY BY THE NONSTEROIDAL ANTI-INFLAMMATORY DRUG, FLURBIPROFEN. D Sabiston, H Tessler, K Summers, C Osterle, JK

Cheetham, E Duzman, R DeGryse. The authors conducted a double-masked clinical trial in which 72 patients undergoing cataract extraction surgery received a topical loading dose of 0.03% flurbiprofen or vehicle before surgery and one drop four times daily for 2 weeks after surgery. The severity of conjunctival hyperemia, aqueous humor cells, and aqueous humor flare was lower in the flurbiprofen-treated group than in the vehicle-treated group at all follow-up visits; the differences were significant on day 14. Four patients treated with flurbiprofen and two treated with vehicle exhibited postoperative hyphemas. Treatment with flurbiprofen appeared to decrease the severity of inflammation following cataract extraction surgery. (*Ophthalmic Surg* 18:873, 1988. Reprint requests should be addressed to Janet K. Cheetham, Pharm. D., Allergan, Inc., 2525 Dupont Drive, Irvine, CA 92715.)

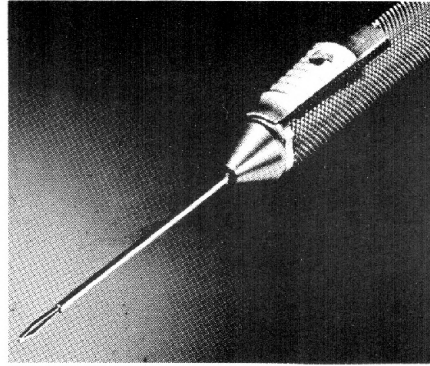
COMPARISON OF OPTIC DISC FEATURES IN LOW-TENSION AND TYPICAL OPEN-ANGLE GLAUCOMA. KM Miller, HA Quigley. The authors undertook this study to identify features of optic nerve head architecture that might explain, in part, why ganglion cell loss occurs in patients with low-tension glaucoma. We compared retrospectively the disc photographs of 25 patients with low-tension glaucoma with those of 26 control patients with typical open-angle glaucoma. No differences were observed in any of the following features: pore length, shape, or size variation; cup/disc and disc/arteriole ratio; clock size variation; cup/disc and disc/arteriole ratio; clock positions of total rim loss; central retinal vessel entry site; rim pallor; number of rim-crossing vessels; and presence or absence of peripapillary nerve fiber layer hemorrhages, optic pits, and central retinal vessel canals. An hour-glass appearance of connective tissue bundles within the scleral lamina cribrosa, however, was present statistically less often in patients with low tension glaucoma ($p=0.007$). We speculate that the microscopic arrangement of fiber bundles within the lamina cribrosa may play an etiologic role in the pathogenesis of low-tension glaucoma. (*Ophthalmic Surg* 18:882, 1988. Reprint requests should be addressed to Harry A. Quigley, MD, Maumenee B-110, The Wilmer Institute, Johns Hopkins Hospital, Baltimore, Maryland 21205.)

Eid Mubarik



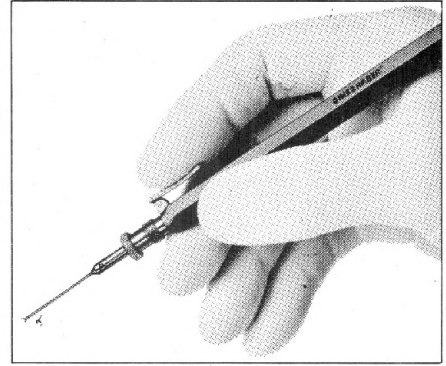
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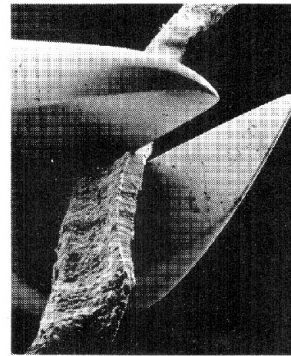
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