مجلہ طب العیون پاکستان

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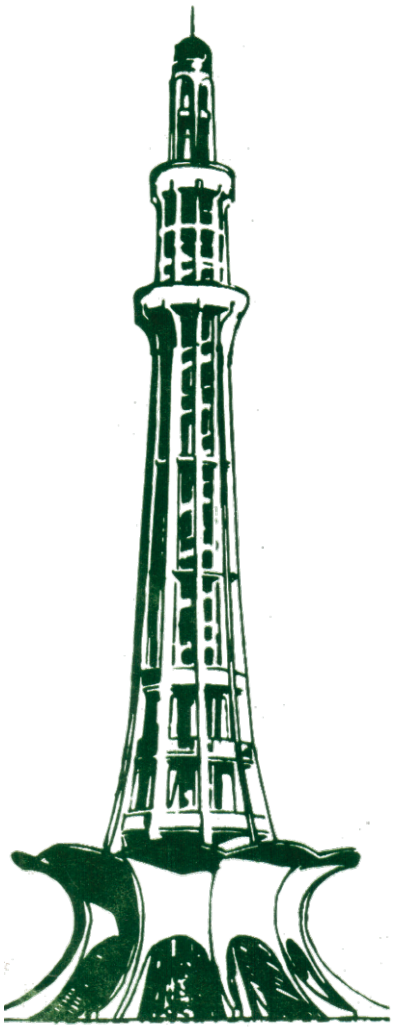

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In The Name of Allah, The Beneficent, The Merciful

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اردو خلاصہ جات

از خالد اعوان

پاکستان میں آنکھ کا تنا ذر تقشیر - عطا محمد خانزادہ۔

جنوری ۱۹۷۶ سے دسمبر ۱۹۸۴ کے آخر تک مصنف نے آنکھ کے تنا ذر تقشیر کے ۶۹۶ مریض صوبہ سرحد میں دیکھے۔ ان میں سے ۶۱۶ مرد تھے اور ۸۰ عورتیں تھیں۔ مریضوں عمریں ۳۲ سال سے ۸۰ سال تک کے درمیان تھیں۔ نوجوان ترین مریض ایک ۳۲ سالہ عورت تھی۔ مرض ۹ ۴۳ مریضوں میں دو طرفہ اور ۱۷۷ میں یکطرفہ تھا۔ ان مریضوں میں سے ۴۸۰ مریضوں کو مشترک کالہ موتیا بھی تھا۔ یہ مریض یا تو اندرون چشم دباؤ کے حد سے بڑھ جانے پر درد ہونے یا بینائی کے ضائع ہو جانے کی وجہ سے ڈاکٹر سے مشورہ کے لئے آئے۔ بہت سے مریض تھوڑے ہی عرصہ کے بعد دواؤں اور قطروں کے استعمال سے بالکل غافل ہو گئے یا پھر ذیلی حصائنہ کے لئے واپس نہ آئے۔ ان وجوہات کی بنا پر مصنف کی رائے میں عمل جراحی ان مریضوں کے علاج کا بہترین طریقہ ہے۔ تنا ذر تقشیر سے زیر بحث مریضوں میں سے ستر فی صد (۷۰٪) کو سفید موتیا بھی تھا۔ مصنف کی رائے میں ان مریضوں میں سفید موتیئے کے آپریشن کے دوران الجھاؤ کا زیادہ احتمال ہے۔ اس مضمون میں تنا ذر تقشیر پر جدید ضیالارت اور ایک تقضیلی تبصرہ بھی شامل ہیں۔ (مجلہ طب العیون پاکستان ۲: ۷-۱۲، ۱۹۸۶)

انقطاع النفس فی النوم اور قرص البصری کا ورم - روتھ مری فیفہ - ہاورڈ ای بولجر اور بشیر احمد چوہدری

اس مضمون میں مستند انقطاع النفس فی النوم میں قرص البصری کے ورم کا ظاہر ہونا پہلی دفعہ بیان کیا گیا ہے۔ ایک ۳۹ سالہ عورت جس کو شدید انقطاع النفس فی النوم کی شکایت تھا کی آنکھوں میں مصنفین نے حالت بیداری میں جبکہ اندرون دماغ دباؤ بھی حسب معمول تھا دو طرفہ ورم القرص البصری یا بابہ حاضر میں کئی مصنفین اوڈیما حلیمیہ (Papilledema) کی موجودگی پھیپھڑوں میں دیرینہ رکاوٹ، تنا ذر پک وک این، اور پید ائشی دل کی بیرقان اسود میں بیان کر چکے ہیں مگر اس مریض کو ان میں سے کوئی بھی مرض نہ تھا۔ انقطاع النفس فی النوم میں ورم قرص البصری کی صحیح وجوہات معلوم ہیں۔ ان مصنفین کا خیال ہے کہ اسکی وجہ شاید وہ الجھاؤ اور خون میں کاربن ڈائی آکسائیڈ کی شبینہ زیادتی ہیں جو دوران نیند سانس کی رکاوٹ کے وقفوں کے دوران پیدا ہوتے ہیں۔ (مجلہ طب العیون پاکستان ۲: ۱۳-۱۵، ۱۹۸۶)

فلوریسین فی الورید کے ناموافق اثرات۔

محمد اسحاق چشتی - جنوری ۱۹۸۰ سے دسمبر ۱۹۸۴ تک مصنف نے فلوریسین فی الورید کے ۶۲۹ مشاہدات اپنے کلنک میں کئے۔ مریضوں کی عمریں ۲۱ سے ۸۱ سال تک کے درمیان تھیں۔ ان میں سے ۴۴ مریضوں (۲۲ عورتیں اور ۲۲ مرد) میں ضمنی اثرات ظاہر ہوئے۔ چند ایک مریضوں میں ایک سے زیادہ ناموافق اثرات پائے گئے۔ سب سے کثیر الوقوع شکایت متلی آنے کی تھی اور ۲۹ مریضوں کو ہوئی۔ ان میں سے چھ کو قے بھی ہو گئی۔ ۱۱ مریضوں کو خارش کی شکایت ہوئی جن میں سے سات کو جلد کے چٹے بھی پڑ گئے۔ دو مریضوں کو چکر آنے لگے۔ ایک مریض کو تشنج کے دورے کے ساتھ ساتھ بطا القلب اور بے ہوشی بھی ہو گئی۔ ایک مریض کو رگ کی جگہ سے بعید از مرکز جلد میں فلوریسین کے غیر معمولی دھبے پڑ گئے۔ اس مریض اور تین مریضوں جن میں دوران فون کے مضر اثرات ہوئے کا تفصیلی تذکرہ کیا گیا ہے۔ (مجلہ طب العیون پاکستان ۱۹-۲۱: ۲، ۱۹۸۶)

سری لنکا کا زندہ بینک العیون۔ آندرے فرنینڈو

۱۹۵۰ میں اپنے سری لنکا میں تعین کے دوران مصنف نے قرنیہ جات کی ٹرانس پلانٹ کے لئے قرنیہ جات کی نایابی کے مسئلہ کا عجیب سا حل نکالا۔ اس نے حکومت کے اور مذہبی نمائندگان سے مل کر ایک قانون پاس کروایا کہ جو مجرم پھانسی لگیں ان کی آنکھیں لڑانسی پلانٹ کے لئے استعمال کی جائیں۔ اس طرح مصنف کی دور بینی سے دنیا کا پہلا "زندہ بینک العیون" ایجاد ہوا۔ جس میں استعمال کے وقت تک عطا کنندہ آنکھ زندہ مجرم میں ہی محفوظ رہتی۔ جب اس کی پھانسی کا وقت آتا ایک یا دو لوگ جن کو قرنیہ ٹرانس پلانٹ کی ضرورت ہوتی وہ ہسپتال میں داخل کر دیے جاتے۔ اور پھانسی لگتے ہی عطا کنندہ کے قرنیہ وصول کی آنکھ میں لگا دیے جاتے۔ (مجلہ طب العیون پاکستان ۲: ۱۸، ۱۹۸۶)

Ophthalmic "Past-Pourri"

Priorities for Progress

"When one compares them with the beautiful plates that illustrate the transections of the Ophthalmological Society of the United Kingdom one cannot help wishing that the publisher had been unpatriotic enough to have their plates made in London."

S.D. Burnett (An American Ophthalmologist)
In his review of an American
"Text-book of Ophthalmology"
Archives of Ophthalmology 15:144, 1886

Editorials

Ophthalmic Literary Trends in Pakistan

BISMILLAHIR-RAHMANIR-RAHEEM! This issue begins the second volume of THE JOURNAL. The objectives pursued in the first volume were mainly to create a publication of prevailing international standard that reflects the needs of Pakistani ophthalmologists and focus attention on the direction ophthalmology in Pakistan is pursuing. The very founding of THE JOURNAL is an indication that the profession is fast moving toward a goal of progress by research and documentation of experience. The papers published in the first volume were selected not only for their high standard of contents but also to meet the clinical needs of our readers and to stimulate those inclined toward basic research. Although all of the material published in the first volume was original, several papers included extensive reviews that were intended to meet the needs of both practitioners and trainees. Hence, the papers on angioid streaks, glaucoma, retinoblastoma, and diabetic retinopathy contained reviews that were most exhaustive and up-to-date. This useful policy is continued in this issue, and the paper on exfoliation syndrome with glaucoma capsulare includes an up to date review on this subject. Dr. Khanzada's paper "Exfoliation Syndrome in Pakistan" is based on his study of the largest series (696 cases) ever reported in ophthalmic literature. He makes some very significant observations. Also, his thoughts on the management of glaucoma and cataract in exfoliation patients in Pakistan are of practical value. It is surprising, at least to me, to find that exfoliation syndrome is so prevalent in Pakistan.

The section on CAMERA CLINICALS not only presents challenges to the diagnostic ability of the readers but also takes advantage of the curiosity created by these challenges to impart more comprehensive knowledge to them. Instead of simply giving answers to the photographic quizzes, current and concise information on the topics is included in EXPOSITIONS. The highest quality reproduction of figures and photographs is of paramount importance in such an approach. The printing of the first volume could easily compete with the best anywhere in the world. The scientific standard of all the papers was assured by their prepublication evaluation by the referees consulted by other prestigious international ophthalmic publications. Similarly, the section on "OPHTHALMIC 'PAST-POURRI'" gives the readers the glimpses from the past, with references and modern status of the presented topics where possible.

As noted in the editorial "The Founding of The Journal" in the index issue of the first volume (October 1985), all this was accomplished, of course, with much hardwork and sacrifice. One other reason for that editorial was to present the truth to the readers, without fear of what conclusions it may lead to. It is comforting to know that some good has come from the printing of that editorial. There were letters of support and encouragement from readers and from the members of the Editorial Board. These letters also brought many useful and practical suggestions, the implementation of which is expectd to make the editorial and printing operations more efficient. Because of that editorial many ophthalmologists in Pakistan are now actually engaging themselves in scientific writing. The detailed instructions and suggestions on how to conduct research and writing were sent to them at their requests. Professor Raja Mumtaz met with the Editor, Khalid J. Awan, during the Convocation of the Pakistan Academy of Medical Sciences (held on December 23, 1985 in Lahore), and assured him on behalf of the Society that he must not get distracted by any moves that appear to undermine his efforts. Also, Professor Raja reiterated his wholehearted support of Dr. Awan's editorship of THE JOURNAL, expressed his sincere admiration for the hard labor and energy being spent on bringing out such an impressive publication, and urged Dr. Awan to continue the publication of THE JOURNAL as before. Many others have also come forward with their support. A particular mention of Dr. Muhammad Humayun is in order here.

In his evaluatory remarks on the first volume Dr. Blodi stated that THE JOURNAL had "enhanced the stature and reputation of Pakistan ophthalmology," but also raised the most important question : "Has this journal met the needs of Pakistani ophthalmologists?" The remarks in the above paragraphs shed some light on what plans the Editors have in answer to this question. It is very important that readers write us about what they consider to be their needs and what they expect from their national publication. Without their input the question raised by Dr. Blodi will remain only half answered, rendering THE JOURNAL less useful to Pakisani ophthalmologists than it intends to be. We have received several suggestions that will be incorporated in future issues. However, these suggestions come from ophthalmologists with interests limited only to specific subspecialties. A broader viewpoint is needed to make THE JOURNAL useful to the greatest majority of Pakistani ophthalmologists.

Beginning with this issue, THE JOURNAL is adopting the policy of including the addresses for the reprint requests with the summaries of articles published in the "ABSTRACTS FROM

ELSEWHERE." This will help the readers in obtaining from authors the entire copies of papers they find interesting. The editors wish to remind the readers that the abstracts edited and published in THE JOURNAL do not include the literature in languages other than English, for the simple reason that English is the only foreign scientific language read and understood in Pakistan. Also, we publish abstracts only from those English journals that have the highest standard and reputation in the world.

— Khalid J. Awan

Problems of Corneal Donor Material in Pakistan

In this issue appears (on page 18)a most interesting and historically significant account of the first, and most unusual, eyebank established in Sri Lanka (Ceylon) by Andre V. Fesus, M.D. I had the good fortune of meeting Andre and his wife Elizabeth during a lecture-study tour of Central Asia. I was most impressed by Andre's determination and Elizabeth's forthrightness. This soon turned our acquaintance into mutual friendship. Near the end of our study tour, Andre gave a talk on his most fascinating experience in Sri Lanka. Because of the current close professional association and friendship among the cornea surgeons of Pakistan and Sri Lanka, I thought Andre's account of his "Living Eyebank" would fascinate and educate our readers as it did me. Andre has most kindly written this article for the Pakistan Journal of Ophthalmology at my request. I believe it is one of the most interesting historical developments in modern ophthalmology in our part of the world. Dr. Fesus describes how he obtained donor eyes for corneal transplants from the unclaimed bodies of the executed prisoners and underscores the importance of timely detection and treatment of preventable nutritional blindness. In Pakistan, thousands of patients are left victims of curable blindness because of an extreme paucity of the donor material for corneal transplants. There are many reasons for this, but most of these may be overcome by proper education of the public and participation of the properly informed religious and social leaders. The responsibility to educate and inform them lies with us, the Pakistani ophthalmologists. I feel if we demonstrate sincere interest and start programs for public education, the government agencies will also come to our help. General Muhammad Zia-ul-Haq, President, Islamic Republic of Pakistan, has himself emphasized the need for establishing eye banks and public education programs in Pakistan. Not only has he himself signed an eye donation card, he also has promised his full support in our struggle against blindness from corneal diseases. Recently, in his address at the Convocation of the Pakistan Academy of Medical Sciences he reminded both the people and the professionals that it is not the physical body of a man that goes with him to hereafter, it is his good deeds that accompany him there, and what could be a better deed than to donate your organs to the living needy when you yourself are free of any need for them. I propose that we consult experts in the legal and religious codes of Pakistan and request our legislators to make it a law, just as Dr. Fesus had one created in Sri Lanka, that the organs of unclaimed corpses may be used as donor material. At the same time we must start an aggressive campaign to educate the public about the importance of organ donation and urge them to sign organ donation cards in maximum numbers.

Nutritional blindness is reversible if detected in time. The ophthalmological organizations in Pakistan should hold screening clinics for the detection of this problem among our people. Also public education about proper diet and about the symptoms of nutritional deficiency diseases will prove most beneficial.

— Khalid J. Awan

Ophthalmic "Past-Pourri"

Scleral "Oxoplant"

Kuhnt presented the case of a patient with eye injury who had suffered loss of part of sclera with vitreous loss and uveal tissue destruction in the area of laceration. He transplanted on this human eye "a piece of the sclera of an ox..., which healed over by first intention, so that the shape of the eye and a slight amount of vision were preserved."

H. Kuhnt: On scleral operation.
At the Congress of Naturalists and
Physicians, Strassburg - 1885
(1-15-93)

Scleral heterologous grafts should be expected to produce serious postoperative reactions. Dr. Kuhnt's patient might have had compromised immunity. The best approach is to use preserved human sclera. The human sclera may be preserved in alcohol or by placing it in a 15-cc glass bottle full of 95-percent glycerine and 10 grams of molecular sieve (sodium and calcium alumino-silicates) at its bottom.[1] — Editor.

1. King, JH, Jr, and Mctigue, TW: A simple method of preservation of cornea for lamellar keratoplasty. Amer J Ophthalmol 53:445, 1962.

Retinoblastoma in Pakistan

I read with interest the excellent article "Prevalence and Clinical Presentation of Retinoblastoma in the Northwest Frontier Province of Pakistan" by Dr. Zia-ul-Islam[1] in April 1985 issue of the Pakistan Journal of Ophthalmology. I knew that the lack of public education in Pakistan keeps the patients away from doctors till it is very late, but what amazed me most was the high incidence of retinoblastoma. I agree with Dr. Zia-ul-Islam in that educating the Pakistani public will significantly improve the prognosis of most diseases in Pakistan. However, a larger number of properly trained physicians is also direly needed in all of the provinces. Also an effort should be made by the profession itself to establish a limited number of national centers for more serious but less common diseases, such as congenital glaucoma and retinoblastoma.

I would like to know what were the clinical criteria on the basis of which Dr. Zia-ul-Islam made the diagnosis of retinoblastoma. A few photographic illustrations of his patients would have been of help to ophthalmologists still in training. Since a large number of entities may be included in the differential diagnosis of white pupillary reflex,[2] it would have been nice to mention whether any histopathological studies were performed on cases that fell under the heading of leukocoria. Dr. Zia-ul-Islam mentions radiotherapy in the management of some of his patients. Ellsworth[3] recommends radiation 3 days a week in daily doses of 400 rads with a weekly maximum of 1200 rads and the total dose varying from 3500 to 4500 rads. I am interested in knowing about the dose of radiation used by Dr. Zia-ul-Islam.

Muhammad Humayun, FRCS(C)
Dartmouth, Nova Scotia, Canada

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1. Islam, Z: Prevalance and clinical presentation of retinoblastoma in the Northwest Frontier Province of Pakistan. Pak J Ophthalmol 1:111, 1985.
2. Reese, AB: Tumors of the Eye. 3rd ed., New York, Harper & Row, Publishers, 1976, pp 105-113.
3. Ellsworth, RM: Retinoblastoma. In Fraunfelder, FT, Roy, FH, and Meyer, SM (eds.): Current Ocular Therapy, Philadelphia, W.B. Saunders Company, 1980, p 266.

Reply

The clinical diagnosis of retinoblastoma in advanced stages is not really very difficult. More than fifty percent of our patients presented with a fungating large mass that filled the whole orbit (Figure 1). Many other patients presented with leukocoria (Figure 2) that was carefully evaluated with indirect ophthalmoscopy, 3-mirror contact lens examination of the fundus, radiographic studies for calcification and

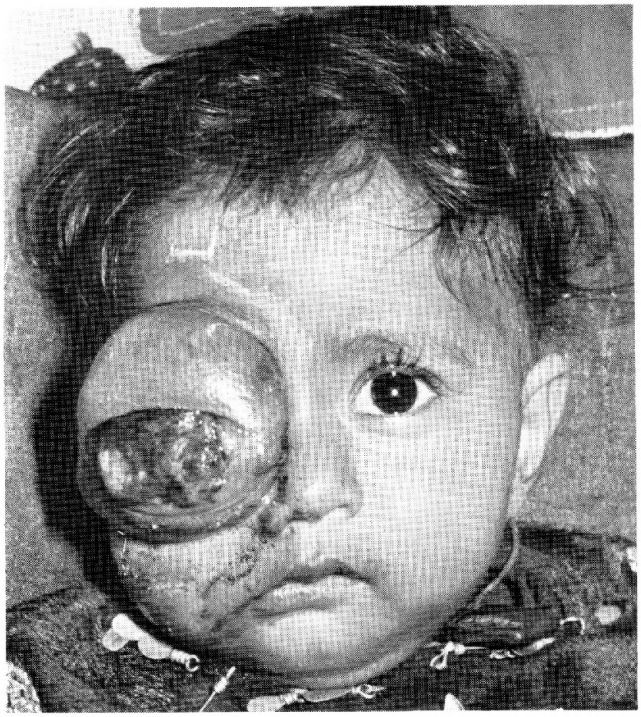

Figure 1. (Islam): Advanced retinoblastoma of the right eye presenting as a fungating mass.

any enlargement of the optic canal. In these patients diagnosis of retinoblastoma was confirmed by histopathologic studies of the excised globes. During the period of our study, we made a clinical diagnosis of

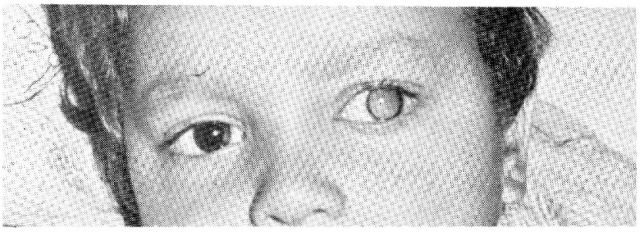

Figure 2. (Islam): Retinoblastoma presenting as leudocoria and exotropia of the left eye.

pseudoglioma in 10 patients. Eight of these were found to have retinoblastoma on histologic examination of the excised globes. In 1979, I estimated that the incidence of retinoblastoma in Peshawar was 20.4% of all the registered tumors in laboratory of our area; during the same period this incidence was 16% in Karachi, indicating a higher prevalence of retinoblastoma in Northwest Frontier Province area.

The irradition was the only possible method of treatment in some cases because of the advanced stage of the disease and the poor general health of the child. In those patients who received irradiation therapy, alone or in combination with surgery, a total dose of 3500 rads was used. We employed cobalt-60 in delivering radiation.

Zia-ul-Islam, FRCS
Peshawar, Pakistan

Book Reviews

THE 1985 YEAR BOOK OF OPHTHALMOLOGY. Edited by J. Terry Ernest, M.D., Ph. D., Chicago, Year Book Medical Publishers, 1985, clothbound, 274 text pages plus table of contents and index, black and white illustrations. $45.00.

In these days of explosion in medical publishing, there are so many ophthalmic journals being published that it is literally impossible even for the most ardent reader to keep up with the perusal of the available literature. Since 1901, The Year Book of Ophthalmology has been bringing to its readers the concise essence of the most meritable articles selected from the leading medical journals of the world, most of the selections being accompained by the succinct evaluatory remarks of a very learned editor. The current 1985 Year Book is edited by Dr. J. Terry Ernest, the Chairman of the Department of Ophthalmology at the Chicago University.

The 1985 Year Book of Ophthalmology contains a review of the selected literature of 1984. The number of international journals reviewed in this issue comes to 51. It is interesting that though a neurology journal from the subcontinent Indo-Pakistan is included, no ophthalmic publication from that part of the world appears in the list. The book is divided into 14 chapters according to anatomical structures of the eye (seven chapters), subspecialties (pediatric, neuro-ophthalmology, medical ophthalmology, basic sciences, etc.), and major disease entities (glaucoma, refractive errors, etc.). Not all, but most chapters are preceded by most revealing introductions by authorities in their respective fields.

In countries like Pakistan, the non-availability of the current journals and the prohibitive cost of the ones that are available make it very desirable for ophthalmologists in those countries to have a review publication that can keep them abreast with the modern developments at a minimum cost. The Year Book of Ophthalmology most aptly fulfills that need.

There are two features that I would most like to see in the future Year Books: The resuming of the publication of the list of questions that was a constant feature of the past editions. It always gave me a chance to judge the currency of my knowledge before I read the book, and also stimulated me to read the text much more attentively with a desire to retain what I read. Secondly, I would like to see that the addresses for obtaining the full text of the reviewed articles are also included. Even in the absence of these two features, The 1985 Year Book of Ophthalmology is one of the best ways to bring one's knowledge of ophthalmology up to date. I not only highly recommend this book, but also strongly suggest that all the ophthalmologists in Pakistan make it a must for their yearly reading. It will be most productive if the Year Book was made a prescribed reading for all the senior trainees and fellows in Pakistan.

— Reviewed by Khalid J. Awan, M.D.

THE SECONDARY GLAUCOMAS. Edited by Robert Ritch and M. Bruce Shields. St. Louis. The C.V. Mosby Company. Hardcover, 411 text pages, index, illustrated with black and white figures and one color plate. U.S. $49.50.

The Secondary Glaucomas is a handsomely produced text that contains contributions from 27 American, one Canadian, and one British experts. The book is divided into six sections, each of which is further subdivided into a number of chapters. The text is profusely illustrated with beautifully reproduced clinical photographs, photomicrographs of light and electron microscopy, fluorescein angiographs, carefully executed artwork, and line drawings.

The Secondary Glaucomas provides ophthalmologists with impressive and accurate information on the current concepts of pathogenesis and management of these poorly understood and difficult to manage entities. The book is most exhaustive and detailed text with useful reviews and references. The book is well-written and enjoyable to read from the moving dedication "To our parents" to the last chapter on "Glaucoma Following Penetrating Keratoplasty."

Most of the recent developments are included in the discussions of various entities. For example, the book describes, the growth of a membrane across the anterior chamber angle in iridocorneal endothelial syndrome (which includes essential iris atrophy, Chandler's syndrome, and iris nevus or Cogan-Reese syndrome), and the theory of friction of the lens zonule against the posterior epithelial surface of the iris being responsible for the disperssion of pigment in pigmentary glaucoma. The author of the chapter on neovascular glaucoma points out that the risk of rubeosis iridis is many times higher than the development of retinal neovascularization after central retinal vein occlusion. He mentions that flourescein angiography of the iris will show leakage of dye from its normal-appearing vessels before any other signs of neovascular glaucoma appear following a central retinal vein occlusion. The current views on ghost red blood cells in hemolytic glaucoma, direct lens protein blockage of filteration pathways in phacolytic glaucoma, exfoliation syndrome, and intraocular lens implant surgery and glaucoma are appropriately detailed. The book includes appropriate discussion of the role of modern modality of laser in the prevention and the treatment of secondary glaucomas amenable to such an approach. I found the chapter on "Effects of Nonsteroidal Drugs on Glaucoma" to be interesting and useful.

Each author gives a thorough review with early as well as recent references on the topic of his discussion, including pathogenetic aspects, clinical findings, differential diagnosis, course, prognosis, and management. The book is most useful and will benefit the neophyte and the researcher alike. I strongly recommend The Secondary Glaucomas to all ophthalmologists.

— Reviewed by Khalid J. Awan, M.D.

Original Article

Exfoliation Syndrome in Pakistan*

Atta Muhammad Khanzada, F.R.C.S.

ABSTRACT: From January 1976 to December 1984, the author saw a total of 696 patients with exfoliation syndrome from the North West Frontier Province of Pakistan. Out of these, 616 were men and 80 were women. The oldest patient was an 80-year-old man and the youngest was a woman of 32. Exfoliation was bilateral in 439 patients and unilateral in 177. Glaucoma associated with exfoliation syndrome was present in 480 patients, 308 men and 40 women. The author found that the patients with glaucoma came to see the doctor only when there was ocular pain due to an elevated intraocular pressue or when they had lost sight. Most of these patients were extremely noncompliant in the continued use of medicines, and rarely returned for followup evaluations. The author strongly recommends surgical treatment as the initial approach for the management of glaucoma in them. The incidence of cataract in these patients was 70%, and there was a higher rate of intraoperative complications for cataract surgery. The paper also includes a review and a commentary on the current status of exfoliation syndrome. (Pak J Ophthalmo 2: 7-12, 1986).

The exfoliation syndrome, an ocular condition in which accumulation of bluish white flakes is seen on the pupillary border, the anterior lens capsule, surfaces of the iris, ciliary body, the zonules, anterior vitreous, posterior surface of the cornea, and the trabecular meshwork (Figure 1), was first adequately described by Vogt.[1] Dvorak-Theobald[2] pointed out that this entity is not similar to the true exfoliation of the lens capsule. She suggested the name "pseudoexfoliation," which enjoyed universal popularity until a recent publication by Layden and Shaffer[3] who prefer the term "exfoliation syndrome" because of multiple structure involvement.

The existence of glaucoma in patients with exfoliation syndrome has been known for a long time.[4-6] Now it is believed that glaucoma that occurs with exfoliation syndrome is a truly secondary glaucoma.[3] The eyes with exfoliative changes also show a greater frequency of cataract formation.[3]

The early reports created an impression that the disease was prevalent only in the Scandinavians, but now it is well established that exfoliation syndrome is found in all parts of the world, with a peculiar rarity of disease only in Negroes.[7] The purpose of this paper is to present the results of a study concerning the incidence and behavior of exfoliation syndrome in the northwestern parts of Pakistan.

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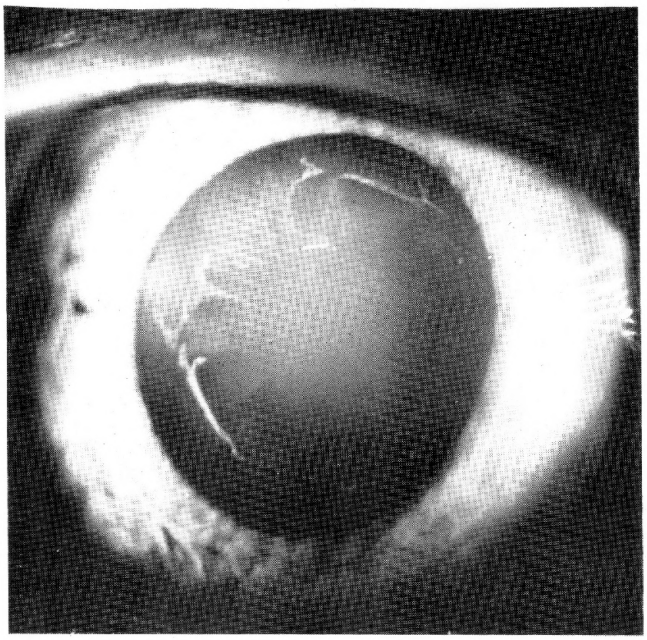

Figure 1. (Khanzada): Right eye with exfoliation syndrome. A photobiomicrograph. After pupillary dilation the peripheral band of exfoliative material on the caspule is visible around the central disc during slit lamp examination. (Courtesy of Khalid J. Awan, M.D.)

MATERIALS AND METHODS

From January 1976 to December 1984 all the patients seen in outpatient and inpatient services of Al-Noor Eye Clinic were carefully screened for the

presence of exfoliation syndrome. Other than the routine ophthalmological evaluation, the patients had careful biomicroscopic, gonioscopic, and applanation tonometric examinations. Age, sex, therapeutic measures, any associated ocular conditions, place of residence, and ethnic background were recorded in each case. A total of 696 cases of exfoliation syndrome were seen during the course of this study.

RESULTS

Out of a total of 696 patients with exfoliation syndrome, 616 were men and 80 were women. Bilateral cases numbered 493 and unilateral 177. The geographical distribution records showed that the disease was most prevalent in Dera Ismail Khan Division with the highest incidence among people living in North and South Waziristan. The incidence decreased as one approached Dera Ismail Khan proper. The lowest incidence was found in Bhakkar, Jhang, Mianwali, and the Attock, Havalian, and Haripur areas of Hazara. The districts of Bannu, Peshawar, Mardan, etc. and Agencies (Kurram, Khyber, etc.) Swat, Gilgit, and Chitral fell somewhere in the middle. The disease was most prevalent in the tribe of Wazirs, followed by, in a descending order of frequency, Daurs, Bhittanis, Masuds, Marwats, Bannuchis, Khattaks, and others. An interesting geographic difference was noted: the disease was more common in the mountainous areas than in the lowland settled parts. The findings in the patients included in this study are given in the TABLE. The most interesting age incidence was the presence of exfoliation syndrome in a 32-year-old woman.

TABLE
Findings in 696 Cases of Exfoliation Syndrome

Male	616
Female	80
Unilateral	177
Bilateral	439
Age in years	32-80
Glaucoma	480
Cataract	487

* The youngest patient was a 32-year-old woman.

DISCUSSION

The cause of glaucoma in exfoliation syndrome has been controversial in that some authors think it is merely a superimposed simple open angle glaucoma,[7] whereas others consider it a truly secondary glaucoma caused by the blockage of the filteration area by the exfoliative material.[3] The incidence of open angle glaucoma in exfoliation syndrome may vary from 14% to 90% according to different authors.[12] The management of glaucoma in eyes with exfoliation is similar to that of open angle glaucoma. However, this approach must be modified in taking care of the patients in the North West Frontier Province of Pakistan. These patients come to see the doctor either because of pain in the eye from a very high intraocular pressure or because of the total loss of sight. Most of them will not return for a subsequent followup. Also, if medical treatment is given, the compliance rate drops to almost nil in a very short time. I manage these patients surgically in most instances. The patient is kept under observation for a reasonable length of time before he is allowed to return home after surgery. I have been extremely satisfied with my surgical management of these patients. I have found, like others have,[8] trabeculectomy to be very reliable in the management of exfoliative glaucoma in North West Frontier Province patients.

An increased incidence of cataract formation in eyes with exfoliation syndrome has been previously noted.[3] In my series 70% of the patients had cataract. The important aspects of cataract surgery in exfoliation syndrome must be addressed. In eyes with this disorder, the capsule is degenerated, the zonules are weaker,[10] and the pupil poorly responds to mydriatics.[11] These factors make the extraction of cataract, intracapsular or extracapsular, much more risky. The presence of glaucoma further complicates the matters. Bartholmew[10] noted that fragility of the zonules may lead to subluxation of the lens and phakodonesis. In my series cataract extraction was overall more difficult in exfoliation patients. The most common intraoperative complications I faced in these patients during cataract surgery were an increased incidence of capsule rupture and vitreous loss. I also found synechia between the anterior lens capsule and the epithelium of the iris. These adhesions are not dissolved by alpha-chymotrypsin, and must be carefully lysed by sweeping an iris spatula between the lens and the iris before the attempt to extract the lens is made. Sometimes a radial iridotomy to enlarge the pupillary space becomes necessary.

Why exfoliation syndrome is so prevalent in the Pathan tribes of Pakistan is not clear. Historically, the region has been the gateway to Indo-Pakistan for the invasions of the Greeks, the Turks, the Huns, the Mongols, the Tartars, and the Afghans. The Pathans like these invaders are the descendants of Aryans. This common ancestory may be the answer to this question. Whatever the reason, it is significant that exfoliation syndrome is very common among the inhabitants of North West Frontier Province of Pakistan.

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Commentary

Exfoliation Syndrome: Current Concepts and a Review

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

Khanzada's report of 696 cases of exfoliation syndrome is not only so far the largest series ever reported, it also is indicative of a surprisingly high incidence of this entity in the North West Frontier Province of Pakistan. How common is exfoliation syndrome in other parts of Pakistan is a natural question in need of an answer. Other than a histophathologic study of exfoliation syndrome presented by Sheikh at the 8th Congress of Ophthalmological Society of Pakistan at Karachi, in 1985, I am not aware of any other study conducted in Pakistan on this topic.[1] I am of the opinion that at least one teaching center from each province should conduct a study similar to that of Khanzada on exfoliation syndrome, and publish its results. A national program of research and management based on the collective results of all such studies would prove most effective in combating the sight threatening aspects of exfoliation syndrome in Pakistan. A knowledge of the current concepts about exfoliation syndrome and a review of the subject are important.

HISTORY AND TERMINOLOGY

In 1917, Lindberg[2] mentioned the presence of bluish-white flakes on the pupillary borders of 50% of his 60 Finnish patients with chronic glaucoma, but his investigation did not go beyond declaring that these deposits were probably a result of inflammation. In 1918, Vogt[3] found a film with crinkled edges on the anterior surface of the lens capsule and some pupillary threads in a 72-year-old man with glaucoma, and thought the changes were associated with remnents of pupillary membrane. Later when he found bluish-white felt-like deposits on the pupillary border in a patient who had undergone broad iridectomy for chronic glaucoma, he thought the changes were on account of inflammatory process. In 1923, Malling[4] raised the possibility of their having a direct relationship with glaucoma. Vogt[5] about the same time commented that the condition was actually an exfoliation of the superficial lamellae of the lens capsule. In 1925, he gave the first detailed clinical account of the condition, and named it "exfoliatio superficialis capsulae anterioris," and thought the condition was caused by chronic glaucoma.[6] However, a year later he saw 17 patients with exfoliative changes, but out of these, four had no evidence of glaucoma. Now he reached a totally opposite conclusion that the glaucoma was not the cause but the consequence of exfoliation, caused by exfoliative material getting caught in the trabeculum and thereby obstructing the outflow of the aqueous. He named the glaucoma asociated with exfoliation "glaucoma capsulare" or "glaucoma capsulocuticulare."[7] In 1927, Busacca[8] published the first histopathologic report and concluded that the changes were not due to exfoliation of superficial lamellae of the lens capsule, but actually were deposits (sometimes called "Busacca deposits" and not to be confused with "Busacca nodules or floccules" seen on the iris stroma in anterior uveitis) of unknown origin from the aqueous. The investigation of Busacca was followed by the classic study of Dvorak-Theobald[9] who by her histophathologic studies established beyond a doubt that this so - called exfoliation was not because of the peeling off of the superficial layers of the lens capsule but resulted from deposits that were unconnected with the capsule. She suggested the up to now popular term of "pseudoexfoliation." Sunde[10] proposed the term "exfoliation syndrome." A few years later the term "senile uveal exudation" was proposed by some authors without much acceptance.[11] The advent of electron microscopy allowed Bertelsen, Drablos, and Flood[12] to use this method of study and conclude that

the exfoliative material is produced by the epithelium of the lens. They found fibrillar material in the deeper layers of capsule adjacent to the lens epithelium which they thought was produced by epithelial cells, and named the condition "fibrillopathia epitheliocapsularis" in 1969. In 1973, Ghosh and Speakman[13] found that these changes increased with age and hence applied the term "senile exfoliation of the lens," a term that also had been favored by the early authors.[7,8,28] In recent years exfoliative material has also been found in the basement membranes of several ocular structures including ciliary body, iris, iris vessels, trabecular meshwork, and conjunctiva.[14,18] This prompted Eagle, Font, and Fine[18] to use the term "basement membrane exfoliation syndrome," but today many authors prefer the term "exfoliation syndrome"[19,20] as had been previously suggested by Sunde.[10]

RACE, AGE, AND SEX INCIDENCE

The earlier literature created an erroneus impression that the disease was mostly seen in Scandinavians.[2,4,23] Today it is well recorded in almost all parts of the world and in all ethnic groups.[19,20] The disease, however, has been found to be not so common among Negroes and Eskimos.[24,25] In the United States the exfoliation syndrome is most commonly seen in individuals of Greek origin.[19] The North West Frontier Province of Pakistan was also invaded by the Greeks under Alexander of Macedonia, and this may be a factor, as mentioned by Khanzada, in the prevelance of exfoliation syndrome in the area. Several reports of exfoliation in Indians have appeared.[26-29] I recently personally saw the following case of exfoliation in a Sikh from Punjab.

CASE REPORT

An 84-year-old Sikh from Punjab presented with a complaint of gradual loss of sight in both eyes. He otherwise was in an astonishingly good health for his advanced years. Eye examination showed that visual acuity was CF in the right eye and 6/60 (20/200) in the left. Slit lamp examination revealed advanced cataracts with typical exfoliative deposits on the anterior segment structures. Gonioscopic examination after dilation of the pupil showed a thick curled edge of the peripheral band of exfoliative deposits on each anterior lens capsule (Figures 1 and 2). The intraocular pressure was 15 mm Hg in each eye with applanation tonometry. An extracapsular cataract extraction with posterior chamber intraocular lens implant was performed on the right eye with good visual results. The postoperative evaluation of the posterior pole showed no signs of glaucoma. It must be mentioned that despite all the carefulness the posterior capsule ruptured in the center during the final stages of cortex aspiration. Fortunately, the vitreous was kept from herniating into the anterior chamber by the pseudophakos.

Exfoliation syndrome is a disease of people over 60.[2,29] Gradle and Sugar[30] reported it in a 41-year-old woman, but Khanzada's case of a 32-year-old woman is the youngest ever reported. It appears that the disease in women begins at a younger age than in men. Although many western authors are of the opinion

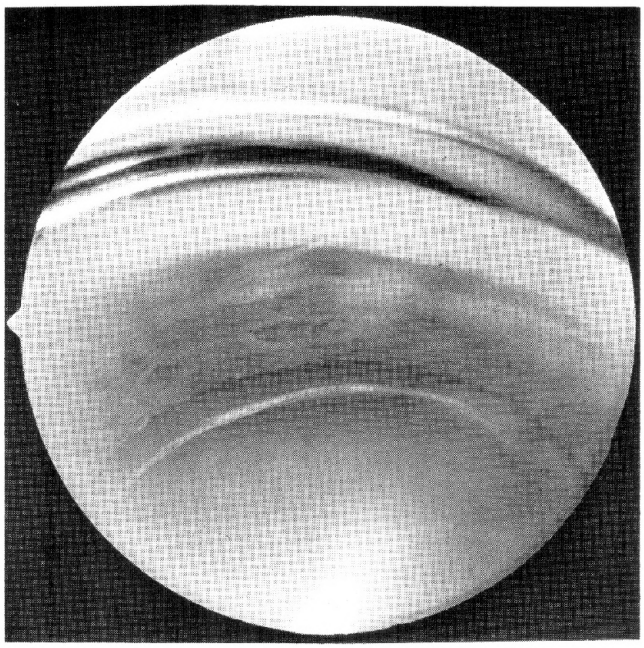

Figure 1. (Awan): Photogoniograph of the right eye. Note the thick peripheral band of exfoliative material on the lens capsule and white deposits on the pupillary border at 10- and 11 o'clock positions.

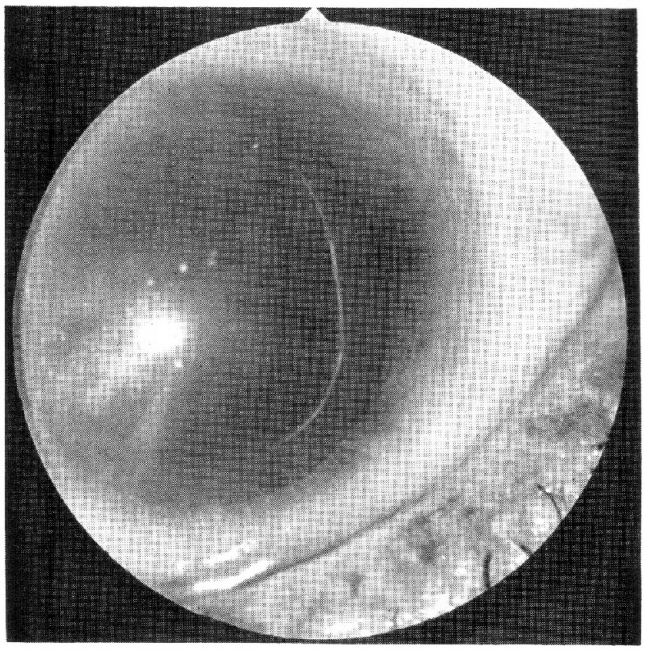

Figure 2. (Awan): The peripheral band of exfoliation material with its curled edge is easily visible with direct illumination after dilation of the pupil.

that there is no significant sex preference,[20,21,24] the exfoliation syndrome is overwhelmingly seen, as in the present series of Khanzada, in men in the subcontinent Indo-Pakistan.[26,29]

CLINICAL FINDINGS AND DIAGNOSIS

The hallmark of exfoliation syndrome is deposition of bluish-white powdery material on the structures

which are bathed by the aqueous. These deposits have been variously described as flakes, floccules, globules, dandrufflike, crumblike, feltlike, etc. They are most easily detectable on the pupillary border and the anterior lens capsule during a slit lamp examination. However, if looked carefully they are also present on the posterior surface of the cornea, both surfaces of the iris, anterior face of the vitreous in aphakic eyes, and when examined with a gonioscope, on the zonule, and the structures of the anterior chamber angle.[19,20,31] With a new technique of cycloscopy, the deposits are visible on the zonule and ciliary processes.[32] These deposits on the anterior lens capsule are not only the most consistent feature of exfoliation syndrome, they are also the most dramatic in appearance, consisting of a translucent central disc with a crinkled edge, separated from the peripheral granular girdle with a rolled out edge by a deposit free ringlike band.[21] The exfoliation syndrome is unilateral in a little over one third of the cases,[19] but is probably followed by bilaterial appearance in a large number of them in time.[21]. A feature of great diagnostic value is the excessive pigmentation in the filtration area,[21] which may decrease with time.[22] A transilluminated iris may show focal loss of pigmentation in the pupillary area. Increased intraocular pressure may be present in 55% to 85% of the patients.[21,23] Rarely low-tension glaucoma may be associated with exfoliation syndrome.[19] An increased incidence of cataract formation has also been noted,[20] and a tendency toward subluxation of the lens due to weakened zonule may be present in advanced cases.[26,33]

HISTOPATHOLOGY

Although the exact origin and pathogenesis of exfoliative material, a faintly eosinophilic substance, remain somewhat unclear, it is currently believed that it is an abnormal basement membrane (with 500-A periodicity) synthesized at multiple sites by abnormal or aging cells.[1, 3 4] Ringvold and Husby[34] suggested it was an amyloid-like substance high in concentration of glutamic acid and glycine. Dickson and Ramsey[35] suggest that the labelled amino-acids that become incorporated into proteins within the epithelial cells of the lens capsule are passed through it to the surface. The material consists of irregular arrangments of fibrils 30 mm in diameter.[21] Davanger[36] concluded that filaments were made up of proteoglycosaminoglycan mucopolysaccharide consisting of a protein core surrounded by polysaccharide side chains. The deposition of this material is not limited to the lens, and it has been shown in the basement membranes of the ciliary and iris epithelia, the trabeculer endothelial cells, endothelial cells of iris and conjunctival vessels, and the extraocular tissues of the orbit.[22] The material is found trapped in the filtering spaces and is not phagocytized by the trabecular endothelium like the pigment granules.[22]

RELATIONSHIP WITH GLAUCOMA AND CATARACT

The exact nature of exfoliation material, the source it comes from, and its effect on the aqueous circulation is not fully explained. Hence, the relationship of exfoliative material with glaucoma capsulare is also debatable. It is known, however, that on the average glaucoma occures in over 70% of the patients with exfoliative syndrome, and a careful examination of patients with open-angle glaucoma in various parts of the world has revealed that 10% to 30% of them have or develop exfoliation.[21, 24, 32] It has been known also that the average glaucoma occurs in 70% of patients with exfoliation syndome,[21,24] but cases of very long standing disease without glaucoma do occur. The case of a Sikhreported here is one example of it. It is important, however, to know that glaucoma with exfoliation syndrome is more severe and more difficult to treat.[19,24] The tests conducted in a few series appear to confim that in most patients with glaucoma associated with exfoliation syndrome, corticosteroids do not cause an increase in the intraocular pressure of the degree or the frequency that is so characateristic of patients with ordinary type of chronic open angle glaucoma.[16], [32] This appears to classify the glaucoma asociated with exfoliation in a different category.The patients who have exfoliation but their intraocular pressure does show elevation on cortocisteroid testing are regarded as not having glaucoma capsulare but having a coincidental coexistence of simple open-angle glaucoma and exfoliation syndrome.[32] Although typically the glaucoma is chronic open angle type, many reports of angle closure glaucoma in association with exfoliation syndrome have appeared.[16,19,22,37,38] The mechanism of open angle glaucoma in exfoliation syndrome is now regarded as a secondary glaucoma due to the obstruction of outflow channels by the trapped exfoliative material.[16,20,21] However, there are those who consider, or have considered in the past, this to be merely a primary open angle glaucoma that is associated with exfoliation.[24]

Cataract has been noted to occur with greater frequency in patients with exfoliation syndrome, particularly in patients from Indo-Pakistan, as is also obvious by Khanzada's report.[20,26-29] It must be remembered, as mentioned by Khanzada, that surgical procedures for cataract in patients with exfoliation syndrome must be planned and executed most cautiously to avoid dislocation of the lens or the rupture of capsule. It appears that these complications of cataract surgery happen independent of whether the patient has associated glaucoma or not, as is demonstrated by the case of the Sikh presented here.

MANAGEMENT OF EXFOLIATION SYNDROME

The patients with exfoliation syndrome must be followed more closely for a timely detection of

development of glaucoma, and those who already have it must receive more aggressive therapy. I agree with Khanzada that in Pakistan early surgery is very important. However, in the urban areas of Pakistan with more educated patients it is wise to try medical therapy, without the use of anticholinestrases, in initial stages of management. Khanzada has been well satisfied with results of trabeculectomy in his Pakistani patients with exfoliative glaucoma, similar to what has been reported from the other parts of the world.[39] Pohjanpelto[40] found laser trabeculoplasty (gonioplasty) to be a satisfactory alternative. However, limited availability of laser units in Pakistan makes this mode of therapy of questionable value. I have also heard from some ophthalmologists from Pakistan who have tried laser trabeculoplasty that the results at best are uncertain in the Pakistani patients. I think the conventional filtering procedures should not be abandoned entirely, particularly by those who have a great deal of experience with them. A carefully planned and executed trabeculectomy or other filtering procedure may be safer in patients with poor followup record.

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Original Observation

Sleep Apnea and Optic Disc Swelling

Ruth-Marie E. Fincher, M.D.
Howard E. Borger, M.D.
and
Bashir A. Chaudhary, M.D., F.P.A.M.S.

ABSTRACT: The authors describe for the first time the development of optic disc swelling in documented obstructive sleep apnea syndrome. Their patient, a 39-year-old woman with severe obstructive sleep apnea, had bilateral optic disc swelling with normal intracranial pressure while awake. Papilledema has been reported in patients with chronic obstructive pulmonary disease, the Pickwickian syndrome, and cyanotic congenital heart disease. However, the patient reported here did not fall into any of these categories. The mechanism of optic disc swelling in obstructive sleep apnea is not clear. It may be due to nocturnal hypercapnia and acidosis caused by apneic periods. (Pak J Ophthalmol 2:13-15, 1986)

Papilledema occurs in many cardiopulmonary diseases including chronic obstructive pulmonary disease (1) and the Pickwickian syndrome.[2-3] The papilledema is presumably due to carbon dioxide retention and resultant acidosis which causes cerebral vasodilatation. Sleep apnea syndrome is a relatively new clinical entity and many associated clinical features are still being defined.[5,6] Patients with obstructive sleep apnea develop repeated episodes of nocturnal hypoxemia and hypercapnia. We have not found any reports of optic disc swelling in patients with documented obstructive sleep apnea. We recently cared for a patient who had unexplained optic disc swelling in association with obstructive sleep apnea.

CASE REPORT

A 39-year-old morbidly obese woman was evaluated at the Sleep Disorders Center of the Medical College of Georgia Hospital because of difficulty sleeping, loud snoring, morning headaches, and daytime somnolence. She had a history of falling asleep both during conversation and in the bathtub, and had been observed to have both tachypneic and apneic episodes as well as cyanosis during sleep. In addition, when she was 19 years old she had been found to have hypothyroidism secondary to thyroid atresia. She had been treated with levo-thyrozine replacement, with which she said she had been intermittantly compliant. At the time of referral to the Medical College of Georgia Hospital, she had primary hypothyroidism, with T3 RIA 61 ng/dl, TA RIA 4.1mg/dl, T3RU 30%, and TSH 113. After treatment with levo-thyroxine 0.2 mg daily for one month, repeat thyroid function tests showed T3 RIA 151 mg/dl, T4 RIA 16.6 mg/dl, T3RU 37%, TSH less than 3. Symptoms suggestive of sleep apnea persisted despite treatment of hypothyroidism.

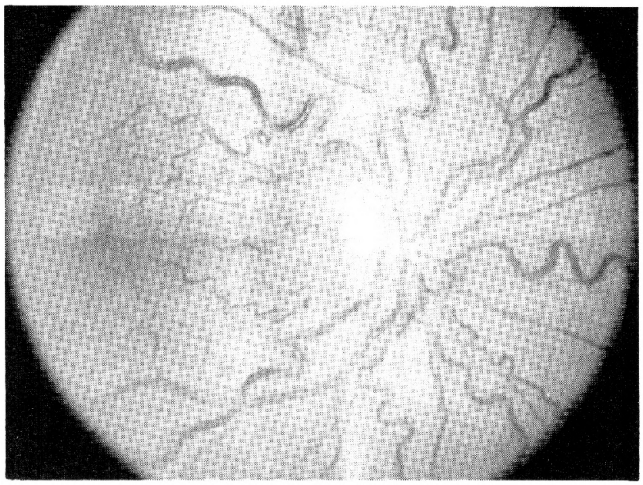

Figure 1. (Fincher, Borger, Chaudhary): Photograph of the right retina showing papilledema.

Physicial examination revealed a morbidly obese woman, with a weight of 380 pounds, and height of 5'8". Ophthalmologic examination revealed a cataract on the right eye, with normal visual acuity and field in the left eye. There was bilateral optic disc swelling (Figure 1). Tonsils were surgically absent and the uvulopalatal fold was slightly enlarged. Except for obesity, the

Accepted for publication January 25, 1985.

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remainder of the physicial examination was unremarkable. Arterial blood gases drawn during the day with the patient upright showed a PO2 52mm Hg, PCO2 42.5mm Hg, and pH 7.44. Arterial blood gases on room air with the patient supine showed a PO2 54mmHg, PC02 50.8mmHg, pH 7.37, and oxygen saturation of 87%. Because of unexplained optic disc swelling, computerized tomographic (CT) scan of the head was performed and was normal. Lumbar puncture performed during the day revealed a normal opening pressure. An eight hour polysomnogram consisting of electroencephalogram, (EEG) electrooculogram, electromyogram, (EMG) electrocardiogram, (EKG) oro-nasal airflow, chest and abdominal expansion (Respitrace) and oxygen saturation (Hewlett-Packard ear oximeter) was performed (Figure 2). Apnea was defined as cessation of oro-nasal airflow for at least 10 seconds. Apneas were

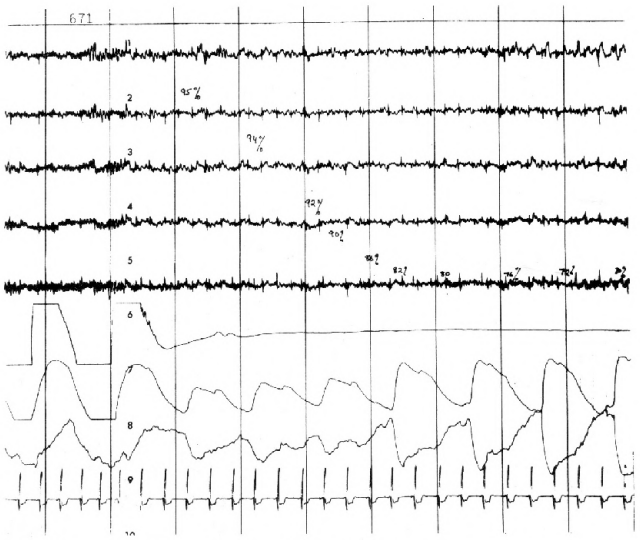

Figure 2. (Fincher, Borger, Chaudhary): Polysomonogram consisting of EEG (lines 1-4), EMG (line 5), oro-nasal airflow (line 6), thoracic and abdominal movements (line 7,8) and EKG (line 9). The polysomnogram shows a 21 second obstructive apnea and fall in oxygen saturation from 95 to 70%.

considered obstructive in type if the chest and abdominal movements continued during the apneic episodes. Apneas were considered central in type if there was cessation of chest and abdominal movements during apneic episodes. The total sleep time was measured from the onset of Stage 1 sleep until the end of the polysomnogram, less the awake time. The apnea index was calculated by dividing the total number of apneic episodes by the number of sleep hours.

Analysis of the polysomnogram revealed 310 apneic episodes, ranging in duration from 10 to 48 seconds with mean apneic duration of 15.2 seconds. There were 254 obstructive, 27 central, and 29 mixed apneic episodes. The patient spent 18.7% of her sleep time in the apneic state. The apnea index was 44.3 apneas per sleep hour. A diagnosis of very severe obstructive sleep apnea was made. The patient was seen by an otolaryngologist for possible uvulopalatoplasty, but the patient was not felt to have a surgically correctable lesion. She was treated with 5cm of nasal continuous positive airway pressure (CPAP) with resolution of her daytime somnolence and morning headaches. A repeat polysomnogram with CPAP showed no episodes of apnea during the eight hour study. The patient was discharged home with the CPAP epuipment.

DISCUSSION

The Pickwickian syndrome is a clinical entity characterized by extreme obesity, daytime somnolence and hypoventilation.[7] While many Pickwickian patients also have sleep apnea,[8] the diagnosis of sleep apnea cannot be reliably made on clinical grounds alone.[9] The diagnosis in our patient was well established by nocturnal polysomnographic recording. Although she had the classic symptoms of obesity and disturbed sleep found in patients with obstructive sleep apnea, she did not have arterial blood gas evidence of the daytime hypoventilation characteristic of the Pickwickian Syndrome.[10] We believe this is the first report of optic disc swelling occurring in a patient with documented sleep apnea.

Repeated episodes of hypoxemia, hypercapnia, and pulmonary hypertension associated with apneic episodes occur in these patients.[6] Our patient had both hypoxemia and hypercapnia during recumbency, both of which would be expected to worsen during the apneic episodes. Hypercapnia and hypoxemia with resultant cerebral vasodilatation is the proposed mechanism for the development of papilledema.[2,11] While papilledema is usually associated with increased intracranial pressure,[2,11] Petersen[12] reported papilledema with normal intracranial pressure in 12 of 83 patients with cyanotic congenital heart disease. In his series, severity of fundoscopic changes correlated with hypoxemia, but not with hypercapnia or pH. More recently, Sugita[13] reported those patients with sleep apnea who had episodic cerebrospinal fluid pressure elevation concomitant with apneic periods. However, papilledema was not present in any of these patients.

We could not identify any cause of optic disc swelling in this patient other than sleep apnea. A lumbar puncture performed during the day showed normal cerebrospinal fluid pressure. While her daytime cerebrospinal fluid (CSF) pressure was normal, she may actually have had elevated CSF pressure during sleep in association with apneic episodes. Her optic disc swelling may be due to local ocular vascular changes, or may represent true papilledema. A CT scan of the head revealed normal-sized ventricles with no evidence of increased intracranial pressure.

Since repeated episodes of elevated PaCO2 occur in most patients with sleep apnea, optic disc swellng may not be uncommon in these patients. Further studies are needed to establish the frequency of optic disc swelling in patients with obstructive sleep apnea. Since arterial blood gas abnormalities can be reversed by adequate treatment of sleep apnea, optic disc swelling may also improve with successful treatment of sleep apnea. Long term follow-up studies are needed to determine the effect of therapy for sleep apnea on the severity of optic disc swelling.

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Acknowledgement: The authors wish to thank Mrs. Alma Bussey for manuscript preparation.

Scholarship Schedules

IX Congress of the Ophthalmological Society of Pakistan

April 25, 26, and 27, 1986, Quetta, Pakistan

The 9th Congress of the Ophthalmological Society of Pakistan will be held on April 25-27, 1986 in Quetta. The Baluchistan Branch of the Society is the host for this conference. The kind manners and warm hospitality of the people of Quetta and Baluchistan will certainly make this a memorable professional as well as social experience. A large gathering of professionals and speakers expert in their respective fields is attending.

For registration material and submission of abstracts contact: Dr. Muhammad Naseem, General Secretary, Helpers Eye Hospital, Sa ab Road, Quetta, Pakistan. Telephone: 77915 and 78560.

XXV International Congress of Ophthalmology

May 4-10, 1986, ROME, ITALY

The 25th International Congress of Ophthalmology, one of the most prestigious events in international ophthalmology will be held in Rome, Italy on May 4-10, 1986. The dates make it very convenient to attend it right after the 9th Congress of Ophthalmological Society of Pakistan. The Congress allows one to combine the sights of ancient Rome with learning about modern ophthalmic developments.

For registration and accommodations contact: Rome, 86 - Coordinating Center, c/o EGA Congressi, Viale Tiziano 19, 00196 ROME, ITALY. Telephone:06/3960341, Telex: 614357EGA PL1. For submission of abstracts: Franco D'Ermo, M.D., Chairman, Scientific Program, Via Tagliamento, 9, 00198 ROME - ITALY Tel: 06/864927.

Current Concepts in Ophthalmology Courses

John Hopkins University, U.S.A.

Feb. 23-27, 1987, Dorado Beach, Puerto Rico

March 16-20, 1987, Vail, Colorado

Contact: Office of Continuing Education, Johns Hopkins University School of Medicine, Turner 22, 720 Rutland Ave., Baltimore, MD 21205. USA.

The International Oculoplastic Surgery

Australia-Tahiti, June 26-July 11, 1986

Ophthalmic, Oculoplastic and Facial Surgery Congress. Fifteen days with touring faculty exchanging techniques with doctors from Sydney, Brisbane, The Outback, and Tahiti.

18th Annual Oculoplastic & Facial Surgery Dissection Course

October 9-11, 1986, New York, NY

Three intensive days of practical instruction in oculoplastic surgery, including cosmetic blepharoplasty, cosmetic surgery, ptosis and lid reconstruction, lacrimal and facial cancer and facial trauma repair. Special features of the course include videotaped surgical demonstrations and cadaver surgery performed by the registrants.

Contact: Congress Administrator, c/o Pierre Guibor, M.D., 630 Park Avenue, New York, New York 10021, (212) 734-1010 or (800) 223-4500.

Canadian Implant Association

Twelfth Annual Meeting, June 27, 28, 1986

Queen Elizabeth Hotel, Montreal, Quebec, Canada.

Themes: - Computers in Ophthalmology. Lens Implant Pathology and Immunology, Epikeratophakia, Radial Keratotomy.

December 27, 18, 29, 1986

Marriott Harbour Beach Hotel

Fort, Lauderdale, Florida

Themes: - Radial Keratotomy, Extracapsular Surgery and Eyelash Micropigmentation. Contact Marvin L. Kwitko, M.D., Program Chairman, 5591 Cote des Neiges Road, Montreal, Quebec, Canada, H3T 1Y8.

WOOPS IN "WITING"

In the October, 1985 issue of The Journal the correct EXPOSITION on page 224 for Figure 4 of the CAMERA CLINICALS on page 203 was the "Eyelid Complications of Varicella," for Figure 5, it was "Corneal Complications of Eyelid Marginal Verruca," and for Figure 6 it was "Recurrent Tarsal Sebaceous Carcinoma." We are sorry for their inadvertent transposition in printing. — Editor

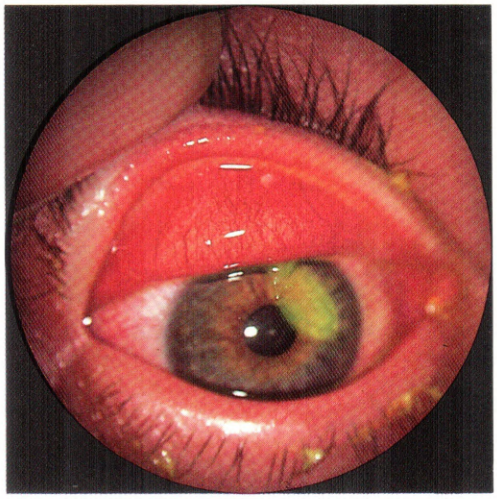


Figure 1

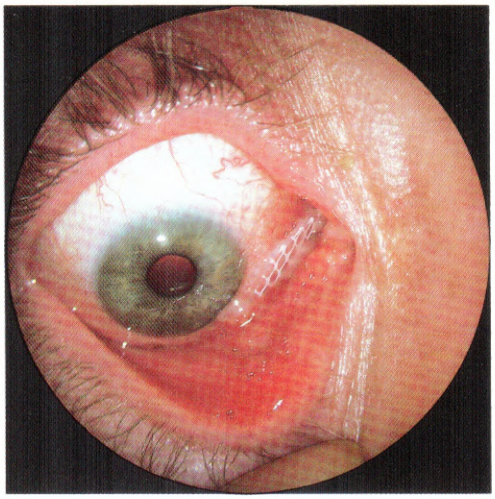
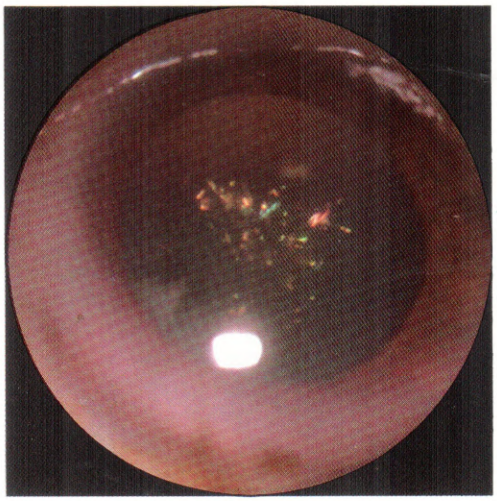


Figure 2



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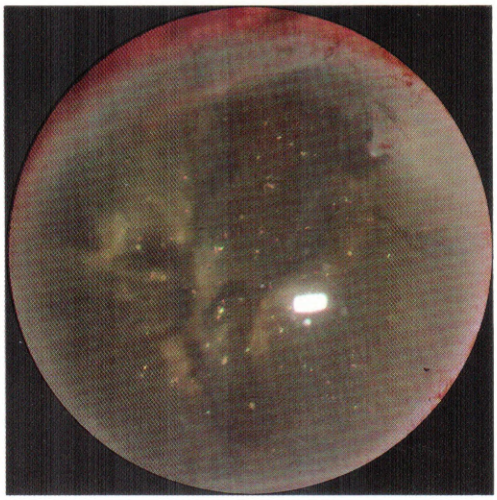

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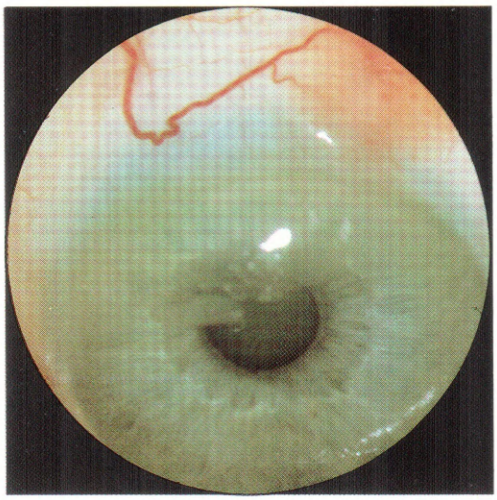

Figure 5

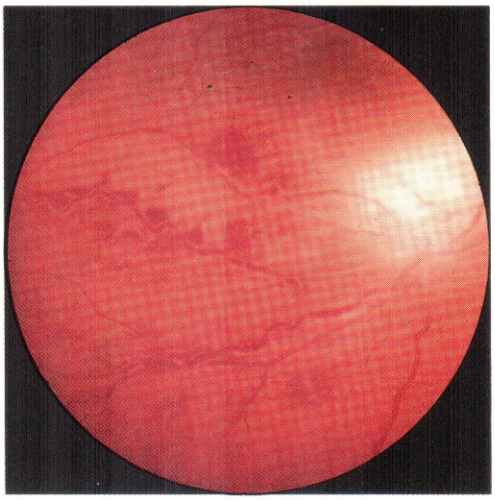

Figure 6

Camera Clinicals

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

In this section of the Journal, photographic documentations 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*** *beginning on page 28 – Editor.*

Figure 1: A 47-year-old man came with a complaint of painful red eye. His family physician had prescribed antibiotic drops which the patient had used for two weeks without any relief. The patient said that the eye was comfortable early in the morning, but became painful and watery as the day went by. On examination, a geographic circumscribed corneal abrasion that stained with fluorescein was seen (Figure 1). When the upper eyelid was everted, a white object was seen sticking to the tarsal conjunctiva (Figure 1). The removal of this object cleared the condition within three days.

Figure 2: A 37-year-old man was seen with painful red right eye. About 10 months before he had been operated on for facial trauma at a big medical center. On eye examination the vision was 20/20 (6/6) in each eye with proper glasses. The right eye was inflammed, more so nasally. In the center of this redness was a flattened clear object with white streaks. The extraocular muscle function and the rest of the eye examination were normal. After treatment of a few days with topical and systemic antibiotics, the surgical removal of the object was advised. It was done under local anesthesia with excellent results.

Figure 3: A 53-year-old man sought eye evaluation because of dimness of vision. He was under treatment for hypertension and had had one coronary attack in the past. On eye examiantion his visual acuity was 20/50 (6/15) in each eye and could not be improved with glasses. Slit lamp examination through the dilated pupils revealed bilateral lenticular changes with needlelike deposits in the central parts of clear lens. When slit lamp light beam fell on these, they lit up like a Christmas tree with brilliant light bulbs of all colors hanging on it (Figure 3). Advanced arteriosclerotic changes in the retinal vessels were noted.

Figure 4: A 64-year-old man had undergone extracapsular cataract extraction with an intraocular lens implantation 11 months before his visit. The eye was red and visual acuity had fallen to perception of hand movements. There was severe anterior chamber reaction with matting of the anterior surface of the IOL and the iris with inflammatory exudate. The intraocular pressure was 50 mm Hg. Because of the repeated attacks of this severe inflammation that failed to totally respond to medical treatment, the IOL was removed. However, this did not stop the inflammation, and the eye developed hypotony with further loss of vision to no light perception. Three months following the removal of the IOL, the anterior chamber of the eye developed many iridescent multicolored crystalline floaters in the aqueous humor as shown in Figure 4.

Figure 5: A 79-year-old woman's family doctor referred her for an ophthalmic evaluation because of an unusual lesion in her left eye. External eye examination showed a 1 cm x 1 cm fleshy lesion in the upper temporal bulbar conjunctiva. The lesion was pinkish in color and highly vascularized. It had extensions invading the adjacent cornea. These pseudopodia like extensions were translucent and had edges which extended into the pupillary zone of the cornea (Figure 5). Also present were whitish dots near the edges. The lesion neither bothered the patient nor affected her sight.

Figure 6: A 25-year-old woman, with second six-month pregnancy, came with a complaint of blurriness of vision for three days followed by a sudden loss of sight with mainly upper field of vision involvement in her right eye. During her previous pregnancy she had developed an active inflammatory lesion in the fundus of that eye, which was successfully treated with medical therapy. She had been warned that any subsequent pregnancy might reactivate the lesion. On this visit her vision in the right eye was 20/200 (6/60) and 20/20 (6/6) in the left. On slit lamp examination moderate reaction was present in the vitreous of the right eye, and cells were seen in the anterior chamber. There were no external signs of any inflammation. Ophthalmoscopic examination thru a dilated pupil showed a greyish fluffy lesion in the area of previous scar and an inferior temporal retinal branch vein occlusion beyond this lesion (Figure 6). Medical management carried out with the cooperation of her obstetrician fortunately led to good recovery with final vision acuity of 20/30 (6/9).

Ophthalmic "Past-Pourri"

And Don't Forget The "Leechologist"

"Leeches afford the least painful and in many cases the only practicable means of local depletion, and are precious instruments in the hands of the physician. The application of leeches requires some skill and attention, and is often usefully placed in the hands of *special practioners.*"*

George Ripley and
Charles A. Dana (eds.) - 1875
The American Cyclopaedia: A
Popular Dictionary of
General Knowledge, p. 362

**Italics by the Editor*

Ophthalmic History

The Living Eyebank of Sri Lanka

Andre V. Fesus, M.D.

About half a century ago, after graduating from the University of Budapest and working three years in the University Eye Clinic I became an ophthalmologist. Professor Blaskovick, world famous for his ptosis operation, asked me to join his staff as an assistant professor. After World War II, I was working in Austria when in 1949, Professor Pillat, the Head of the Eye Clinic of the University of Wien (Vienna) recommended that I join a team of specialists being recruited by the Government of Ceylon (now Sri Lanka) to improve the medical care on the island. I was the only eye specialist in the group.

I started to work at the Victoria Memorial Eye Hospital of Colombo. The patient load was very heavy and I was amazed at the large number of keratomalacia cases caused by a lack of vitamins. Obviously, the reason had to be in the staple diet, which was poor in fresh fruit, something quite surprising because the fertile land offered an aboundance of fresh fruit almost the year round. My statistics showed that about 70% of the juvenile blindness was caused by this merciless ailment. I decided to do corneal grafts in patients who were totally blind in both eyes.

To obtain suitable donor corneal material was a big problem. At that time I knew that only the USA had a functioning cornea bank and that England had passed a law allowing the corneas of dead persons to be used for grafting under some circumstances. My initial plan was to obtain corneas from persons who died in the General Hospital. I obtained the consent of the authorities concerned, but in practice I did not get one single eye. I was hampered by the delays caused by the bureaucratic process and the fast decomposition of corpses in the tropical climate of the country. From the local newspapers I became aware of the frequency of executions of criminals. The idea struck me to found a "Cornea Bank" from the eyes of executed prisoners. In 1950, I submitted my proposal to the authorities. With the help of the President of the Senate and the strong support of the Buddhist clergy, a law was passed that if no relatives or friends claimed the corpse, it would be used for purpose of research in medicine or surgery. I was also allowed to examine the condemned prisoner the day before his execution, to make sure the corneas were clear. Twenty minutes after the hanging, I was allowed to remove the eyeballs. The patient who was to undergo transplant surgery was admitted to the hospital several days before the execution of the donor for a good medical examination and preparation for the surgery. From the site of execution I went directly to the hospital with the donor eyes and immediately performed the operation.

Also See Editorial on Page 4.

Dr. Fesus

In those days the surgical instruments, needles, and suture materials were nothing like the excellent equipment that is available nowadays. However, my own Swiss trephine served me very well.

The method I developed was as follows: Since no fine sutures were at hand, I fixated the donor button in place by covering it with a conjunctival ribbon, broader than the implant, obtained from the upper limbus and pulled downwards and fixed in position with two black silk sutures. I never had a dislocation of the donor disc. The credit for this goes partly to the patients, who were willing to lie on their backs for a full week, and did so with oriental stoicism and selfdiscipline. After the implant was firm, I removed the sutures as well as the conjunctival ribbon by amputation. I used a small donor button of about 5mm diameter in most cases.

I operated on between 40-50 cases. I obtained the best vision of 6/18 and the worst of 6/60. My experience was that these results could be expected only if the patient had become blind at an age when his visual acuity had fully developed. The impressive results of my surgery were more due to the fact that the corneas used were practically alive when transplanted than just due to my surgical skill.

I also warned the authorities that with education and a change in nutrition keratomalacia can be eliminated to a great degree. Prevention was the answer to this terrible ailment.

I left Ceylon in 1958 and a few months afterwards a political change abolished the capital punishment there. This automatically led to a hasty demise of the Cornea Bank of the Executed.

I have come to know that the Australian Eyebank established an Eyebank for Ceylon and now local eye surgeons can perform corneal transplants on a routine basis.

Reprint requests to: Andre V. Fesus, M.D., 1605 Pocatello St., Sarasota, FL 33581

Original Article

Adverse Reactions to Intravenous Fluorescein*

M. Ishaq Chishti, M.D., F.P.A.M.S.

ABSTRACT: The author performed 629 fluorescein angiograms in his office from January 1980 to December 1984. The age of the patients varied from 21 to 81 years. Forty four patients (7%), 22 men and 22 women, developed adverse reactions to intravenous fluorescein, some with multiple manifestations. Nausea was the most frequent reaction and occurred in 29 cases. Six of these patients also had vomiting. Eleven cases experienced pruritus and seven among them also developed urticaria. Two patients fainted and one had convulsions, bradycardia and syncope. One patient developed an unusual fluorescein pattern of skin proximal to the injection site. This patient and three others who had severe circulatory adverse reaction are reported in detail. (Pak J Ophthalmol 2:19-21, 1986).

INTRODUCTION

Fundus fluorescein angiography is now a well established diagnostic procedure in evaluating the integrity of retinal blood vessels, retinal pigment epithelium, Bruch's Membrane and choriocapillaris. Fluorescein angiography is essential to determine the extent of subpigment epithelial neovascularization and also to prove the closure of subpigment epithelial neovascularization after laser treatment. It is considered diagnostic in differentiation of subpigment epithelial hemorrhagic mass versus malignant melanoma of the choroid. Fluorescein angiography can also be useful in determining the permeability of the iris and ciliary body blood vessels in cases of vitreitis and iris inflammation causing chronic cystoid macular edema. The leakage of fluorescein seen in anterior chamber and vitreous cavity under slit lamp can be very impressive and is a dynamic evaluation of the permeability defect. Although fluorescein angiography is regarded as a relatively safe procedure there are severe local[1,6] as well as potentially life threatening systemic [3,4,5,6] adverse reactions that may occur.

Accepted for publication September 12, 1985.

For Reprints: M. Ishaq Chishti, M.D., F.P.A.M.S.; Retina Specialists, Inc., 6651 Chippewa, Suite 322; St. Louis, Missouri 63109

* Funded by the Pakistan Academy of Medical Sciences.

MATERIALS AND METHODS

Six hundred twenty nine fluorescein angiograms were performed from January 1980 to December 1984. Patients age ranged from 21 to 81 years. We used 10 cc of 5% or 5 cc of 10% sodium fluorescein (Fluorescite or Fundescein), intravenously. Patients who gave history of multiple drug allergies were given Medrol 24 mg., and Benadryl 50 mg., orally, 30 minutes prior to the fluorescein injection. Forty four cases (7%), 22 males and 22 females developed adverse reactions to intravenous fluorescein. Some patients had multiple adverse reactions. Twenty nine cases developed transient nausea with six of those also developing vomiting. Vomiting was more severe in patients who had a full stomach prior to the injection. Nausea usually lasted two to three minutes. Eleven cases had pruritus with seven patients also developing urticaria. These reactions were more prominent on the face and neck and occurred generally from one minute to as late as 40 minutes after the injection. These patients were treated with Benadryl and Medrol orally and responded well to the treatment. Upon close observation, it was detected that many patients had mild itching on the face and arms but it was not severe enough for them to complain. Minimal coughing and clearing of the throat were observed without patient complaint of these symptoms. One patient complained of numbness of throat and another of numbness of hands and ears. Three patients had severe circulatory adverse reactions, two of them fainted and one had

convulsions, bradycardia and syncope. One patient had an unusual yellowish fluorescein pattern of the skin proximal to the injection site. The three cases with adverse circulatory reactions and the fourth case which developed an unusual fluorescein pattern of the skin proximal to the injection site are reported in detail.

CASE REPORTS

Case 1: A 35-year-old white male complained of blurred vision, right eye, particularly at night for the past one year. He had chronic central serous retinopathy. He was in good health. Surgical history revealed hernia repair at age five. He had no known allergies and was not taking any medications. Family history was negative. His uncorrected visual acuity was 20/25 in the right eye and 20/20 in the left eye. Fundus examination of the right eye showed pigment mottling below and nasal to the fovea. There was slight macular edema. He was given 4 cc of 10% Fundescein intravenously. Five minutes after the fluorescein injection, he was observed to be pale and fainted soon afterwards. He was placed on his back on the floor and given oxygen, 4 liters per minute for five minutes. He immediately responded to the above treatment and was sent home with stable vital signs 45 minutes after the injection.

Case 2: A 28-year-old white male complained of a blurred spot in in the central field of vision, right eye for the past one month. He had corrected visual acuity of 20/20 in the right eye and 20/60 in the left eye. Previously, he had fluorescein angiography, in 1976 for ocular histoplasmosis in the left eye during which he fainted. As he had subpigment epithelium neovascularization in the right eye, it was felt that fluorescein angiography should be performed to determine the extent of subpigment epithelium neovascularization. The patient was given 6 cc of 5% sodium fluorescein (Fluorescite) intravenously. One minute after the injection he fainted and was placed on his back and was given oxygen. The fainting lasted only 5 to 10 seconds. Patient had an attack of paroxysmal atrial tachycardia several weeks after the fluorescein angiography. Upon questioning, it was discovered that the patient had a previous attack one year before. He had not volunteered this information when his medical history was taken.

Case 3: A 65-year-old white male was referred for retinal evaluation. He had no complaints regarding his general health. Surgical history was negative. There were no known allergies. He was taking Timoptic twice daily for Glaucoma, left eye. Ocular examination revealed corrected visual acuity of 20/25 + 1 in the right eye and counting fingers at 3 inches in the left eye.

Slit lamp examination of the left anterior segment showed mild rubeosis iridis. The angle was closed due to rubeosis iridis. The right fundus was normal except for slight narrowing of the retinal arterioles. The left fundus showed pink optic disc with narrowed retinal arterioles. There was cherry red spot with grayish swollen retina in the posterior pole. He was given 5 cc of 10% sodium fluorescein (Fluorescite) intravenously. Six minutes after the injection of fluorescein, he complained of a tingling sensation all over his body. A minute later he fainted and was placed on his back. He was given oxygen. He developed bradycardia, sweating and cold skin and was unresponsive for 15 minutes. He had clonic movements of his hand and face. Intravenous Dextrose with water was given and vital signs were stablized. The patient was admitted to the hospital for further evaluation. He had a carotid angiogram which revealed occlusion of the right and left internal carotid arteries at their origin in the neck with reconstitution of the intracranial portion via the ophthalmic arteries bilaterally. Fluorescein angiogram showed increased retinal circulation time to 6 seconds with nonperfusion of the upper part of the optic disc. There are blunting of the capillary ends.

He had anterior segment ischemia with slow occlusion of the central retinal artery, left eye. This patient has slowly developed retinal hemorrhages and rubeosis iridis, right eye, due to carotid artery insufficiency.

Case 4: A 47-year-old white female, complained of blurred vision, right eye, for two months. Medical history was negative and she had no previous surgery. She was allergic to Penicillin and Sulfa and complained of developing skin rash due to drug allergies. Fundus examination showed inferior temporal retinal branch vein occlusion, right eye. Fluorescein angiography was performed after giving her Benadryl 25 mg., and Medrol 24 mg., 30 minutes prior to fluorescein injection. Only 2 cc of 10% Sodium Fluorescein (Fundescein) was injected intravenously. She complained of generalized itching and a wheal formation on the left side of her chest. She developed yellow fluorescein stain patches on the left forearm above the injected site (Figure).

DISCUSSION

The most frequent adverse reaction was nausea, which lasted one to two minutes and only reassurance was necessary. One patient who had lunch prior to the fluorescein injection developed severe vomiting. It is advised that patients who are not diabetic should have an empty stomach before fluorescein angiography. Generally, the vomiting subsides in 5 to 6 minutes and no treatment is needed. The exact mechanism underlying this adverse reaction is unknown. Slower injection of fluorescein reduces the incidence of nausea and vomiting. Pruritus was a frequent adverse reaction and generally did not require any treatment. If urticaria was present, it was treated with oral Benadryl and Medrol. Some patients did develop urticaria in spite of receiving Medrol and Benadryl prophylactically before the injection. Pruritus and urticaria are assumed to be the immediate hypersentivity type allergic responses.

The most serious complication was fainting due to vasovagal reaction which occured in two patients who were both young. One patient had paroxysmal atrial tachycardia and both of these patients had herniorrhaphy in childhood. It appears that the younger individuals tend to develop vasovagal reaction more frequently. Vasovagal reactions probably are the result of anxiety rather than the fluorescein itself. Such patients should be observed for pallor of the skin which precedes the fainting attack. Lying patient on his back and administration of small amount of oxygen is usually sufficient to reverse a vasovagal reaction.

The most serious reaction occured in a 65-year-old man with bilateral carotid artery occlusion. He had convulsions, bradycardia and syncope lasting 15 minutes. This reaction probably was due to combination of decreased cerebral blood supply and allergic reaction to fluorescein.

The fourth case had patches of fluorescein staining on the forearm proximal to injection site indicating leakage of fluorescein from the capillaries due to the allergic reaction. Because of her history of drug allergies, this patient was given systemic Medrol and Benadryl before the injection. In spite of this precaution, however, the patient developed an allergic reaction.

Detailed history of allergies and cardio-vascular diseases is mandatory to prevent potentially dangerous adverse reactions. Young men should be watched for vasovagal attack, older persons with

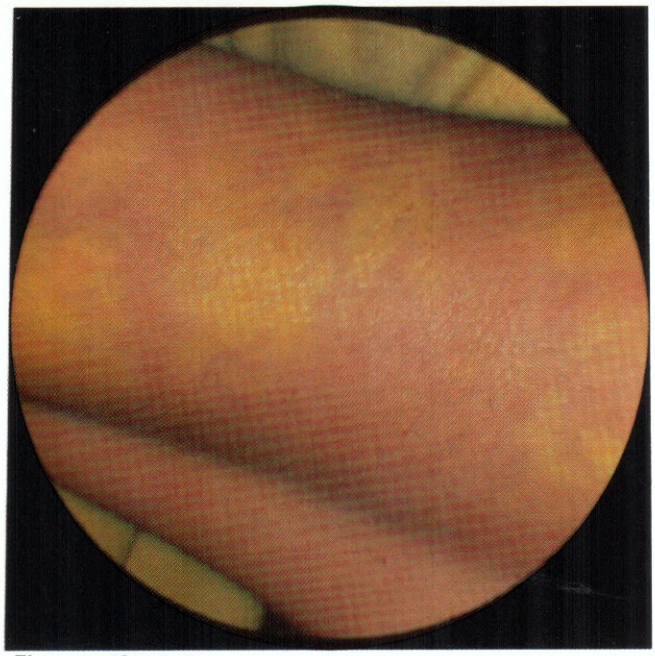

Figure 1. (Chishti): Fluorescein skin reaction. Patient had received only 2 ml of 10% sodium fluorescein intravenously. Note yellow patches on the forearm above the site of injection.

carotid artery disease for convulsions and syncope and patients with multiple allergies for anaphylactic reactions.

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The study cited in this paper was submitted by the author as part of the thesis to meet the requirements of Fellowship of the Pakistan Academy of Medical Sciences.

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ہر فرد آہستہ آہستہ ماضی کے دھندلکوں کا حصّہ بن جاتا ہے۔
لیکن اس کی خوبیوں کا ذکر اسے ہمیشہ زندہ رکھتا ہے۔ اور ڈاکٹر
شفیع مرحوم جیسے خال خال لوگ جن کے حوالے سے اچھائی
کے سوا کسی بھی تلخ یاد کا ڈھونڈنے سے سراغ نہیں
ملتا۔ وہ تو مرنے کے بعد پہلے سے بھی زیادہ صاحبِ
حیات ہوتے ہیں۔ اور مجھے یقین ہے کہ ان کی شناسائی سے
بہرہ مند ہر شخص ہمیشہ یہی کہے گا کہ
رفیتند و لے نہ از دل ما !

Figure 2. (Seyal): Nishtar Medical College with decorative illumination at the occasion of 1983 International Conference at which the First Professor Muhammad Shafi Lecture was delivered by Prof. Shafi's pupil Dr. Khalid J. Awan, M.D. (Photo by Khalid J. Awan, M.D.)

صلاحیتوں سے مالا مال ڈاکٹر جمال بھٹہ صاحب کے شانہ بشانہ کالج کی بنیادوں کو اس طرح استوار کیا کہ اس کالج کا دیکھتے ہی دیکھتے سارے جہان میں ڈنکا بجنے لگا۔ ۱۹۵۸ء میں جب وہاں پروفیسر کی جگہ بنی تو اگرچہ یہ ڈاکٹر شفیع کا استحقاق تھا کہ انہیں ترقی دے کر وہ عہدہ ان کے سپرد کر دیا جاتا۔ مگر اس دفعہ بھی سیاسی وابستگیوں کا پرانا چکر آڑے آیا۔ اور انہیں نظر انداز کر کے کسی اور کو فیضیاب کر دیا گیا۔ تاہم چند ماہ بعد جب کنگ ایڈورڈ میڈیکل کالج لاہور میں ان صاحب کو پروفیسری عطا ہوئی تو ڈاکٹر شفیع نشتر میڈیکل کالج ملتان میں پروفیسر مقرر ہو گئے۔ جس کے بعد ۱۹۶۶ء میں ان کا تبادلہ کنگ ایڈورڈ میڈیکل کالج لاہور میں بطور پروفیسر ہو گیا جہاں وہ اپنے دم واپسیں یعنی مئی ۱۹۷۳ء تک مصروف خدمت رہے۔ بر سبیل تذکرہ یہ کہ مخلوق خدا کی خدمت کے لیے بھی ان کا انداز نرالا تھا۔ جس کے کسی ایک ناواقف لوگوں کی ممکنہ غلط فہمی کو خارج از سوچ کون قرار دیتا ہے شاید وہ مادیت کے اتنے مارے ہوئے تھے کہ ان کی پریکٹس کے کوئی لگے بندھے اصول اور اوقات ہی نہیں تھے۔ کیونکہ دن بھر کالج اور ہسپتال میں تندہی سے اپنے فرائض بھرپور طریقے سے ادا کرنے کے بعد وہ سر شام سے اپنے پرائیویٹ کلینک میں مریضوں کو بھگتانے بیٹھتے تو اکثر و بیشتر رات بہت زیادہ بیت جاتی تھی مگر وہ بندۂ خدا تھکن سے مس نہیں ہوتا تھا۔ اور یکسانیت سے اپنے کام میں جتا رہتا تھا۔ حالانکہ درحقیقت انہیں مالی یافت اتنی نہیں ہوتی تھی جس کا ایسی صورت حال میں گمان ہو سکتا تھا۔ صرف معدودے چند لوگوں سے فیس وصول کرنے کی نوبت آتی تھی، ورنہ زیادہ تر مریضوں کے ساتھ بلا معاوضہ سروت یا خدا ترسی اور فیض رسانی والا معاملہ تھا۔ وہ بھی چل چلاؤ کی روش سے نہیں بلکہ مکمل پیشہ ورانہ انہماک اور دیانت کے ساتھ ہوتا تھا۔ اسی لیے ان کے قریبی اور بے تکلف احباب کہا کرتے تھے کہ انہوں نے پریکٹس کے نام سے خواہ مخواہ کی تہمت پال رکھی ہے ورنہ ان کے کلینک کو تو کسی درویش کا تکیہ کہا جانا چاہیئے۔ جہاں کسی رسمی پابندی یا تکلف کے بغیر جس کسی کا جس وقت جی چاہتا ہے اپنی سہولت کے مطابق دھڑلے سے چلا آتا ہے۔ اور فیضیاب ہوتا ہے۔ یہی وجہ ہے کہ جب وہ فوت ہوئے تو کوئی قابل ذکر سرمایہ اور لمبے چوڑے اثاثے اپنے اہل و عیال کے لیے چھوڑ کر نہیں گئے تھے۔ البتہ ان کے لیے سر چھپانے کی جگہ بنا گئے تھے۔ جس کی چھت تلے ان کی خوددار اور باہمت مدرس بیوہ اپنی محنت کی آمدن سے سلیقے اور وقار کے ساتھ بچوں کی پرداخت کا وظیفہ ادا کر رہی ہے۔

بہرکیف اب ہم ہیں اور ان کی یادیں ہیں۔ گردش لیل و نہار میں دائمی جدائی کا غم دے کر رخصت ہو جانے والا

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The Late Professor Muhammad Shafi: Some Remembrances at the Occasion of the First Professor Muhammad Shafi Memorial Lecture

Professor Noor A. Seyal, F.R.C.S.

ENGLISH ABSTRACT: The author traces the career of the much admired late Professor Muhammad Shafi from the time of the World War II until his death in 1973. In 1942, the author and Dr. Shafi were assigned to the Anglo-Iranian Oil Company. Impressed by Dr. Shafi's diagnostic ability and surgical skill, the Chief Medical Superindent, who was also an eye specialist, made him the incharge of the eye department. Dr. Shafi's professionalsim, character, and natural kindness made him very popular. He used this popularity to further the cause of Pakistan movement, and by toiling day and night helped create the "Pakistan Association" in Iran, an accomplishment that was later on highly praised by the first ambassador of Pakistan to Iran, the late Raja Gazanfar Ali Khan. In addition to his several very moving acts of true friendship toward the author, the author mentions Dr. Shafi's astonishing feat of successfully doing his D.O. and D.O.M.S. from England during an incredibly short period of three month vacation from his post in Iran. After doing his F.R.C.S. in ophthalmology from England and Edinburgh, Dr. Shafi became the assistant surgeon at London's King's College Hospital. In 1955, Dr. Shafi left this post to occupy the position of assistant professor of ophthalmology that had been promised to him in order to establish a Department of Ophthalmology at the Nishtar Medical College, Multan, Pakistan. On his arrival in Pakistan, he was not permitted to occupy this position, because in the typical tradition of political nepotism, the health minister of that time wanted to give that position to her much less qualified favorite. Most interestingly, some Divine intervention made that favorite unable to occupy the position, while Dr. Shafi waited, for one whole year. Finally, in 1956, Dr. Shafi was given that position, and made Professor and the Head of Department in 1958. In 1966, Prof. Shafi was transferred to King Edward Medical College, Lahore as the Head of the Department of Ophthalmology there. He remained in that position until his death in May 1973. (Pak J Ophthalmol 2:21-27, 1986)

حکمرانی کا جس طرح راستہ کھولا تھا وہ واقعہ تاریخ کا ایک حصہ ہے پس کوئی تعجب کی بات نہیں کہ اتنے بہت سے پاکستانی ڈاکٹروں کے ہوتے ہوئے یہاں ایرانی بھائیوں کے دلوں پر اہل پاکستان کی حکمرانی کے دروازے کھل رہے ہیں۔ یہ ایک ایسی حوصلہ افزا ستائش تھی کہ آج بھی میرے لیے اور میرے ان ساتھیوں کے لیے باعث افتخار ہے۔ جو ایران میں باہم شریک سفر تھے۔ اور ڈاکٹر شفیع کی تو بات ہی جدا ہے وہ تو وہاں گویا لیڈر تھے اور وطن و قوم کی سربلندی کے لیے ہمیشہ مستعد و متحرک رہتے تھے۔ ہر چند کہ نجی زندگی میں وہ انتہائی متحمل مزاج، سلیم الطبع اور صلح جو تھے۔ مگر ملک و ملت کے معاملات میں اصولوں پر کبھی سمجھوتہ نہیں کرتے تھے۔ ذاتی معاملات میں وہ تلخ اور ناگوار باتیں بھی برداشت کر لیتے تھے مگر جہاں پاکستان کی آبرو اور اہل وطن کے وقار کا مسئلہ درپیش ہوتا تھا وہاں وہ کبھی دب کر نہیں رہتے تھے۔ اور ایسا عموماً وہاں پر موجود بھارتیوں کے ضمن میں ہوتا تھا۔ جن کی تعداد بھی کچھ کم نہیں تھی۔ اور جو ہر طانوی سفارت کاروں اور بھارتی سفارت خانے کی شہہ پر ہمیشہ آمادۂ شر انگیزی رہتے تھے کیونکہ بھارت کی وہاں دال نہیں گل رہی تھی نہ ہی مدتوں تک بھارت اور بھارتیوں کو ایران میں سماجی اور سیاسی پیش رفت میسّر آسکی تھی۔ یہ بھی ایک علیحدہ اور طویل روداد ہے جس کے بیان کی اس موقع پر گنجائش نہیں ہے۔ لہٰذا میں قصہ کوتاہ کرتے ہوئے ڈاکٹر شفیع مرحوم کی طلب علم کے لیے لگن اور ان کی زندگی کے آخری دور کا مختصراً ذکر کر کے اپنے کلام کو ختم کرنا چاہوں گا۔ قدرت نے انہیں ایسا ذہن رسا عطا کیا تھا کہ ان کی کارکردگی پر اچھے اچھے ماہرین علم بھی ششدر رہ جاتے تھے جس کی ایک مثال یہ ہے کہ وہ ۱۹۴۷ء میں صرف تین ماہ کی رخصت پر انگلستان گئے اور اس قلیل مدت میں انہوں نے آکسفورڈ سے D.O. اور انگلینڈ سے D.O.M.S کر کے وہاں بہت سے متعلقین کو حیرت زدہ کر دیا تھا اور وقت گزرنے کے ساتھ ساتھ حصول علم کے میدان میں ان کی پیش قدمی جاری رہی۔ ہیں ۱۹۵۰ء میں F.R.C.S کے لیے انگلستان میں تھا کہ وہ بھی اسی سال کے آخر میں وہاں پہنچ گئے۔ ہیں ۱۹۵۱ء میں فائنل کر کے پاکستان آگیا اور لیڈی ولنگڈن ہسپتال لاہور میں D.M.S کے ساتھ ساتھ کنگ ایڈورڈ میڈیکل کالج میں اسسٹنٹ پروفیسر لگ گیا۔ ڈاکٹر شفیع ۱۹۵۲ء میں انگلینڈ اور ایڈنبرا سے الیف آر سی ایس کرنے کے بعد لندن KING'S COLLEGE HOSPITAL میں رجسٹرار اور بعد میں اسسٹنٹ سرجن مقرر ہو گئے ۱۹۵۴ء میں مجھے نشتر کالج ملتان میں پروفیسری مل گئی۔ اگلے سال وہاں OPHTHALMOLOGY کے اسسٹنٹ پروفیسر کا عہدہ وجود میں آیا تو میں نے ڈاکٹر شفیع کو لندن خط لکھ کر آمادہ کیا کہ وہ واپس آکر یہ ملازمت اختیار کر لیں۔ چنانچہ وہ ۱۹۵۵ء میں واپس آگئے۔ لیکن یہاں صورت حالات نے مایوس کن پلٹا کھایا اور یہ ہوا کہ اس زمانے کی وزیر صحت نے اپنے ایک منظور نظر ڈاکٹر کو وہاں لگوانا چاہا جن کی تعلیمی استعداد ڈاکٹر شفیع کے مقابلے میں کم تر تھی۔ لیکن بجائے اس کے کہ وہ وزیر صاحب حق و انصاف سے کام لیتے ہوئے ڈاکٹر شفیع کے راستے میں حائل نہ ہوتے انہوں نے اپنے پسندیدہ آدمی کا کام چوپٹ ہوتے دیکھ کر اس اسامی کے لیے ایڈورٹزمنٹ ہی واپس لے لی اور ڈاکٹر شفیع نہ ادھر کے رہے نہ ادھر کے۔ کچھ ایسی ہی بے تدبیریاں اور زیادتیاں ہیں جن کے باعث آج کل بھی اچھا خاصا جوہر قابل اجنبی ملکوں کے کام آرہا ہے اور اپنی تمام تر آرزو اور کوشش کے باوجود اپنے محبوب وطن کی خدمت سے قاصر ہے۔ مذکورہ رکاوٹ کے سبب ڈاکٹر شفیع کے لیے ایک سال کا عرصہ بے کار گزر گیا البتہ یہ ہوا کہ اس اثنا میں انہوں نے MBBS بھی کر ڈالا۔ اس دوران میں کلاسیں آگے تک پہنچ چکی تھیں مگر نشتر کالج میں OPHTHALMOLOGY کے اسسٹنٹ پروفیسر کی جگہ بدستور پُر نہیں ہوئی تھی۔ لہٰذا اس کے لیے دوبارہ ایڈورٹائز کیا گیا۔ اس طرح ۱۹۵۶ء میں وہ وہاں تعینات ہو گئے۔ یہاں بھی وہ اپنی اہلیت و صلاحیت اور قابل تعریف اخلاق و کردار کی بدولت جلد ہی ہر دلعزیز ہو گئے۔ سونے پر سہاگہ یہ کہ ڈاکٹر جمال بھٹہ صاحب کی رہنمائی نے ان میں مقامی ماحول کے مطابق اچھے منتظم کے اوصاف میں اضافہ کر دیا۔ اور ان کا شمار کالج کے ان PIONEERS میں ہونے لگا جنہوں نے قائدانہ

کی پیش کش کا اختیار رکھتے ہیں۔ ہم نے کچھ دیر باہم مشورہ کیا اور پھر حامی بھر لی اور ڈاکٹر حسین نے چند ہی دنوں میں بمبئی سے ہماری تقرری اور سفری انتظامات وغیرہ کے کاغذات بھجوا دیئے۔ اب ہوا یہ کہ ڈاکٹر شفیع تو اپنی ملازمت سے استعفیٰ دے کر فارغ ہو گئے۔ لیکن میرے ہاؤس جاب کی مدت ختم ہونے میں ابھی دس دن باقی تھے۔ میں نے اس کا حل یہ نکالا کہ چھٹی کی درخواست دے دی اور ہم دونوں بمبئی چلے گئے جہاں سے بذریعہ بحری جہاز ابادان روانہ ہونا تھا جس میں کچھ دن کا انتظار درپیش تھا۔ اسی اثنا میں ایک روز بمبئی کے دفتر میں امرتسر ہسپتال کے میڈیکل سپرنٹنڈنٹ کا ٹیلیگرام پہنچا جس میں تحریر تھا کہ چونکہ ڈاکٹر نور احمد سیال اپنی ڈیوٹی چھوڑ کر بلا اجازت بمبئی چلے گئے ہیں لہٰذا انہیں واپس بھیجا جائے۔ دراصل وہ صاحب اپنے ایک بھتیجے ڈاکٹر کو ایران میں ملازمت دلوانا چاہتے تھے۔ لہٰذا میرے ضمن میں دس دن کے اس چھوٹے سے سقم کو انہوں نے استعمال کیا اور اس طرح میں وقتی طور پر ایران جانے سے رہ گیا۔ لیکن ڈاکٹر شفیع کا معاملہ تو بالکل صاف تھا اور بلا روک ٹوک ابادان جا سکتے تھے۔ مگر "ہمہ یاراں دوزخ" کے اصول کی پاسداری میں وہ ایران جانے کی بجائے میرے ساتھ ہی بمبئی سے واپس آ گئے۔ پھر خاصی بھاگ دوڑ اور اس زمانے میں پنجاب کے G.C.H. لیفٹیننٹ کرنل بھروچہ سے لاہور میں ملاقاتوں کے بعد بمبئی میں کمپنی والوں کو کلیرنس بھجوانے میں کامیابی پائی اور آخر کار ۱۹۴۲ء میں ایران جانے کا راستہ صاف ہوا۔ اور ہم دونوں وہاں پہنچ گئے۔ سو ظاہر ہے کہ جو شخص اپنے دوست کا ساتھ دینے میں اپنے مستقبل کو بھی داؤ پر لگانے سے دریغ نہیں کرتا تھا۔ اس کے لیے کہ ایک ساتھی کے حق میں کسی انجمن کی صدارت کے اعزازی عہدے سے دستکش ہو جانا کوئی ایسی بڑی بات نہ تھی۔ بہر حال ذکر یہ ہو رہا تھا کہ ایران میں پاکستان کا بول بالا کرنے کے لیئے ہر کوئی جی جان سے لگا ہوا تھا۔ اور وہاں کے نجی و سرکاری حلقوں میں ڈاکٹر شفیع کی مقبولیت اور ان کی شخصیت کا جادو ہم وطنوں کے لیے بہت بڑا سہارا تھا جس کے طفیل نشر و اشاعت اور رابطۂ عمومی کے بہت سے کٹھن مرحلے آن کی آن میں طے ہو جاتے تھے۔ وہاں پر اس زمانے میں مقیم اہل وطن میں سے بیشتر افراد عمر کے اس دور سے گذر رہے تھے جس کے متعلق کہا گیا ہے کہ آتش جوان تھا چنانچہ وہ امنگوں اور ولولوں سے سرشار تھے اور اپنے نوزائیدہ وطن سے ہزاروں میل دور ہونے کے باوجود اس کے لیے بہت کچھ کر گزرنے کی لگن اور تڑپ اپنے سینوں میں رکھتے تھے علاوہ ازیں ان سب کے مالی حالات انتہائی قابل رشک تھے چنانچہ اپنے مال و زر کا ایک معتدبہ حصہ بھی انہوں نے آزادی کے قرض کی ادائیگی یعنی پاکستان کا نقش اجاگر کرنے کے لیئے مخصوص کر دیا تھا۔ اور یہ ان سب کی دامے درمے قدمے سخنے کاوشوں کا ثمر تھا کہ ایران میں پاکستان کے سفیر کی پورا پہلا سال عدم تعیناتی کے باوجود پاک ایران برادرانہ تعلقات کی بے مثال اور مضبوط بنیاد فراہم ہو گئی تھی۔ اور جب اگست ۱۹۴۸ء میں مرحوم راجہ غضنفر علی خاں ایران میں اولین سفیر پاکستان کی حیثیت سے تہران پہنچے تو وہاں پاکستان کے لیے ہموار زمین اور ساز گار فضا کے مشاہدے سے انہیں اس کے عوامل سے آگاہی کا تجسس ہوا۔ اس جستجو میں انہیں ان گمنام وطن پرستوں کی کارکردگی سے روشناسی ہوئی جنہوں نے ستائش اور حوصلے کی تمنا سے بے نیاز ہو کر پاک ایران یگانگت و اخوت کا باب رقم کرنے میں اپنا حصہ ادا کیا تھا۔ تب وہ ان سے بطور خاص ملاقات کے لیے ابادان گئے تھے۔ ان دنوں ڈاکٹر شفیع پاکستان ایسوسی ایشن کے صدر تھے جس کی طرف سے سفیر پاکستان کے اعزاز میں ایک پُرہجوم دعوت عصرانہ کا بندوبست کیا گیا۔ جہاں راجہ صاحب مرحوم نے پاکستانی باشندوں کے جوش و خروش اور محبّ الوطنی کے فراواں جذبے کا بچشم خود مشاہدہ کیا تو وہ بے حد متاثر بلکہ مبہوت ہو گئے۔ حسن اتفاق سے اس اجتماع میں پاکستانی ڈاکٹر بھی معقول تعداد میں شریک تھے۔ میں ان دنوں ابادان سے باہر تھا۔ اور اس تقریب میں شرکت نہیں کر سکا تھا مگر سنا ہے کہ راجہ صاحب نے سپاسنامہ اور رسمی تقریروں کے بعد آپس میں گھل مل کر ہلکی پھلکی گفتگو کے دوران کہا تھا کہ صرف ایک ڈاکٹر نے انگریزوں کے لیے ہندوستان پر دو صدیوں کی

قابلیت اور مہارت کے حوالے سے تو ان کی عظمت میں کسی کو کلام نہیں تھا لیکن ساتھ ہی ساتھ ان کا اعلیٰ کردار اور مثالی اخلاق بھی گویا ضرب المثل بن گیا تھا۔ اس پر طرہ یہ کہ تمام تر مدارج بلند اور شہرہ بے مثال کے باوجود رعونت و تکبر کی بجائے ان کی سرشت میں طبیعت میں انکساری اور سادگی بدرجۂ اتم تھی۔ چنانچہ بڑے سے بڑا گھرانہ ان کا مداح اور چھوٹے سے چھوٹا فرد ان کا پرستار تھا۔ مگر قابل ستائش بات یہ ہے کہ اس متاع بے بہا کو انہوں نے ذاتی مفادات سے زیادہ قومی اور اجتماعی افادیت کے لیے گویا وقف کر دیا تھا۔ اور جب اِدھر برصغیر میں قائداعظم کی زیر قیادت حصول پاکستان کے لیے قدم بہ قدم جدوجہد ہو رہی تھی تو اُدھر ایران میں مقیم اس وفد کے ہندوستانی مسلمان اپنی توانائیوں کو مستقبل کے پاکستانی باشندوں کے تصور سے مجتمع کر رہے تھے۔ اور ڈاکٹر شفیع ان کاوشوں میں پیش پیش تھے۔ اور یہ ان کے اثر و رسوخ، مرتبہ و مقام کے علاوہ پاکستان کے لیے ان کے جذباتی و قلبی جوش و خروش کے عوامل تھے کہ اس مہم میں انہی سے رجوع کیا جاتا تھا پھر شب و روز کی دوڑ دھوپ اور سب کو منظم کرنے کے بعد حصول پاکستان سے کچھ قبل "پاکستان ایسوسی ایشن" کے نام سے ایک تنظیم قائم کی گئی جس کا آئین یعنی دستور العمل خاصی عرق ریزی سے تدوین کیا گیا تھا جس کی سنجیدگی سے پابندی کرتے ہوئے عام انتخابات کے ذریعے اس کے عہدیداروں اور مجلس انتظامیہ کا چناؤ ہوا۔ اور ان سارے طویل و صبر آزما مراحل کے دوران ڈاکٹر شفیع نے اتنا بڑھ چڑھ کر اپنا کردار ادا کیا کہ ہر شخص ان کے لیے سراپا توصیف و تشکر بن گیا تھا۔ حالانکہ ان کے لیے یہ کوئی زیادہ نئی بات نہیں تھی۔ اس لیے کہ وہ طالبعلمی کے زمانے ہی سے اس قسم کی سرگرمیوں میں بہت فعال و متحرک تھے اور امرتسر میڈیکل سکول میں مسلم سٹوڈنٹس ایسوسی ایشن کے صدر رہ چکے تھے۔ مگر ابادان میں یہ ہوا کہ پاکستان ایسوسی ایشن کی داغ بیل ڈالنے میں لگاتار شریک فکر و عمل رہنے کے بعد انہوں نے اس کا صدر بننے سے اجتناب کیا حالانکہ ایسوسی ایشن کی تاسیس کے بعد اوّلیں انتخابات میں اس عہدے کے لیے ان کا کوئی حریف نہیں تھا۔ لیکن انہوں نے خلوص اور بے لوثی کے زیر اثر نہ صرف یہ کہ اس عہدے کے لیے ہم سب کے ایک بزرگ ساتھی مسٹر محمد یعقوب شیدا کا نام خود تجویز کیا بلکہ انہیں منتخب کرا کے رہے۔ یہ الگ بات ہے کہ قواعد کے مطابق اگلے برس کے انتخابات میں کسی نے ڈاکٹر شفیع کے انکار پر کان نہ دھرا۔ اور انہیں آئندہ کے لیے صدر منتخب کر لیا۔ ڈاکٹر شفیع کی جانب سے اپنے ایک ساتھی کے لیے جگہ چھوڑ دینے کا اقدام وہاں پر موجود ہموطنوں کے لیے ناقابل فہم ہو گا مگر مجھے ان کی روش پر قطعاً کوئی حیرت نہیں ہوئی تھی کیونکہ مجھے ان کے اس وصف کا ذاتی طور پر تجربہ تھا کہ وہ اپنے ساتھیوں کے لیے ناقابل یقین حد تک ایثار کرنے سے نہیں ٹلتے تھے۔ وہ واقعہ یہ تھا کہ میں ۱۹۴۰ء میں تعلیم مکمل کرنے کے بعد کرنل ایس ایم کے ملک مرحوم کے ماتحت امرتسر میں ہاؤس جاب کر رہا تھا۔ اور ڈاکٹر شفیع گورنمنٹ ڈسپنسری پاک پٹن میں M.O.A تھے۔ اس سے پہلے ۱۹۳۸ء میں اپنی تعلیم مکمل کر کے اور ہاؤس جاب کرنے کے بعد وہ D.O کر چکے تھے۔ یہ ۱۹۴۱ء کی بات ہے کہ وہ پاک پٹن سے مجھے ملنے کے لیے آئے۔ اور میرے ہی کوارٹر میں ٹھہرے ہوئے تھے۔ اصل میں ہم دونوں کا چولی دامن کا ساتھ تھا۔ اور باوجودیکہ میرا تعلق جھنگ سے تھا اور وہ حافظ آباد کے ایک قصبے پنڈی بھٹیاں سے آئے تھے۔ مگر ہمارے تعلقات اتنے گہرے اور صمیمانہ ہو گئے تھے کہ ہمیں ایک دوسرے کے قریبی رشتہ دار سمجھا جاتا تھا۔ چنانچہ وہ اس ملازمت کے دوران بھی ذرا سا وقت ہاتھ آنے پر مجھ سے ملنے چلے آتے تھے۔ جن دنوں کا میں ذکر کر رہا ہوں انہی دنوں ایک روز ہم دونوں گپ شپ میں مصروف تھے کہ ایک بانکے سجیلے سے صاحب ایسی کرّ و فرّ کی چال چلتے ہوئے اندر آ گئے کہ ہم دونوں یکبارگی مرعوب ہو کر رہ گئے انہوں نے اپنا تعارف کرایا کہ ڈاکٹر سیّد مسعود حسین نام تھا۔ ایران میں ملازمت کرتے تھے اور چونکہ اینگلو ایرانین آئیل کمپنی کو اپنے ہسپتال کے لیے کچھ ڈاکٹر درکار تھے۔ اس لیے یہاں سے بھرتی کرنے کے لیے انہیں بھیجا گیا تھا۔ لیکن وہ نوجوان مسلمان ڈاکٹروں ہی کو لے جانے کا ارادہ رکھتے تھے۔ اس لیے بلا تامل اس کوارٹر میں چلے آئے تھے۔ پھر پوچھا کہ اگر ہم دونوں رضامند ہوں تو وہ انہی قدموں پر ایران میں ملازمت

اہلِ مغرب کے لیے انوکھا تھا اسی لیے کئی یورپی ممالک کے ڈاکٹر اس کی تربیت کے لیے وہاں جایا کرتے تھے۔ چنانچہ ڈاکٹر جیمیسن بھی اس آپریشن میں ڈاکٹر شفیع کے ہاتھ کی صفائی سے اتنا متاثر ہوا کہ وہ اس آپریشن کیے ہوئے لینس کو اپنی انگلیوں میں تھامے سارے ہسپتال میں نمائش کرتا اور ایک ایک ڈاکٹر سے کہتا پھرتا کہ یہ ہے اپنے کام میں مہارت کا نمونہ اور مسیحائی کا ڈھنگ۔ جو پہلے دیکھا تو نہ تھا البتہ سُن ضرور رکھا تھا۔ ایران میں ڈاکٹر شفیع کی شہرت کا یہ نقطۂ آغاز تھا جس کے بعد طلوع ہونے والا ہر دن ان کی ناموری اور نتیجتہً ہر دلعزیزی کا ایک نیا باب وا کرتا چلا گیا اور ڈاکٹر جیمیسن تو ان کا اس قدر گرویدہ ہو گیا کہ اس نے اپنے نائب کو جو ایک ایرانی آئی سرجن تھا جلد ہی وہاں سے تبدیل کر کے تمام وظائف ڈاکٹر شفیع کے سپرد کر دیئے یہاں تک کہ رفتہ رفتہ خود بھی شعبۂ امراضِ چشم سے گویا لاتعلق ہو کر اس نے تمام متعلقہ ذمہ داریاں انہیں سونپ دیں۔ پھر ابادان سے ڈاکٹر شفیع کا چرچا ایرانی تیل کے ان تمام مقامات میں ہوتا چلا گیا جو اینگلو ایرانین آئیل کمپنی کے زیرِ انعرام تھے اور ان علاقوں میں بھی پہنچا جو اس کے دائرہ اختیار سے باہر تھے۔ یہاں یہ وضاحت بے محل نہیں ہو گی کہ اینگلو ایرانین آئیل کمپنی کوئی ایسا عام سا ادارہ نہیں تھا جیسا کہ کمپنی کے عنوان کی وجہ سے سمجھا جانے کا گمان ہو سکتا ہے۔ بلکہ وہ ایک طرح سے ان تمام جگہوں کے سیاہ و سفید کی مالک تھی جہاں تک اس کا پھیلاؤ تھا۔ اور یہ اثر و نفوذ ابادان سے لے کر تہران بلکہ اس سے آگے کرمان شاہ اور تختِ شیریں تک پہنچا ہوا تھا۔ اس کے اپنے بحری جہازوں اور طیاروں کے بیڑے تھے۔ ان گنت موٹر کاروں، موٹر لانچوں، لبسوں ویگنوں اور رسل و رسائل کے دیگر وسائل میں وہ خود مختار تھی۔ اس کی اپنی لمبی چوڑی جدید ساز و سامان سے آراستہ رہائشی بستیاں تھیں۔ ذاتی کلب، سینما گھر، پارکیں اور تفریح گاہیں تھیں۔ باغ باغیچے، کوچہ و بازار اور تجارت گاہیں حتیٰ کہ لمبی لمبی نفیس سڑکیں تک اپنی تھیں۔ دنیا بھر میں سب سے بڑی ریفائنری پمپنگ سٹیشن۔ فائر بریگیڈ اور پائپ لائنیں سارے ایران میں اس کی ملکیت تھے۔ جن کے لیے حفاظتی اور انتظامی بندوبست بھی خود اسی کے تھے۔ اور ان معاملات میں حکومتِ ایران کا عمل دخل محض برونِ بیت کہا جا سکتا تھا۔ سابق اینگلو ایرانی آئیل کمپنی کے اس تسلط و حکم کو پیشِ نظر رکھتے ہوئے یہ کہنا غلط نہ ہو گا کہ اسے ریاست اندرونِ ریاست کا درجہ حاصل تھا جس کے فنی اور غیر فنی عملے کی تعداد لاکھوں کو چھوتی تھی جس کا ہر ادنیٰ و اعلیٰ فرد صرف کمپنی کی صوابدید سے بھرتی ہوتا تھا۔ جن کا تعلق کسی ایک ملک یا قوم سے نہیں تھا بلکہ یہ اس کے انگریز کارپردازوں کی مرضی اور منشا پر منحصر تھا کہ جس کو موزوں سمجھیں اسے کمپنی کی ملازمت میں رکھ لیں۔ چنانچہ وہاں انگریز، ایرانی، ہندوستانی، عرب، ارمنی، یہودی، آشوری اور کئی یورپی باشندوں کی کھیپ تھی۔ جو کمپنی کی ملازمت میں تھے تاہم کلیدی عہدوں پر انگریز ہی تعینات ہوتے تھے جبکہ چند ایک کلیدی حیثیتیں ایرانیوں کو تفویض کر دی جاتی تھی جسے آٹے میں نمک سے تشبیہ دی جا سکتی ہے ہر چند کہ تب برطانیہ دوسری عالمی جنگ کی بھٹی میں پھنسا ہوا تھا پھر بھی وہ دور ہنوز انگریز کی جا بجا بالادستی کا دور تھا۔ اور جنگ کیلئے تیل جیسی اہم ترین جنس کی افادیت کے لحاظ سے اینگلو ایرانین آئیل کمپنی کا دبدبہ اور دم خم فراواں تھا۔ اس کے ہر شعبے اور محکمے میں برطانوی انداز تظم و نسق کی کارفرمائی تھی۔ اور برطانوی طرز انتظامات کے حوالے سے ہسپتال اور اہلِ ہسپتال کا مرتبہ و مقام نسبتاً ارفع و اعلیٰ تھا۔ جہاں برتری اور سہولیات کا یہ عالم تھا کہ وہ طویل و عریض ہسپتال سارے کا سارا ایئر کنڈیشنڈ تھا۔ اگرچہ یہ انکشاف موجودہ زمانے میں ہمیں حاصل شدہ وسائل اور نعمتوں کی موجودگی میں شاید زیادہ حیرانی کا باعث نہیں ہو گا۔ تاہم سن چالیس کی دہائی کے اوائل میں وہاں اس انتظام سے لیس لمبے چوڑے ہسپتال کا نظارہ ہمارے لیے عجوبے سے کم نہیں تھا۔ کیونکہ ہم نے برصغیر میں انگریزوں ہی کے قائم کردہ ہسپتالوں میں سے کسی ایک میں حتیٰ کہ میو ہسپتال جیسے شہرۂ آفاق ہسپتال تک میں یہ بندوبست نہیں پایا تھا۔ بہر حال یہی شاندار اور پُر وقار ماحول تھا جس میں ڈاکٹر شفیع کی اہلیتوں اور صلاحیتوں نے ایسی جلا پائی کہ دیکھتے ہی دیکھتے ہر طرف ان کا چرچا ہونے لگا۔ اور بہت مختصر عرصے میں ان کا نام ہر ادنیٰ و اعلیٰ کی زبان پر تھا۔ اپنی پیشہ ورانہ

پروفیسر محمد شفیع مرحوم

پہلے شفیع میموریل لیکچر کے موقعہ پر!

مصنف:
پروفیسر نور احمد سیال

Figure 1. (Seyal): A 1965 photograph of the staff of the Department of Ophthalmology, Nishtar Medical College, Multan. Seated from left to right are: Dr. Munir Khan, Dr. S.M. Shahid, Dr. K. Begum, Prof. M. Shafi, Prof. A.D. Minhas, Dr. Kishwar, and Dr. K.J. Awan. Standing from left to right are: Dr. Sultan A. Chaudhry, Dr. Manzoor Ahmad, Dr. Jaleel-ud-Daula, and Dr. Mahmood Akhtar.

(Courtesy of Khalid J. Awan, M.D.)

ہر انسان کی داستانِ ماضی کے کچھ اوراق ایسے ہوتے ہیں جو زمانۂ حال کی تمام تر الجھنوں، سرگرمیوں اور ذہنی و جسمانی مصروفیات کے باوجود کبھی خلوت اور کبھی جلوت کے لمحات میں اس کے سامنے آئے بنا نہیں رہتے۔ اور دورِ گزشتہ کے بچھڑے ہوئے چند اچھے ساتھی ایسے بھی ہوتے ہیں جن کی یاد سدا قلب و ذہن میں گھر کیے رکھتی ہے میرے ازحد عزیز دوست اور بھائیوں سے بڑھ کر ساتھی ڈاکٹر محمد شفیع مرحوم ماہر امراضِ چشم کی یادیں بھی ایسا مقام رکھتی ہیں کہ وہ میری زندگی کے آخری لمحات تک میرے لیے انمول سرمائے کا کام دیتی رہیں گی۔ اور میرا جی چاہ رہا ہے کہ ڈاکٹر محمد شفیع مرحوم کے ساتھ معنوی تعلق رکھنے والوں کی اس محفل کو بھی میں اپنے ساتھ ان یادوں میں شریک کروں جو برسہا برس پر محیط ہیں۔ یہ آج سے تقریباً چالیس برس پہلے کی بات ہے جب میں اس نابغۂ روزگار کی ہمراہی میں زندگی کے ایک ناقابلِ فراموش موڑ سے مستقبل کے اندیکھے دور میں داخل ہوا تھا۔ سنہ ۱۹۴۲ء میں دوسری عالمی جنگ کا زمانہ تھا جب ہم دونوں بمبئی سے "بارپیٹا" نامی بحری جہاز میں سوار ہو کر حفاظتی جہازوں کے گھیرے میں اپنی نئی ذمہ داریاں سنبھالنے کے لیے ایران روانہ ہوئے تھے۔ یہاں اینگلو ایرانین آئیل کمپنی ابادان کے جنرل ہسپتال میں ہم دونوں کی تقرری ہوئی تھی۔ وہ سفر بھی ایک ہیجانی سفر تھا کہ ہر آن سمندر یا فضا سے جرمنوں کے اچانک حملے کا دھڑکا ہر کسی کو لگا ہوا تھا۔ بارے خدا خدا کر کے ہم سلامتی سے ابادان پہنچ گئے اور جب ہم ڈیوٹی پر حاضری کی اطلاع دینے کے لیے ہسپتال پہنچے تو وہاں ایک غیر متوقع حسنِ اتفاق سے ہمارا منتظر تھا۔ وہ یہ کہ اس ہسپتال کا انگریز چیف میڈیکل سپرنٹنڈنٹ ڈاکٹر جیمین نامی ایک آئی سپیشلسٹ تھا جس نے ڈاکٹر شفیع کی امراضِ چشم کے شعبے میں پچھلی کارگزاری کا ریکارڈ دیکھ کر ان میں غیر معمولی دلچسپی کا اظہار کیا۔ اور انہیں فی الفور براہِ راست اپنی ماتحتی میں آئی وارڈ اور آئی آؤٹ ڈور کے فرائض سنبھالنے پر تعینات کر دیا۔ مزید عجیب معاملہ یہ ہوا کہ ڈیوٹی سنبھالنے کے پہلے ہی دن اس نے ڈاکٹر شفیع کو کیٹریکٹ کے ایک آپریشن پر لگا دیا۔ اور خود ان کے پہلو میں کھڑے ہو کر اس کا مشاہدہ کرتا رہا۔ ڈاکٹر شفیع نے اس آپریشن میں INTRA CAPSULAR EXTRACTION کا طریقہ استعمال کیا جس میں ڈاکٹر سوہن سنگھ اور ڈاکٹر تلسی داس جیسے مشہور ہندوستانی ماہرین امراضِ چشم سے وہ مہارت حاصل کر چکے تھے۔ جن کی یکے بعد دیگرے ماتحتی میں انہوں نے امرتسر میں ہاؤس جاب کیا تھا۔ اور بعد میں ڈی۔او (پنجاب)، کی سند بھی حاصل کر لی تھی۔ اس زمانے میں کیٹریکٹ کے آپریشن کا یہ طریقہ بہت سے

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Figure 1

Meibomian Lithiasis and its Complications

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

ABSTRACT: Meibomian lithiasis is a rare condition that develops from the deposition of calcium salts in the inspissated secretion of the clogged meibomian glands. Meibomian lithiasis of the upper eyelid caused repeated abrasions of the cornea that failed to respond to treatment in a 47-year-old man. The detection and removal of the meibomian concretion quickly resolved the condition. The author suggests that eyelids should be everted to detect any lithiasis in patients with poorly healing or recurring corneal abrasion. (Pak J Ophthalmol 2:16, 17 and 28, 1986).

Conjunctival concretions (lithiasis) are yellowish white hard deposits of variable size, occuring singly or in groups, that lie under the epithelial layer of the conjunctiva of the elderly.[1] As long as they remain beneath the epithelium, they are asymptomatic. Once they erode through the overlying epithelium, they may become a source of irritation of the eye.[2] The conjunctival concretions may be removed by observation under a slit lamp and the use of topical anesthesia and the tip of a sharp hypodermic needle. The conjunctival concretions develop in glands of Henle and the glands of new formation.[1] The majority of concretions are not calcareous in that they do not contain calcium.[3]

Meibomian lithiasis is a much rarer disorder than the conjunctival concretions. Because of any of a number of reasons there is retention of the meibomiam secretions, which with time become insipissated to form meibomian "infarcts" seen in old people. The deposition of calcium salts transforms these into hard masses of meibomian lithiasis.[1] Very rarely, these hard masses may break through the conjunctiva, as happened in the patient reported here, and cause corneal abrasions or even ulcer formation.[1] It is necessary to remove these symptomatic meibomian lithiasis formations. The eyelids of all the patients with poorly healing or recurring corneal abrasion should be everted to detect any meibomian or conjunctival lithiasis.

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Figure 2

Extrusion of Orbital Medial Wall Implant

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

ABSTRACT: Nine months after it was used to repair the fracture of the medial wall of the right orbit, the alloplastic implant extruded in a 37-year-old man. The extrusion of orbital implants is rare, and to see this happen after medial wall repair is even rarer. The author proposes that poor fixation at the time of surgery and delayed postoperative infection from the nasal cavity were responsible for the extrusion. (Pak J Ophthalmol 2:16, 17 and 28, 1986)

A concomitant fracture of the medial wall of the orbit may be found in about one third of the patients with blowout fractures of the floor.[1] However, an isolated fracture of the medial wall is extremely rare.[2] In the patient reported here multiple facial injuries were found at the time of initial trauma. The medial wall fracture may be accompanied by entrapment of the medial rectus and diplopia. It is also very important to remember that fractures of the orbit may be accompanied by serious ocular complications in 14% fo the cases.[3]

The defects in the bone caused by fractures of the orbit are reconstructed by alloplastic materials, such as Supramid, Teflon, etc. It is very rare for these implants to extrude and cause infection.[4] In the event it happens, the implant should be removed thru a skin incision. In this patient the implant had already migrated forward thru the nasal conjunctiva. It was easily removed. The medical records of this patient showed that no fixation by suturing was provided for the implant. It appears that infection from the nasal cavity also contributed to the extrusion of the implant.

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Figure 3

Christmas Tree (Crystalline) Cataract

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

ABSTRACT: Less than 10 cases of congenital crystalline (aculeiform type) cataract (spiesskatarakt or spear-cataract) have been reported. Although crystal formation in advanced cataracts is not unusual, acquired crystals in clear adult lens are also rare. A 53-year-old man bilaterally developed irregularly arranged needlelike crystals with prismatic light reflections in the center of his clear lens over a period of several years. The cause of this acquired Christmas tree-like aculeiform cataract and the nature of its crystals could not be determined. (Pak J Ophthalmol 2: 16, 17 and 29, 1986).

Cataract made up of crystals appears in the axial part of clear lens. The disorderly arrangment of crystals has been likened to spears (speisskatarakt), needles, or fur trees, the crystal arrangement being different in all cases. In other cases, the crystals may be rhombohedric, rounded, or tubular, in which case the cataract is given the name of corraliform. Generally, the aculeiform cataract is congenital, bilateral, without other local or systemic abnormalities, accompanied by some degree of reduction of vision, and hereditary with dominant transmission.[1]

The crystals are localized in the adult nucleus with possible involvement of the outer layers of the fetal nucleus as well. The cause and the true nature of these crystals remains undetermined. Vogt[2] who first reported this type of cataract found that crystals resembled tyrosine. Gifford and Puntenney[3] Calcium sulphate crystals were found in a corraliform cataract by them and in a spear cataract by Parker.[4] The acquired appearance of crystals in the lens of a 50-year-old Hindu man was thought to be due to the decline of the alpha a-crystalline.[5] The patient reported here had no lipid or protein abnormalities.

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Figure 4

Cholesterosis Bulbi Following Intraocular Lens Implantation

Khalid J. Awan, M.D., F.P.A.M.S. and Muhammad Humayun, M.D., F.P.A.M.S.

ABSTRACT: Severe recurrent anterior uveitis necessitated the removal of intraocular lens implant from the left eye of a 64-year-old man 11 months after an uncomplicated extracapsular cataract operation. The uveitis, however, progressed relentlessly and the eye became blind. Subsequently free floating crystals with prismatic light reflections appeared in the anterior chamber. This is the first report of cholesterosis bulbi as a postoperative complication of intraocular lens implant surgery. (Pak J Ophthalmol 2:16, 17 and 29, 1986)

Cholesterosis bulbi described in the past as synchysis scintillans, is a condition, in which crystals cholesterol are seen in the degenerated tissues of the blind eye. The condition is uncommon, and clinically manifests in the vitreous or the anterior chamber. It needs to be differentiated from the very common condition of asteroid hyalosis. The asteroid bodies in the latter are composed of shiny calcium-containing lipid aggregates in otherwise healthy eyes, whereas synchysis scintillans particles are made up of cholesterol crystals in the severely damaged blind eyes.[1] However, one of us (KJA) reported the presence of a few flat crystals freely floating in the aqueous of the normal eye with 20/20 (6/6) vision in a 16-year-old girl.[2] These crystlas spontaneously disappeared, as has been reported in some other cases of cholesterosis bulbi.[3] Wand, Smith, and Cogan[1] suggested that the term synchysis scintillans should be dropped in favor of cholesterosis bulbi. The source of the cholesterol crystals in cholesterosis remains uncertain. It is believed that when they appear in the anterior chamber, they do so by forward migration from the vitreous. It has been proposed that the impairment of the normal mechanism for maintaining cholesterol in solution in the eye could be responsible.[4].

Although cholesterosis bulbi in eyes that had undergone cataract operation has been previously reported, our case is the first documentation of cholesterosis following intraocular lens implant surgery. This patient did have some evidence of vitreous hemorrhage before uveitis and cholesterosis appeared.

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Figure 5

Corneal Intraepithelial Neoplasm

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

ABSTRACT: A 79-year-old woman had an intraepithelial neoplasm of the upper temporal cornea that extended from a heavily vascularized papillomatous lesion of the perilimbal conjunctiva. It was mottled with whitish dots and had pseudopodialike edges, lesions recently described by other authors. The lesion was of a very low virulence, and it bothered neither the patient, nor her sight. (Pak J Ophthalmol 2:16, 17 and 30, 1986).

Waring, Roth, and Ekins[1] recently reported fimbricated gray corneal epithelial plaques, usually adjacent to some conjunctival lesions, with histopathologic changes characteristic of a specific dysplastic and neoplastic process. They suggested that these and other lesions classified as intraepithelial epitheliomas (Bowen's disease) and epithelial dysplasias should not be regarded as separate entities but parts of a spectrum of single disease complex, intraepithelial neoplasia. These lesions may be considered a preinvasive carcinoma of the corneoconjunctival epithelium. It is interesting that these corneal changes are common, yet not carefully noted by most ophthalmologists. It is perhaps because these lesions are either asymptomatic. Like in the patient reported here, or they cause only a mild irritation, or slight blurriness of vision that the patient may attribute to a change in glasses prescription or cataract formation.

Histopathologically, the epithelium in the involved area is hypercellular and thickened, making a sudden junction with entirely normal epithelium. The cells shown pleomorphism and poor intercellular adhesions. Although epithelial basement membrane may be lost, the lesions do not extend into Bowman's membrane.[1] The intraepithelial neoplasia are seen in the adult and the elderly. However, in a recent report from Pakistan histopathologically proven intraepithelial neoplasm was described in two children, indeed an exceptionally rare occurrence.[3] It is to be remembered that the patients with intraepithelial neoplasia may suffer from other unrelated primary cancers.[4]

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Figure 6

Ocular Toxoplasmosis with Branch Retinal Vein Occlusion in Pregnancy

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

ABSTRACT: A 25-year-old woman developed acute toxoplasmic retinochoroditis in her right while pregnant. The lesion reactivated during the second pregnancy, and caused occlusion of the retinal vein tributary that coursed across it. Medical therapy for toxoplasmosis given in cooperation with her obstetrician resulted in recovery with final acuity of 20/30 (6/9). (Pak J Ophthalmol 2:16, 17 and 30, 1986.)

Branch retinal vein occlusion, and branch retinal arterial occlusion, have been infrequently reported in association with acute toxoplasmic retinochoroiditis.[1] The probable cause of this vascular occlusion is perivasculitis caused by the reaction between local antigen and circulating antibody. The occlusion usually occurs at the site of acute retinitis.[1] The management of branch vascular occlusion in retinochoroiditis is that of ocular toxoplasmosis. Tuberculous uveitis also may cause these vascular lesions, an important fact to be kept in mind while managing these patients in Pakistan.

The precise cause of reactivation of healed ocular toxoplasmosis is not known. It is known that facultative pathogens such as *Candida sp.,* herpes simplex virus, cytomegalovirus, *Toxoplasma gondii,* etc. are held off by the cell-mediated defense system. Any compromise of this system, by disease of lymphatic organs, immunosuppressive and cytotoxic therapy, radiation, or general stress and debility, may allow these organisms to freely proliferate.[2] The use of systemic, and even sub-Tenon, corticosteroids without concomitant use of antimicrobial agents may worsen toxoplasmosis in some patients.[2] Recently, reactivation of ocular toxoplasmosis was reported as the presenting sign of acquired immune deficiency syndrome (AIDS).[3] In the patient reported here pregnancy appears to have been responsible for twice reactivation of ocular toxoplasmosis.

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Abstracts From Elsewhere

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

AMA Archives of Ophthalmology

HYPERTHERMIC TREATMENT OF INTRAOCULAR TUMORS. P.T. Finger, MD; S. Packer, MD; P.P. Svitra, BA; R.W. Paglione, MSEE; J. Chess, MD; D.M. Albert, MD. A 5.8-gigahertz (GHz) ophthalmic microwave applicator was used to treat choroidal melanoma (Greene strain) in rabbits. High-frequency electromagnetic radiation provides a favorable dose distribution to induce local hyperthermia in the treatment of intraocular tumors. Heating of the neoplasm, while sparing normal ocular structures, is best accomplished by a transscleral approach. A hyperthermia plaque is placed on the sclera at the base of the intraocular tumor. Contact (resistive) heating and electromagnetic radiation (radiofrequency and microwave) are best suited to a plaque technique. The advantages of electromagnetic heat induction, as compared with contact heating, are twofold: the depth of hyperthermic penetration can be modulated by frequency selection, and the tissues with low water content (sclera) remain relatively unaffected by microwaves. The 5.8-GHz ophthalmic microwave applicator satisfies the requirements for local hyperthermic treatment of intraocular tumors. (Arch Ophthalmol 102:1477-1481; 1984) *Author's Abstract.*

SURGICAL MANAGEMENT OF PERIPHERAL FUNGAL KERATITIS (KERATOMYCOSIS). J.J. Sanitato, MD; C.G. Kelley, MD; H.E. Kaufman, MD. Keratomycosis often follows ocular trauma caused by vegetable matter. Medical management sometimes is unsuccessful, and surgical intervention is required. Debridement, penetrating keratoplasty, and lamellar keratoplasty in conjunction with an inlay conjunctival flap have all been proved effective. Three case reports illustrate the usefulness of lamellar keratoplasty and conjunctival flaps in the management of peripheral corneal fungal ulcers. (Arch Ophthalmol 102:1506-1509; 1984) *Author's Abstract.*

VISUAL, REFRACTIVE, AND KERATOMETRIC RESULTS OF RADIAL KERATOTOMY. One-Year Follow-Up. P.N. Arrowsmith, MD; R.G. Marks, PhD. Ongoing prospective evaluation of radial keratotomy was conducted on 156 eyes of the first 101 consecutive patients. We did a one-year follow-up and compared previously reported six-month findings. All eyes were examined both six months and one year after surgery. Findings obtained by an independent examiner both before and after surgery correlated highly with findings obtained in the surgeon's office. One year after surgery, mean change in spherical equivalent was +4.7 diopters; overall uncorrected distance acuity was 20/20 in 49% of cases and at least 20/40 in 76% of cases. Fifty-eight percent of eyes were within 1.0 D of emmetropia. Visual results showed slight general improvement between six and 12 months; refractive results were stable, except that excessive overcorrection was found to decrease. In this series, radial keratotomy seemed safe and effective one year after surgery. (Arch Ophthalmol 102:1612-1617; 1984) *Author's Abstract.*

ANATOMICAL CLASSIFICATION OF THE DEVELOPMENTAL GLAUCOMAS. H. D. Hoskins, Jr, MD; R.N. Shaffer, MD; J. Hetherington, MD. With the use of observations in 250 cases of childhood glaucoma, defects were classified anatomically according to the three major anterior chamber structures affected: the trabecular meshwork, the iris, and the cornea. The classification should do much to facilitate communication in the area of the developmental glaucomas and provide standardization of terminology to allow collaborative study of these rare diseases. (Arch Ophthalmol 102:1331-1336; 1984) *Author's Abstract.*

COMPLICATIONS OF CONTINUOUS-WEAR SOFT CONTACT LENSES IN A NONREFERRAL POPULATION. T.C. Spoor, MD; W.C. Hartel, MD; P. Wynn, MD; D.K. Spoor, CO/COT. Serious corneal complications occurred in an otherwise successful experience with continuous-wear soft contact lenses (SCLs) for aphakic correction. One hundred twenty eyes were fit, and 92% attained visual acuity of 20/40 or better. Severe corneal complications were observed in 13 eyes, including bacterial ulcers (six), apical erosions (three), and severe superficial vascularization (four). Corneal ulcers occurred in nondiabetic as well as diabetic subjects. Continuous wear SCLs are not innocuous; as for any other drug or device, continuous, long-term medical supervision is necessary to minimize potentially severe complications and visual loss. (Arch Ophthalmol 102:1312-1313; 1984) *Author's Abstract.*

RETROBULBAR ANESTHESIA IN STRABISMUS SURGERY. S.M. Szmyd, MD; L.B. Nelson, MD; J.H. Calhoun, MD; R.D. Harley, MD. Forty-nine patients, ranging in age from 12 to 77 years, underwent strabismus surgery under local anesthesia. With standard preoperative medication and a retrobulbar injection of 2% mepivacaine hydrochloride (hyaluronidase added in 12 patients), effective anesthesia was obtained. Twenty-four patients were observed during the immediate postoperative period, and return of extraocular muscle function and visual acuity was found to be complete an average of 3.8 hours after the injection. The addition of

hyaluronidase significantly altered the duration of the anesthetic. Local anesthesia may be a preferable technique in terms of decreased morbidity, especially in the older patient. The short duration of anesthesia and lack of side effects also enable the surgeon to use adjustable sutures and make the final adjustment relatively early in the postoperative period. (Arch Ophthalmol 102:1325-1327; 1984) *Author's Abstract.*

ISOLATED SIXTH-NERVE PALSIES IN YOUNGER ADULTS. M.L. Moster, MD; P.J. Savino, MD; R.C. Sergott, MD; T.M. Bosley, MD; N.J. Schatz, MD. Acquired sixth-nerve palsies are relatively rare in younger adults. We re-examined 49 patients, aged from 15 to 50 years, with isolated sixth-nerve palsies who were seen between 1972 and 1982 at the Wills Eye Hospital in Philadelphia. In this group, the following etiologies were encountered: vasculopathy (14 patients (29%), tumors (eight patients (16%), multiple sclerosis (six patients (12%), presumed inflammation (four patients (8%), trauma (three patients (6%), postlumbar puncture (two patients (4%), and orbital amyloidosis (one patient (2%). Eleven patients (22%) had no determined cause of their sixth-nerve palsy. The implications for the clinical management of isolated sixth-nerve palsies in younger adults are discussed. (Arch Ophthalmol 102:1328-1330; 1984) *Author's Abstract.*

CLASSIFICATION AND INCIDENCE OF SPACE-OCCUPYING LESIONS OF THE ORBIT. A Survey of 645 Biopsies. J.A. Shields, MD; B. Bakewell, MD; J.J. Augsburger, MD; J.C. Flanagan, MD. Six hundred forty-five consecutive biopsies of orbital lesions performed at a major ophthalmic hospital during a 20-year period were used to develop a comprehensive classification of orbital tumors and pseudotumors, excluding thyroid orbitopathy. Although this series has certain bias, it probably closely parallels the incidence of orbital lesions that would prompt a biopsy in an ophthalmic practice. It is hoped that this review, combined with a familiarity of the signs and symptoms of various orbital lesions, will aid the clinician in the diagnostic evaluation of the patient with an orbital mass. (Arch Ophthalmol 102:1606-1611; 1984) *Author's Abstract.*

TREATMENT OF BLEPHAROSPASM WITH BOTULINUM TOXIN. A PRELIMINARY REPORT. B.R. Frueh, MD; D.P. Felt, MD; T.H. Wojno, MD; D.C. Musch, PhD. The effects of botulinum A toxin injections for the treatment of facial spasm were analyzed for 22 patients. Sixteen patients had unoperated on essential blepharospasm, three had essential blepharospasm with residual spasm following previous surgical treatment, and three had unoperated on hemifacial spasm. Treatment was effective for most patients, but transient, with the mean interval of relief of spasm after the first injections being ten weeks. The injection of botulinum toxin reduced the maximum lid force by about 10%. While side effects were common, they were generally mild and well tolerated. No cumulative effect of botulinum toxin was evident in those receiving three series of injections. There is no significant difference in either the interval free of spasm or the rate of lid-force recovery following any of three sequential injections of increasing doses of botulinum toxin. (Arch Ophthalmol 102:1464-1468; 1984) *Author's Abstract.*

CLINICAL CLASSIFICATION OF GRAVES' OPHTHALMOPATHY. IDENTIFICATION OF RISK FACTORS FOR OPTIC NEUROPATHY. S.E. Feldon, MD; S. Muramatsu, MS; J. M. Weiner, DPH. Clinical signs of Graves' ophthalmopathy were correlated with extraocular muscle volumes in 50 patients. Significant correlations were obtained for horizontal, vertical, and total extraocular muscle limitation, as well as periorbital swelling. Proptosis correlated to a lesser extent. Optic nerve involvement was found to be correlated with both total extraocular muscle volume and limitation of ocular motility. From this information, no risk, future risk, and immediate risk categories of disease were defined quantitatively. The results of the study imply that optic nerve involvement is more likely to occur in association with noncompliant, fibrotic muscle than with more supple muscle of the same total volume. (Arch Ophthalmol 102:1469-1472; 1984) *Author's Abstract.*

OPHTHALMOLOGY
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DERMAL-FAT GRAFT AS A PRIMARY ENUCLEATION TECHNIQUE. w R Nunery, K J Hetzler. The authors undertook a retrospective study of 36 dermal-fat grafts to determine the indications as a primary enucleation implant material. Out of these 26 (61%) required a reoperation in a three-year follow-up period. Sixty-seven percent required secondary prosthetic revision. The authors do not recommend dermal-fat grafting for routine enucleation due to high reoperation rate and prosthetic revisions. *Ophthalmology 92:1256-1261, 1985. Reprint requests to William R. Nunery, MD, Department of Ophthalmology, Indiana University, 702 Rotary Circle, Indianapolis, IN 46223.*

AGING MACULAR DEGENERATION. CLINICAL FEATURES OF TREATABLE DISEASE. J C Folk. The author concludes that argon laser treatment reduces visual loss in patients with aged macular degeneration and extrafoveal subretinal neovascular membranes. The patients must be

educated about the symptoms of subretinal neovascularization and given an Amsler grid. The patients who develop symptoms should be examined promptly. The fluorescein angiograms and meticulous contact lens examinations of the macula should be performed to detect subtle neovascularization and differentiated from fluorescein angiographic changes of drusen, retinal pigment epithelial atrophy, and retinal pigment epithelial detachments. *Ophthalmology 92:594-602, 1985. Reprint requests to James C. Folk, MD, Department of Ophthalmology, University of Iowa Hospitals and Clinics, Iowa City, IA 52242.*

IMPORTANT POINTS IN MANAGEMENT OF PATIENTS WITH CHOROIDAL NEOVASCULARIZATION. L J Singerman. The Macular Photocoagulation Study has proven the efficacy of argon blue-green laser treatment for extrafoveal choroidal neovascularization (CNV) in aging macular degeneration, presumed ocular histoplasmosis syndrome and idiopathic choroidal neovascularization. It is applicable only to eyes managed according to certain principles of therapy and post-treament follow-up. The use of a recent fluorescein angiogram and retrobulbar anesthetic, aiming for complete obliteration of the CNV is necessary. Meticulous post-treatment follow-up with daily patient's monitoring of the Amsler grid, and prompt examinations if distortion is noted is important. Fluorescein angiography is mandatory and is repeated frequently and studied promptly. Residual or recurrent extrafoveal CNV requires prompt re-treatment. The technique set includes first outlining the complex of CNV and adjacent blocked fluorescence from blood or pigment with 100-*um* noncontiguous light intensity burns placed 100 to 125 *um* beyond the margins of the complex. Heavy treatment is then applied with overlapping 200-*um* 0.2-second duration burns beginning on the foveal margin of the CNV. The perimeter of the membrane is then treated with the same settings. Lastly, intense treatment is applied with 200- to 500-*um*, 0.5- or 1.0-second burns over the center of the CNV and the entire area previously treated. The treatment must extend beyond the margins of CNV and must result in a confluent, intense white burn, often including the inner retina. *Ophthalmology 92:610-614, 1985. Reprint requests to Lawrence J. Singerman, MD, Retinal Laboratory, 26900 Cedar Road, Suite 323, Cleveland, OH 44122.*

PERFLUOROCARBON GASES IN VITREOUS SURGERY. S Chang, H A Lincoff, D J Coleman, W F Fuchs, M E Farber. The authors tested 56 patients with complicated retinal detachments with perfluorocarbon gases, which are capable of greater expansion and greater longevity compared to sulfur hexafluoride. Forty-five patients received perfluoropropane (C3F8), eleven received perfluoroethane (C2F6). The retinas of 31 patients (55.4%) were attached at six months after the disappearance of the gas. Previously the operations performed with air-sulfur hexafluoride mixtures had failed in many instances. The increased intraocular pressure, usually transient, and gas-induced lens opacities are major complications. *Ophthalmology 92:651-656, 1985. Reprint requests to Stanley Chang, MD, Department of Ophthalmology, The New York Hospital, 525 East 68th Street, New York, NY 10021.*

INACCURACY OF FINE NEEDLE ASPIRATION BIOPSY. G B Krohel, D R Tobin, R M Chavis. An accuracy rate of 92% has been claimed by some authors by the use of needle aspiration biopsy (FNAB) of orbital tumors. This figure remains unproven. The author recently performed FNAB on 34 patients at the time of surgical biopsy. Cytologic diagnosis has been accurate in less than half of the cases biopsied. Fine needle aspiration biopsy should be limited to strongly suspected cases of orbital metastases or secondary tumors. *Ophthalmology 92:666-670, 1985. Reprint requests to Gregory B. Krohel, MD, Department of Ophthalmology, Albany Medical College, Albany, NY 12208.*

TOPICAL RETINOID TREATMENT FOR VARIOUS DRY-EYE DISORDERS. C G Tseng, A E Maumenee, W J Stark, I H Maumenee, A D Jensen, W R Green, K R Kenyon. The authors evaluated the clinical efficacy of treating various dry-eye disorders using 0.01% and 0.1% (weight/weight) topical all-trans retinoic acid ointment one to three times a day and concurrently with all the medications the patients were previously using. Twenty-two patients were classified into: (1) keratoconjunctivitis sicca (6 patients; 11 eyes), (2) Stevens-Johnson syndrome (9 patients; 17 eyes), (3) ocular pemphigoid or drug-induced pseudopemphigoil (3 patients; 6 eyes) and (4) surgery or radiation-induced dry eye (4 patients; 4 eyes), based on the criterion that they remained symptomatic even under maximum tolerable conventional medical and/or surgical therapies. The squamous metaplasia with mucin deficiency secondary to goblet cell loss and keratinization may be the basis for the development of clinical symptoms and morbidities, as these epithelial abnormalities were invariably present before treatment. All patients demonstrated clinical improvements in symptoms, visual acuity, rose Bengal staining, or Schirmer test. This topical vitamin A treatment caused the reversal of squamous metaplasia as evidenced by impression cytology. Therefore, the topical use of vitamin A may represent the first nonsurgical attempt to treat these disorders by reversing diseased ocular surface epithelium. *Ophthalmology 92:717-727, 1985. Reprint requests to Scheffer C. G. Tseng, MD, PhD, Eye Research Institute, 20 Staniford Street, Boston, MA 02114.*

EXCIMER LASER ABLATION OF THE CORNEA AND LENS. EXPERIMENTAL STUDIES. C A Puliafito, R F Steinert, T F Deutsch, F Hillenkamp, E

J Dehm, C M Adler. The pulsed ultraviolet excimer laser can produce tissue ablation with a high degree of precision and with minimal thermal damage to adjacent structures. In comparative studies of excimer laser ablation of the cornea and crystalline lens using 193 nm and 248 nm radiation, threshold fluence for corneal and lens ablation was higher at 248 nm than at 193 nm. Ablation of corneal stroma at 193 nm produced the most precise cuts. When examined by transmission electron microscopy, a narrow zone of damaged tissue (0.1 to 0.3 *um*) was seen immediately adjacent to the tissue removed by the laser. Ablation with 248 nm radiation produced incisions with ragged edges and with a wider and more severe zone of damage in adjacent stroma. Ultraviolet spectral transmission studies of the corneal stroma showed that absorption is 10 times greater at 193 nm than at 248 nm. The excimer laser was effective in producing well controlled ablation of the crystalline lens in vitro, with effects parallel to those seen in the cornea. *Ophthalmology 92:741-748, 1985. Reprint requests to Carmen A. Puliafito, MD, Howe Laboratory of Ophthalmology, Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, MA 02114.*

AN ULTRASTRUCTURAL STUDY OF CORNEAL INCISIONS INDUCED BY AN EXCIMER LASER AT 193 NM. J Marshall, S Trokel, S Rothery, H Schubert. Far ultraviolet light (193 nm) produced by an excimer laser has been used to produce a variety of incisions in the corneas of anaesthetised rabbits. Ultrastructural analysis of the walls of the ablated areas show damage to the adjacent structures to be confined to a zone 60 to 22 nm in width. These dimensions could either be attributed to photochemical processes in which high energy photons directly break organic molecular bond, or to thermal reactions which result in limited heat flow and damage confined to the absorption depth at 193 nm of less than 1 *um*. In non-penetrating incisions that reached within 40 *um* of Descement's membrane, endothelial cells were lost beneath the line of the irradiation. This spalling of cells seemed to be generated by shock or acoustic waves. *Ophthalmology 92:749-758, 1985. Reprint requests to Stephen Trokel, MD, The Edward S. Harkness Eye Institute, Columbia-Presbyterian Medical Center, 635 W. 165th Street, New York, NY 10032.*

DRUSEN OF THE OPTIC NERVE HEAD. AN IMPORTANT MODEL. G L Savage, A Centaro, J M Enoch, N M Newman. The authors propose that drusen of the optic nerve head (ONH) may provide a useful model for the study of diseases which affect the vicinity of the optic disc. Fundus Photo Perimetry confirmed that little correlation exists between visual field defects and the location of ophthalmoscopically visible ONH drusen. The Flashing Repeat Static Test (FRST) was abnormal in half of the patients, indicating probable ascending dysfunction in optic nerve fibers beyond the lamina cribrosa. Alterations in transient-like and/or sustained-like functions, found in several cases, are thought to represent effects of dysfunction descending to the retinal plexiform layers. *Ophthalmology 92:793-799, 1985. Reprint requests to Jay M. Enoch, PhD, School of Optometry, University of California, Berkeley, CA 94720.*

PHARMACOLOGIC THERAPY OF APHAKIC AND PPSEUDOPHAKIC CYSTOID MACULAR EDEMA. 1985 UPDATE. L M Jampol. Because no major advances in the pharmacologic therapy of aphakic cystoid macular edema (ACME) have occurred since 1982, topical indomethacin remains the one agent which has been proven to be ofprophylactic value for angiographic aphakic cystoid macular edema although other non-steroidal agents may also work. The therapeutic value of these compounds for established ACME remains uncertain. No prospective randomized prophylactic or therapeutic trials of either topical or systemic corticosteroids have been performed. *Ophthalmology 92:807-810, 1985. Reprint requests to Lee M. Jampol, MD, 303 E. Chicago Avenue, Chicago, IL 60611.*

CLINICOPATHOLOGICAL CORRELATION OF A SOLITARY CHOROIDAL TUBERCULOMA. C E Lyon, B S Grimson, R L Peiffer, Jr., J C Merritt. The authors describes a rapidly enlarging choroidal tuberculoma in a 34-year-old black man with pulmonary tuberculosis. Despite appropriate systemic anti-tuberculous therapy the granuloma progress to a large size. The eye became blind and painful, and was subsequently enucleated. No organisms was present on conventional staining of tissue sections, but tubercle bacilli were demonstrated by fluorescence microscopy. *Ophthalmology 92:845-850, 1985. Reprint requests to Charles E. Lyon, MD, Department of Ophthalmology, 617 Clinical Sciences Bldg. 229H, Chapel Hill, NC 27514.*

THE EARLY STRUCTURAL AND FUNCTIONAL DISTURBANCES OF CHRONIC OPEN-ANGLE GLAUCOMA. ROBERT N. SHAFFER LECTURE. S M Drance. The author reports that earliest psychophysical changes in color vision, foveal sensitivity, spatial and temporal contrast sensitivity precede nerve fiber bundle defects of the visual field in glaucoma. Optic disc changes such as enlargement of the physiological cup, as well as retinal nerve fiber layer losses, also precede visual field defects. It is not yet clear which of these is the earliest change. The author presents evidence for more than one mechanism of damage in glaucoma. *Ophthalmology 92:853-857, 1985. Reprint requests to Stephen M. Drance, MD, VGH/UBC Eye Care Center, 2550 Willow Street, Vancouver, BC, V5Z 3N9.*

CHANGE IN APPEARANCE OF THE OPTIC DISC ASSOCIATED WITH LOWERING OF INTRAOCULAR PRESSURE. K C Greenidge, G L

Spaeth, C E Traverso. The authors provide additional documentation that the appearance of the optic disc may improve after intraocular pressure is lowered in patients with glaucoma. Photographic records of the patients of one of the authors (GLS) were reviewed retrospectively. Seven previously unreported cases showing apparent improvement of the optic disc were found. In two cases the improvement was transient, and in five it was lasting. Patients with evidence of disc improvement had an age range of 5 to 55 years. In one case, the scleral ring decreased in size following the lowering of intraocular pressure. In the other cases, the disc appeared to "fill in" without change in the size of the scleral ring. When improvement is short-lived, it presumably represents edema. When of longer duration, it may be a response to anterior repositioning of a posteriorly displaced lamina cribrosa, a decrease in diameter of the scleral ring, hypertrophy and/or proliferation of glial cells, or return towards normal of axonal metabolism. *Ophthalmology 92:897-903, 1985. Reprint requests to Kevin C. Greenidge, MD, MPH, New York Eye & Ear Infirmary, 310 East 14th Street, New York, NY 10003.*

TRABECULODIALYSIS FOR INFLAMMATORY GLAUCOMA IN CHILDREN AND YOUNG ADULTS. J J Kanski, J A McAllister. The authors performed trabeculodialysis on 30 eyes of 23 patients with secondary glaucoma due to chronic anterior uveitis. Trabeculodialysis was unsuccessful in lowering intraocular pressure to below 21 mmHg in 12 (40%) of eyes and successful in 18 (60%) of eyes. Of the 18 successful cases, 5 required no additional medication, but in 13 cases the intraocular pressure could only be maintained at a normal level by concomitant anti-glaucoma therapy. The presence of aphakia, extent of preoperative angle closure, and patient's age had no bearing on the outcome. *Ophthalmology 92:927-930, 1985. Reprint requests to Jack Kanski, FRCS, Prince Charles Eye Unit, King Edward VII Hospital, Windsor, Berkshire SL43DP, England.*

CYCLOCRYOTHERAPY IN THE TREATMENT OF ADVANCED GLAUCOMA. J Caprioli, S L Strang, G I Spaeth, E H Poryzees. The authors exaluated cyclocryotherapy in the treatment of aphakic open-angle glaucoma (AO), aphakic angle-closure glaucoma (ACL), and neovascular glaucoma (NVG) in 96 eyes of 96 patients with a follow-up of greater than 12 months. Intraocular pressure (IOP) was lowered to less than 21 mmHg in 76% of eyes with aphakic open-angle glaucoma, 68% of eyes with angle-closure glaucoma, and 55% of eyes with neovascular glaucoma. Patients with NVG lost vision more frequently (70%) than patients with AO (41%) or ACL (41%). In patients having visual field examinations (76/96), glaucomatous field loss was arrested in 71% of patients with AO and 65% of patients with ACL, compared to 29% of patients with NVG (P less than 0.025). There was a significant correlation between postoperative IOP less than 21 mmHg and preservation of visual field. Patients receiving initial 360° cryosurgical treatment required fewer repeat treatments than patients receiving initial 180° treatment ($P = 0.004$); complications were slightly more common in the 360° group. *Ophthalmology 92:947-954, 1985. Reprint requests to Joseph Caprioli, MD, Yale University School of Medicine, Box 3333, Cedar Street, New Haven, CT 06510.*

RETINAL COMPLICATIONS FOLLOWING YAG LASER CAPSULOTOMY. R L Winslow, B C Taylor. Out of a total of 1100 YAG capsulotomy eyes, 19 developed retinal complications. Complications included one retinal flap tear, two macular holes, six eyes with cystoid macular edema, and ten retinal detachments. The authors feel that these resulted from opening the capsule and were not a specific complication of the YAG laser. (Key words: crystalline lens, cystoid macular edema, lasers, retinal detachment.) *Ophthalmology 92:785-789, 1985. Reprint requests to Richard L. Winslow, MD, 2811 Lemmon Avenue East, Dallas, TX 75204.*

SURGICAL MANAGEMENT OF ENCAPSULATED FILTERING BLEBS. J E Pederson, G Smith. Out of a total of 222 eyes 5-years following glaucoma filtering operations 24 (11%) developed encapsulated filtering blebs associated with elevated intraocular pressure or symptomatic dellen formation, unresponsive to conservative therapy. Nine of 13 eyes were treated successfully with primary needling of the bleb. Ten of 11 eyes were successfully treated with primary bleb revision. Four eyes were successfully treated with a combination of needling and surgical revision and one eye required cyclocryotherapy. The overall success rate of needling or bleb revision was 96% after an average follow-up of 20 months. *Ophthalmology 92:955-958, 1985. Reprint requests to Jonathan E. Pederson, MD, Box 493 Mayo, University of Minnesota, Minneapolis, MN 55455.*

COMPLICATIONS OF SURGERY IN GLAUCOMA. EARLY AND LATE BACTERIAL ENDOPHTHALMITIS FOLLOWING GLAUCOMA FILTERING SURGERY. L J Katz, L B Cantor, G L Spaeth. The authors present one case of "early" post-trabeculectomy endophthalmitis and five eyes with "late" endophthalmitis three to nine years after glaucoma filtration surgery. Differentiation of early versus late endophthalmitis is based on the time of onset and pathogenesis. Retrospective analysis of 1100 consecutive trabeculectomies revealed an incidence of less than 0.1% for early and 0.2% for late endophthalmitis. The authors discuss medical and surgical approaches and the presumed importance of identifying posterior extension into the vitreous and

performing a therapeutic vitrectomy. *Ophthalmology 92:959-963, 1985. Reprint requests to L. J. Katz, MD, The Wills Eye Hospital, Ninth & Walnut Street, Philadelphia, PA 19107.*

LATE ONSET ENDOPHTHALMITIS ASSOCIATED WITH FILTERING BLEBS. s Mandelbaum, R K Forster, H Gelender, W Culbertson. The authors present 36 cases of late onset endophthalmitis in patients with filtering blebs. endophthalmitis appeared from 4 months to 60 years after bleb formation. Possible contributing factors could be identified only in a minority of patients. Aqueous, vitreous or both were cultured in all cases. Eighty-three percent of eyes were culture positive. Streptococci were the most frequent causative organisms, isolated from 57% of culture positive eyes. Twenty-three percent of eyes grew *Hemophilus influenzae.* Only two cases were caused by staphylococci. In general, the visual outcome was poor, probably primarily due to the virulence of the infecting organisms. Endophthalmitis remains a risk even many years after creation of a filtering bleb. The microbiologic spectrum in this clinical setting is considerably different from that of recent postoperative endophthalmitis. Based on the bacteriology and clinical course of the patients presented, the authors make recommendations for management. *Ophthalmology 92:964-972, 1985. Reprint requests to Sid Mandelbaum, MD, Bascom Palmer Eye Institute, P.O. Box 016880, Miami, FL 33101.*

AN INTERNATIONAL CLASSIFICATION OF RETINOPATHY OF PREMATURITY. CLINICAL EXPERIENCE. J T Flynn. Retinopathy of prematurity presents a problem in classification of its manifestations by which it may present to the clinician. A group of 23 ophthalmologists, representing 11 countries, met over a period of two years to develop a new classification. This paper presents the classification and the author's experience with its use in classifying the disease in 121 infants of birthweight less than or equal to 1300 grams over a 15-month period. *Ophthalmology 92-987-994, 1985. Reprint requests to John T. Flynn, MD, Bascom Palmer Eye Institute, P.O. Box 016880, Miami, FL 33101.*

MANAGEMENT OF RETINOPATHY OF PREMATURITY. W Tasman. Seventeen patients with symmetrical stage 3 retinopathy of prematurity (ROP) and plus disease as described in the International Classification of ROP had one eye randomized to cryotherapy and the other to control. Seventy-seven percent of the patients were under 1000 grams at birth and females outnumbered males by a 2 to 1 ratio. The average chronologic age at which cryotherapy was performed was three months. Twelve of seventeen treated eyes (71%) showed resolution of the ROP and 10 of 17 untreated eyes (59%) became significantly worse. However, only five patients had improvement in the treated eye and progression in the untreated eye, a number too small to provide statistical significance. Six eyes with Stage IV ROP were operated by encircling scleral buckling techniques because of total retinal detachment secondary to peripheral traction and cicatrization arising from the ridge. In five patients the unoperated eye had already develooped a retrolental membrane, and in one patient bilateral detachments were present. Five of the six operated retinas were reattached. *Ophthalmology 92:995-999, 1985. Reprint requests to William Tasman, MD, 910 E. Willow Grove Avenue, Philadelphia, PA 9118.*

PROGRESSIVE INHERITED RETINAL ARTERIOLAR TORTUOSITY WITH SPONTANEOUS RETINAL HEMORRHAGES. C G Wells, R E Kalina. Tortuosity of the retinal arterioles complicated by spontaneous retinal hemorrhages is inherited as an autosomal dominant trait. Even when hemorrhages involve the fovea, spontaneous clearing with recovery of normal vision is the rule. We have studied members of three families in which arteriolar tortuosity increases with age. Tortuosity increases most dramatically during adolescence and affects small arterioles in the macular area. Retinal hemorrhages in children from two pedigrees led to extensive laboratory investigation because arteriolar tortuosity may be overlooked easily, particularly in children. Patients with spontaneous retinal hemorrhges and their relatives should be examined for retinal arteriolar tortuosity before being subjected to cardiovascular or hematologic studies. *Ophthalmology 92:1015-1024, 1985. Reprint requests to Craig G. Wells, MD, Ophthalmology Service, Pacific medical Center of Seattle, 1131—14th Ave. South, Seattle, WA 98195.*

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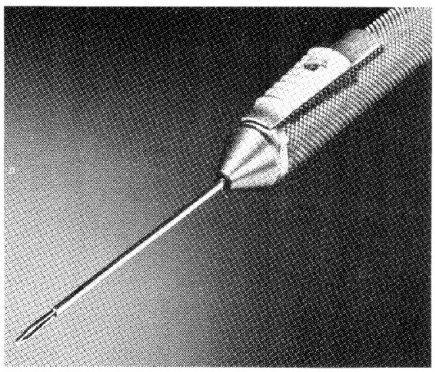

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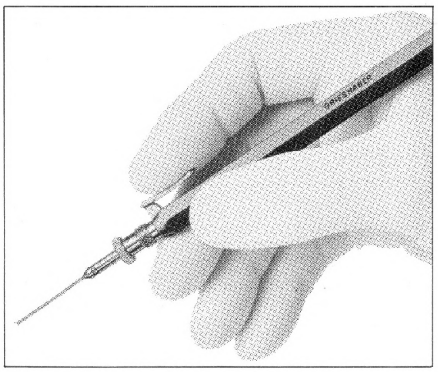

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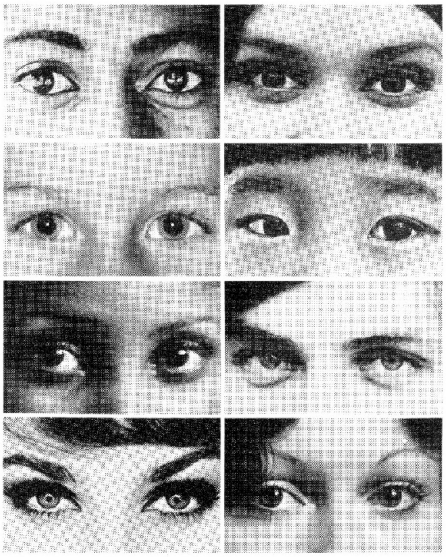

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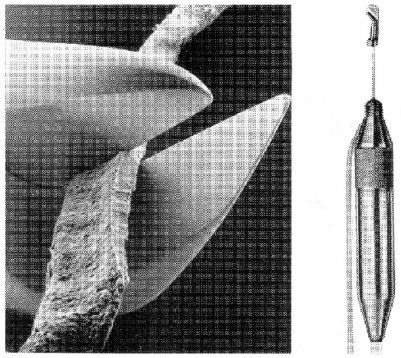

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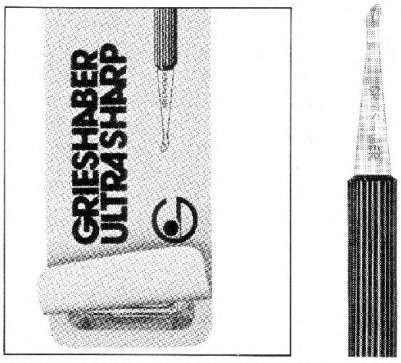

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2. Duke-Elder, S, and Leigh, AG: Diseases of the Outer Eye. Cornea and Sclera. In Duke-Elder, S (ed): System of Ophthalmology, vol. 8, pt. 2. St. Louis, C.V. Mosby Company, 1965, pp 110-114.

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> Figure 1 (Khan, Chaudhary, and Sheikh). Right eye. Histologic section of tumor (hematoxylin and eosin. X400).

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