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THE OFFICIAL JOURNAL OF THE OPTHALMOLOGICAL SOCIETY OF PAKISTAN

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BISMILLAHIR-RAHMANIR-RAHEEM

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Editorial

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

Smoking: the Evil, the Eyesight, the Eye-openers

Bismillahir Ruhmaanir Raheem. Nuhmodoho wa Nosullee ala Rasoolehil Kareem.

Every ophthalmologist is familiar with tobacco amblyopia, the bilateral loss of sight attributed to smoking,[1] and as early as 1913 a text on toxic effects of drugs and poisons on eyes devoted 39 pages to this topic.[2] Then a period followed in which the idea of "tobacco amblyopia" was declared untenable by many American authors. Now the pendulum is swinging back, and it is doing so with much greater force and speed. In one study, 70% of nonsmokers complained of itching and burning of the eyes, lacrimation, and swelling of the eyelids when exposed to tobacco smoke.[3] Now comes a report from Johns Hopkins University that smokers are three times more likely than nonsmokers to develop serious cataracts. The investigator, Sheila West,[4] who studied 838 patients, also adds that if a smoker with early cataracts gives up smoking, it improves his chances of not getting serious cataracts (Personal Commmunication), a development vitally important for a country like ours where blindness from cataract afflicts the populace in staggering numbers. This unquestionably makes smoking a horrible curse for our people in more than one way.

That smoking causes disease has been known for centuries. Even when tobacco was first presented to India's Moghal emperor Akbar the Great (1542-1605 A.D.) as a gift by the European traders, the royal physician, Hakim Abu Al-Fateh Gilani, advised the emperor against its use. When the emperor insisted on trying tobacco, Gilani advised that to reduce its poisonous effects the tobacco smoke must be passed through clean water, a suggestion that led to now well-known innovation of hookah.[5] The first published European report on smoking-disease association appeared in 1859.[6] This report showed that 68 French patients with cancer of the lips, tongue, tonsils, etc. were tobacco users.[6] In 1964, the U.S. surgeon general declared cigarette smoking a "health hazard" after a two-year study of his special advisory committee found that in addition to a 70% increase in the rate of lung cancer in men, cigarette smoking also was associated with coronary disease, chronic bronchitis, and emphysema.[6] Only the totally out of touch among us would be unfamiliar with the rest of the story.

Of course, all good humans would like to witness the uprooting of all evils from our midst, but as healers our foremost responsibility is to the physical and mental well-being of our people. Cigarette smoking is one of the deadly and self-perpetuating curses through which the profiteering industrialists have been exploiting the struggling nations for decades. To get the highest number of young children of the developing countries hooked on cigarette smoking, the industrial money grubbers have felt no twinge of conscience in using the political clout of their powerful governments, bribing the corrupt officials of the target nations, keeping up a relentless barrage of temptingly deceptive media ads, and even distributing free cigarettes among the young teenagers until they turn into full-fledged nicotine-addicts.

The curse of smoking was let out of the bottle by the Europeans when they first reached America. For economic gains, they spread the "tobacco culture" to all parts of the globe, and still today the poor developing nations of the world are their major target for cigarette sales. Ironically, the two loudest preachers of the modern brand of morality, the United States and Britian, are also the exporters of the highest selling brands of cigarettes in the world today.[7]

When concerned citizens of victim nations realized the magnitude and sordor of cigarette smoking, they spearheaded anti-smoking movements in their countries some time ago. For years, neither the human rights sermonizing leaders of the industrialized nations, nor the self-serving leaders of their own countries offered any help in their anti-smoking struggle, letting the scourge of cigarette smoking steadily mushroom in the developing countries. Now that the anti-smoking movements in the developing regions of the world have gained momentum, the professional bodies and the media of the industrialized countries are jumping on the bandwagon to fight smoking in these poor nations, blaring their sanctimonious horns of concern for humanity so loudly as if the whole idea of anti-smoking fight in poor nations was theirs.[8,9] Even so, the governments of these industrial nations are still not curbing the export of this killer industry and its sordid product. In fact, there are plans afoot to shift all their dirty industries to the developing countries.

In 1992, Martin Khor[10] of the "Third World Network" revealed that the Chief Economist of the World Bank and International Monetary Fund had recently proposed that "the advanced industrial countries should shift their dirty industries and dirty products to the 'Third World,' as this would be economically more efficient for the whole world." "If the people in "Third World" happen to die from the pollution from these dirty industries and dirty products," asserted the Chief Economist, "the loss to humanity will be much less, because a person in 'Third World' is only worth $200; whereas, a person living in Washington is worth $100,000. Therefore, you can kill an X number of people in "Third World" for the price of one in Washington." [10]

This kind of sick thinking and these profit-oriented schemes of greedy industrialists place a very urgent responsibility on our shoulders as physicians from a

developing country, the responsibility of fighting on two fronts: firstly, eliminating smoking by our own people, and secondly, halting the export of such dirty products to our country by the industrial nations. We should participate most aggressively in the ongoing anti-smoking campaigns in Pakistan. For instance, in December of last year the Pakistan Academy of Medical Sciences (PAMS) sponsored a very successful seminar on "Health Hazards of Cigarette Smoking" in which PANAH (Pakistan National Heart Association) also participated. Also, the labors of Professor Amanullah Khan, one of the distinguished Fellows of the PAMS, have resulted in the Supreme Court Chief Justice of Pakistan issuing a "show cause" notice to the media for carrying smoking-related ads. The media in Pakistan are also now becoming more conscious of their responsibility in this issue. Also, we should work on convincing the leaders of the industrial countries to restrain their export of tobacco and cigarettes to Pakistan.

The tobacco industry of the United States has exhibited no desire to be satisfied just with an increased export of cigarettes. Their goal is to increase the exports to a level that offsets the decrease in sales caused by anti-smoking regulations at home. In England, the other big exporter of cigarettes, the aim of tobacco companies is "to recruit 300 new smokers every day to replace those who died the previous day." [9] Their aggressive efforts are bearing fruit. In a recent broadcast, David Brinkley, the famed television journalist of the U. S., declared that "the highest selling single consumer product in the world is Marlboro cigarettes (a U. S. export)."[11] According to the independent weekly *Observer* of London, the $225 billion per year smoking industry is selling "roughly 1,000 cigarettes a year for every man, woman, and child on the planet." [9]

The cigarette industry lobby is one of the most powerful and influential, and its interests are being readily looked after by many members of the U. S. Congress, who have no compunction in openly pushing legislation for greatly increasing the cigarette exports to compensate for the business lost to anti-smoking measures at home. As recent as February of this year, Congressman Rick Boucher of the US said, "We are not prepared . . . to quit our legislative efforts on behalf of the tobacco industry," and oddly worried that "While the export market for U.S. cigarettes has been expanding, it has not grown enough to offset the . . . decline in domestic consumption." [12] As William Ecenbarger [6] put it last month: "In some countries, tobacco companies never would have gained a foothold without the help of a powerful ally: the U.S. Government." It doesn't take much convincing to conclude that Pakistan is one of these victims.

Although enforcement of anti-smoking regulations at home has brought a steady drop in yearly sales of cigarettes in the U.S. since 1985, the sales elsewhere in the world have trippled during the same period. If these horrifying facts cannot stir our conscience and jolt us into meeting our patriotic responsibility, nothing will. As physicians, we are obligated to do everything to halt this slow slaughter of our youth and steady squandering of our economic resources. We can offer a great deal to our people in their struggle to wipe out the evil of smoking from Pakistan, or at least severely curtail it. Deploring the export of the scourge of cigarette smoking to the developing countries, Dr. Gregory Connolly [9] recently remarked: "If we want to help rebuild these economies with the limited consumer capital that's out there, we should be putting it into jobs that are going to improve health, not take it away." He then observed pensively, "This is the craziest thing in the world to see limited resources go up in foreign tobacco smoke." Are our leaders and businessmen listening?

A recent article asks President Clinton of the United States " to order the United States Trade Representative to stop helping the tobacco companies open cigarette markets overseas . . . and to support curbs on tobacco advertising in other countries like those already in force here."[6] No lobby or political expediency can overpower public opinion. The Pakistanis living in America should remind the President and the Congress of the United States that it is a blatant mockery of human rights and moral claims to export abroad the health hazards that are sharply inveighed against at home. In the West, we should rouse the public opinion in favor of such policies; in Pakistan, we should initiate and strengthen as many anti-smoking programs and drives as we can. The national media should also search their conscience and encourage people to overcome this evil instead of carrying its alluring ads to trap our youth.

To equate anti-smoking struggle with mission of saving lives is no exaggeration. The *Holy Qur'aan* teaches: *And whoso saveth the life of one, it shall be as if he had saved the life of all mankind.* (5:32) Thus, in struggle against smoking, while answering the noble call of our chosen metier, we receive the exalted reward for obedience to God Almighty as well. Not a bad deal at all.

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

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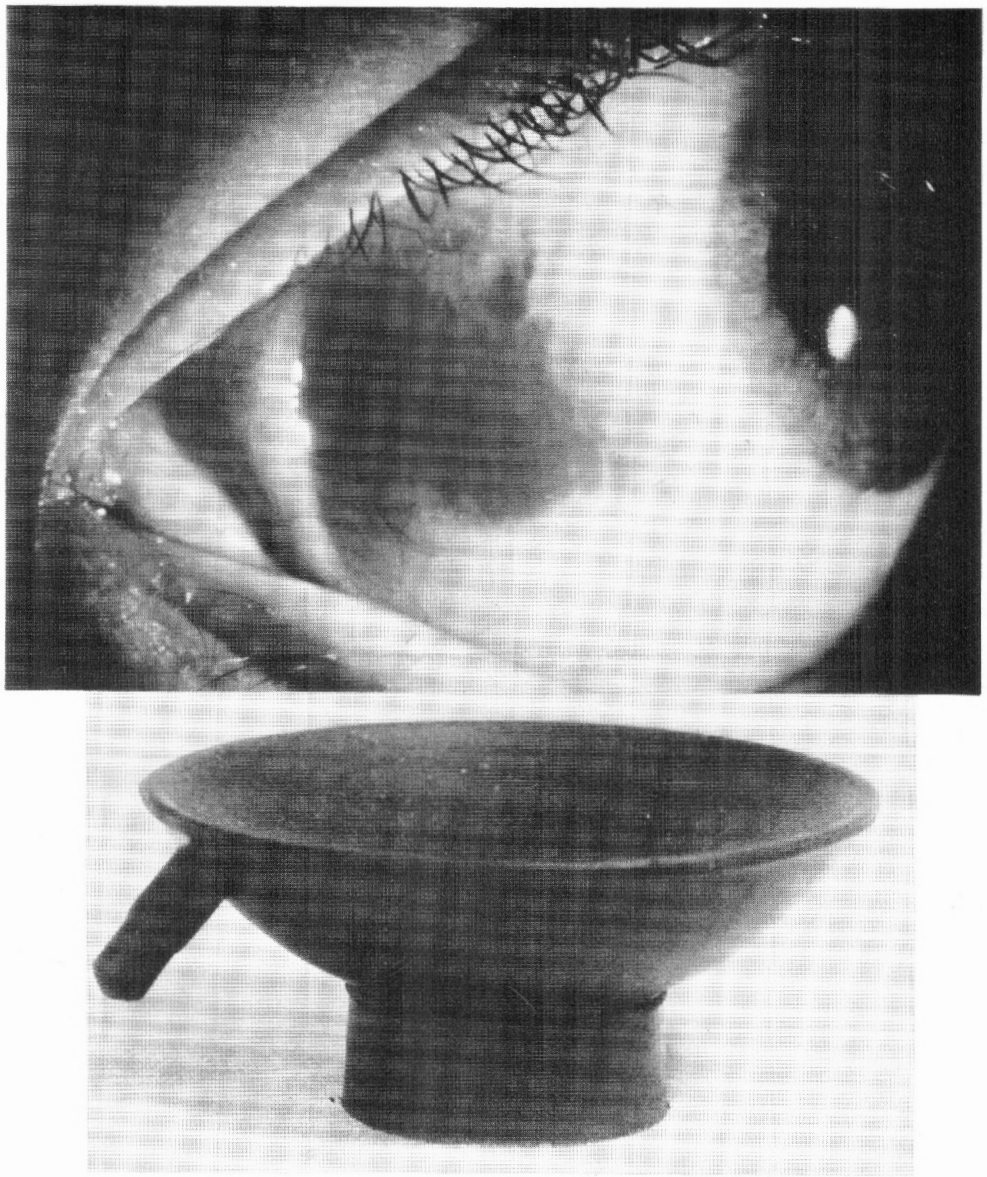
Camera Clinicals

In is section of THE JOURNAL, *photographic documentation of interesting and challenging observations are persented to the readers. They should make their diagnosis from the given information, and compare their conclusions with the expositions given on page 46.* **-Editor**



Figures 1 (top) and **2** (bottom)

Figures 1 and 2: A 13-year-old girl, a resident of a local institution for the mentally retarded, was referred by the local emergency room doctor to an ophthalmologist for eye evaluation . The child had been examined by the ER physician for bruises of the eyelids and bleeding in the eye (Figure 1). The child had been playing with another patient from the juvenile ward of the institution when the injury occurred. There was no change in the visual ability of the patient. The attendent of the patient also brought the object shown in Figure 2 for the ophthalmologist to see.

On eye examination the findings shown in Figure 1 were noted. The cornea, anterior chamber and media were clear. No intraocular abnormality was present on ophthalmoscopic examination. Topical antibiotic drops were prescribed to prevent any infection in the eye. The patient recovered without any residual effects in about ten days.

Camera Clinicals - *Continued from Page 31*

The readers should compare their conclusions with the exposition given on page 47. **-Editor**

Figure 3

Figure 3: The parents of an infant male child brought the baby to an ophthalmologist for eye evaluation. The baby had been previously examined by a general surgeon for the facial changes shown in Figure 3. The surgeon advised that the baby should be kept under observation for a few months. He also recommended an examination by an ophthalmologist. The baby was the product of a full-term normal pregnancy and an uncomplicated delivery.

Eye examination showed the findings as recorded in Figure 3. The pupils were normal in shape and reacted briskly to light. The cornea, anterior chamber, lens, iris, and globe in general were normal in both eyes. The ocular fundi also appeared normal on ophthalmoscopy. However, the eyes were set widely apart from each other. There was no family histoy of any findings that are depicted in Figure 3. Topical antibiotics prescribed by the family physician did not help the eye changes. The child was otherwise thriving at a normal pace.

Professor Mahmud Ali Shah
(1911-1993)

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

Mahmud Ali Shah, F.P.A.M.S., Surgeon Rear Admiral (Hon.)
(July 4, 1911 - February 16, 1993)

Bismillaahir Rukmaanir-Raheem.

"I want to congratulate you on your impressive presentation," said the tall, flawlessly dressed gentleman with an affectionate smile, "it was logical and direct." I had just finished a paper on my new technique, which Professor Frederick Blodi had named "Intrascleral Enucleation," when this distinguished and charmingly polite man had made his way through the coffee break crowd to give me his inspiring compliment. I still fondly remember the Annual Congress of the Ophthalmological Society of Pakistan at Lahore in 1981, the year Professor Shah's disarming affability tattooed my memory.

Later that afternoon, at my request my good friend and classmate Dr. Sultan Ahmed formally introduced me to Professor Shah, a privilege for which I shall forever remain grateful to Sultan. From that day on, I eagerly looked forward to meeting Professor Shah at every ophthalmic conference I got the opportunity to attend in Pakistan. In a short time, our chance meeting rapidly sprouted into a warm mutual friendship the memory of which will foerever remain aglow in my heart That's the way the Shah phenomenon was.

Now, the Shah phenomenon is no more. That spring of intellect and affection that strengthened our faith in human good has forever ceased to flow. On February 16, 1993, Professor Mahmud Ali Shah died. *Inna lillaahe wa inna elaihe raaje'oon.*

Although my first contact with Professor Shah came about in a totally academic setting, this professional acquaintance steadily transformed into a personal relationship. I thought myself especially blessed when I learned that Mrs. Shah, Professor Mubarika, also considered me with a special kindness. The secret background of this was let out by Professor Shah at a lunch to which Shahs had treated me during a meeting in Karachi. When I thanked him for his many kindnesses, he playfully remarked, *'Bhara usaan shaam noo ghur we tay jana aiy,'* then grinned at Mrs. Shah and added, *'Saada Awanan naal poorana wah aiy.'* ("My man, I have to go home at the end of the day. Remember, my hobnobbing with Awans goes way back.) Mrs. Shah smiled and told me that she too was an Awan. This thrilled me to no end, and from that day on Mrs. Shah let me call her "Auntie."

As Professor Najib Khan put it, the passing away of Professor Mahmud Ali Shah is the "end of an epic." The epic that began on July 4, 1911, the day Shah was born in Lahore. His father, Dr. Ghulam Mohammad, was a physician of international renown who served in the Belgian Congo and China. That the Shahs had a natural bent for medicine is confirmed by the fact that his grandfather was a much respected *hakim,* and his late sister was a highly distinguished obstetrician and gynecologist in Karachi. Although she died at a young

age, she left her mark on the history of medicine in the subcontinent as the first Muslim woman to acquire Fellowship of the Royal College of Surgeons (F.R.C.S.) of England. One of his three daughters is a respected microbiologist in England.

He married Mubarika Awan, the very learned and highly respected academician in diseases of children. She, like Professor Shah himself, was also a poineer who founded the Department of Pediatrics at the Civil Hospital, Karachi. Thus she too contributed tremendously to the medical education in Pakistan by giving the newly built Dow Medical College a well-organized teaching unit of pediatrics. Dr. Mubarika was a most pleasant, perceptive, and comforting companion of Professor Shah, who depended heavily on her counsel and camaraderie. Her very sudden death in a road accident nearly three years ago literally, and quite understandably, shattered Professor Shah. He never really recovered from her loss.

Mahmud Ali Shah graduated from the King Edward Medical College, Lahore in 1935 at the age of 24. Dr. Mubarika was also an alumna of K.E. They married in the late twenties and together embarked on their illustrious careers as a team.

After graduation, they joined the anatomy department of their alma mater, and later continued in this field at the Dow Medical College, Karachi. The well-known story is that a condition of having a fully functioning anatomy museum was placed on the recognition of the Dow Medical College. Shahs took that challenge most seriously and to some extent personally. They toiled day and night to collect, clean, label, and prepare appropriately for display the required number of anatomical specimens. Within an unbelieveably short span of six months they stood triumphantly atop their finished herculean task, a fully functioning anatomy museum with 500 specimens. Dow got its approval. And the rest we know.

Professor Shah's interest in anatomy was deep, and he was totally committed to its pursuit for the rest of his professional life, until the events took a lucky turn for ophthalmology. A few years ago he told Mohammad Idrees, a columnist, a very interesting story about his career. "In my early professional days," said Professor Shah, "I was in Lahore with Professor Ramazan Ali Syed (one of the great and leading ophthalmologists of Pakistan after whom the President of Pakistan named the President's Gold Medal award in ophthalmology) for seven years at Mayo. I told him 'I'd rather die than become an eye surgeon.'" Having become convinced of young Shah's abilities Syed sahib did not relent in getting him interested in eye. He went so far as to get Professor A.M. Dick, then the Principal of K.E. and himself an ophthalmologist, involved in steering Shah toward ophthalmology. Slowly but steadily, this molding of young Shah began taking shape. After extensive and productive research work in antaomy, he finally left that field for ophthalmology.

In 1943, he prepared a most impressive thesis on "Pathological Cataract" which earned him the coveted degree of Master of Surgery in Ophthalmology from the University of the Punjab. Later, he was picked to go to the United States to study at the Hravard University. He spent two years there and received his second Master of Surgery from Harvard. This earned him the great distinction of being the only Pakistani to have obtained two degrees of Master of Surgery in Ophthalmology.

When Professor Shah transferred from KE at Lahore to Dow at Karachi, he joined the latter as the head of the department of anatomy. However, circumstances were such that there was also an urgent need for someone to establish a department of ophthalmology. Professor Shah was handed this task. He worked simultaneously in both fields, and succeeded in establishing a fully functioning department of ophthalmology at the Civil Hospital, Karachi. In due course, he was made the Professor of Ophthalmology and also the Vice-Principal of Dow. It appears Allah had made it his destiny to wear more than one hat at any one time and be able to do full justice to them all. Eventually, he became the Principal of Dow Medical College, the position he held until his retirement in 1970.

It is impossible to enumerate Professor Shah's accomplishments in this limited space. They are too numerous to mention in every position he held in his life. However, a few of these must be mentioned at least to do some justice to this encomium.

He served the Pakistan Navy at the Al-Shifa Hospital, Karachi, as the Honorary Consultant Ophthalmologist for many years. In recognition of his services, the President of Pakistan, the late General Mohammad Zia-ul-Haq promoted him to the rank of Honorary Surgeon Rear Admiral during the Afro-Asian Congress of Ophthalmology in Lahore in 1984. This was an unprecedented rank for a medical man in Pakistan's history, and remains unique to this day.

Earlier in 1969, he was awarded *'Tamgha-e-Imtiaz'* (Medal of Distinction) by the Government of Pakistan in a well-deserved recognition of his services to medical education in our country.

He was also the recipient of the most prestigious national recognition in medicine, the President of Pakistan-PAMS Gold Medal, which is awarded to the most illustrious of Pakistani research scholars in the biomedical sciences. In 1984, he received Pakistan Ophthalmology's highest honor, the President of Pakistan's Ramazan Ali Syed Gold Medal of the Ophthalmological Society of Pakistan.

He also played a pivotal role in the establishment of the Pakistan Academy of Medical Sciences (PAMS), the College of Physicians and Surgeon (Pakistan), and the Layton Rahmatullah Benevolent Trust. ■

The Anterior Segment Trauma

Syed Imtiaz Ali, FRCS

ABSTRACT: From a study of 134 consecutive cases of anterior segment ocular trauma we drew following conclusions: (i) This injury constitutes a considerable part of the eye injuries in Rawalpindi Division and Azad Kashmir areas of Pakistan. (ii) Out of a total of 134 patients, 69 (51.5%) sustained blunt trauma, 50 patients (37.3%) had perforating injury, eight patients (6%) had a retained intraocular foreign body, and 15 patients had other types of injuries, such as chemical burn, etc. (iii) Men (112) were affected more often than women (22). (iv) The most alarming finding was that over half of the patients (51.5%) were children under 15. (v) A majority of the injuries (55 cases, 41.5%) occurred during sports and play. (vi) In terms of frequency and severity of visual loss, microsurgery, modern suturing techniques, intraocular lens implantation, and keratoplasty, etc. improve the overall visual prognosis. More widespread public education, better institution of preventive measures, and necessary legislation would appreciably improve the outcome of eye trauma in Pakistan. (Pakistan Journal of Ophthalmology 9:35-40, April, 1993.)

Ocular trauma is a considerable cause of visual impairment and utilization of ophthalmic care resources in Pakistan. Eye injuries have always been and always will be a challenge to ophthalmologists. In this age of increased violence, industrialization, fast moving motor vehicles, heightened interest in sports and leisure activities, both the number and severity of eye injuries are on the rise.[1,2] It is clear that the impact of ocular injuries is significant not only in terms of personal suffering and financial loss but also in terms of loss of national productivity.

The role of trauma as a cause of blindness varies widely in different parts of the world.[3] Even in the highly developed countries, such as the United States, over 2.4 million eye injuries are said to occur every year inspite of the better working conditions, increased use of protective measures in sports and domestic activities, and widespread public health education.[4] In developing and underdeveloped countries, the situation is even worse because of the low socio-economic conditions, insufficient public education, and a lack of preventive and curative medical facilities.[5,6]

Due to its frontal placement, the anterior segment of the eye bears the brunt of both direct and indirect forces.[8] We studied the present status of the management of anterior segment trauma in Pakistan, with particular attention to epidemiology of these injuries in the area of Pothohar, Rawalpindi Division.

Purpose of Study

"Anterior segment ocular trauma is one of the main causes of visual impairment in Pakistan".[9] Although there exists a wealth of information pertaining to the anterior segment trauma, there is much less information about the epidemiology and management of this type of ocular trauma in our country.

Ocular injuries, mainly the anterior segment trauma, are more common amongst the young working class. The catchment area of our hospital also consists of mountainous regions like Murree Hills and Azad Kashmir, where people have to use gun powder in blasting the rocks in order to prepare land for housing and cultivation. The people living in these areas frequently get blast injuries of the eyes, which is an important cause of anterior segment trauma. Other causes are hammering, chiselling, metal working, contact with chemical sand, agricultural field work, etc.[5]

Amongst the children, quite a large number sustain injuries during playing with toys, balls, sticks, household knives, scissors, etc.

Although there have appeared a large number of clinical studies on ocular trauma in other countries, and even a few from the North West Frontier Province of Pakistan,[9] not much work has been done in areas of Azad Kashmir and Rawalpindi Division. These areas consist mainly of hilly and semi-hilly areas. Due to the peculiar nature of these regions, the working conditions and cultural attitudes are different from the rest of the country. Therefore, we felt that there was a great need of a clinical study on the management of the anterior segment trauma in this region.

Material and Methods

A total of 738 patients attended the emergency and outdoor ophthalmology department of the Rawalpindi

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Table 1
Interval between injury and presentation

Period	Number	Percentage
Within 2 hours	24	17.92%
2-6 hours	30	22.39%
7-24 hours	28	20.89%
24-72 hours	24	17.92%
4-7 days	14	10.44%
More than 7 days	14	10.44%
Total	134	100.00%

General Hospital with variaties of ocular injuries, during a period of one year beginning with June 1, 1991 and terminating with May 31, 1992.

Out of these 738 patients, 134 patients (18.15%) had serious anterior segment injuries that required hospitalization. Others had relatively minor injuries like conjunctival abrasions and hemorrhage, corneal abrasions, conjunctival and corneal foreign bodies, etc.

This study included only the patients with anterior segment trauma that required hospitalization. (Table I)

At the time of admisson we recorded a detailed history of the patient which included duration of injury, location of accident, occupation of the patient, etc. A detailed description of the object, its distance from the eye, and its direction of travel were noted. It was also recorded whether the patient was engaged in occupational work, sports activities, domestic work, or was involved in a road traffic accident. An inquiry was also made as to whether the injury was accidental, intentional or self-inflicted. In case of a suspected retained foreign body, its type and form, whether single or multiple, and any possibility of contamination were also rceorded. A special check for any preexisting eye disease, any previous ocular treatment, and whether the patient was wearing any glasses at the time of accident was made.

All the patients had a thorough eye examination. The visual acuity and intraocular pressure (except in perforating injuries) were recorded. Slit lamp biomicroscopy was carried out routinely in all patients. Direct and indirect ophthalmoscopy were also performed. Small and uncooperative children were examined under general anesthesia. Radiographic examination of the involved eye and orbit was done in cases of mechanical trauma. Ultrasonography was employed in patients with hazy media and in patients in whom retrobulbar foreign body was suspected.

The management of blunt injuries included bed rest, analgesics, sedation (as required), reassurance, patching of the involved eye, local antibiotics, local steroids, cycloplegics, and, where indicated, intraocular pressure lowering drugs.

All of the penetrating injuries were repaired in the operating room under general anesthesia under an operating microscope. Sutures of 10-0 monofilament nylon were used for repair of the wound and the anterior chamber was formed during operation with sodium hyaluronate and methylcellulose.

Table 2
Age and sex distribution

Age	M	F	Total	Percentage
0-15	56	13	69	51.5%
16-35	42	6	48	35.8%
36-	14	3	17	12.7%
Total	112	22	134	100%

Subconjunctival injection of gentamicin plus dexamethasone was given at the end of surgery. Atropine drops,1% solution, prednisolone acetate and gentamicin eye drops were used postoperatively. Oral antibiotics, mostly ampicillin and cotrimaxazole, were used. Analgesics and antiemetics were used as needed.

The intraocular magnetic foreign bodies were removed mechanically or with a magnet.

Only about 41.04% of the cases returned for follow-up examination. Follow-up examination also included biomicroscopy, gonioscopy and intraocular pressure measurements.

Results

Out of a total of 738 patients with ocular injuries, 134 (18.15%) sustained serious anterior segment trauma that required hospitalization.

Men (112) were affected much more frequently than women (22), giving a man to woman ratio of 5:1. Children were most frequently affected. The incidence in age group below 15 years was 51.5% and above 15 years it was 48.5% (Table 2).

The right eye (55.35%) was more frequently involved than the left eye.

Table 3 gives the break down on various causes of injury. A total of 55 patients (41.05%) sustained ocular injuries during sports or while playing. Out of these 55 patients, 50 patients were under 15 years of age. This is mainly because of children usually had engaged in risky games such as sling shots, *"goolli dunda,"* and air guns without any eye protection or proper supervision by an adult.

The second major group, 23 patients (17.16%) fell into the category of occupational injuries. These injuries occurred during hammering, wood work, agriculture work, all carried out without wearing any protective devices. Some children got injured while watching adults at work.

Another major group comprised blast injuries, 20 patients (14.93%). These injuries were sustained during celebrative fireworks or during blasting rocks in hilly areas.

Injuries during domestic activities (11 patients, 8.2%), road traffic accidents (10 patients, 7.46%) and assaults (8 patients, 5.98%) also were significant.

Table 3
Causes of injury with regard to age and sex

Causes	0-15		16-35		Over 30		Total	Percentage
	M	F	M	F	M	F		
1. Sport and play:	39	11	3		2		55	41.05%
Stone	8	2						
"Goolli dunda"	4							
Cricket ball	4		2					
Disposable syringes	4	2						
Arrow head	3	2						
Fall from roof	2	3						
Stick	2							
Iron bar	2							
Hockey stick	2							
Air gun	2		1		2			
Catapult	2							
Toy pistols	2	2						
Wire	1							
Branch of Tree	1							
2. Occupational:	3		12	2	6		23	17.6%
Hammering	1		4		3			
Wood work			3		1			
Agricultural	2		3	2	1			
White washing			2		1			
3. Blast Injury:	2		16		2		20	14.93%
Firecrackers	2		10					
Blasting stone			6		2			
4. Domestic:	5	1	1	3		1	11	8.2%
Needle	3					2		
Stick	1		1					
Broken utensil	1			1				
Cover of bottle		1						
5. Road Accident	4	1	2	1	2		10	7.46%
6. Assault:			6			2	8	5.98%
With chemicals			2			2		
With fists			4					
7. Miscellaneous	3		2		2		7	5.22%

Sixty-nine eyes (51.49%) received blunt injuries, while 50 eyes (37.31%) received penetrating injuries. Out of the 50 eyes with penetrating injury, eight (5.97%) also had a retained intraocular foreign body. The remaining 15 eyes (11.2%) had miscellaneous injuries, e.g. chemical injuries, etc.

Cornea was involved in 120 eyes (89.28%) (Table 4). Out of these, 55 eyes (41.04%) received blunt injuries. Cornea was involved in all of the penetrating (50 eyes, 37.04%) and in chemical injuries.

Corneal edema occurred in 25 eyes and in majority of these cases corneal damage recovered within 5 days.

Corneal opacity persisted in a few cases, especially where the intraocular pressure was raised markedly or where a total hyphema was present.

Folds in Descemet's membrane were found in 20 eyes (14.92%), all of which had corneal edema.

Corneal abrasions were present in 9 eyes (6.71%). These were superficial in nature and all of them healed with 24-48 hours after treatment with antibiotic drops or ointment and patching.

Five eyes (3.73%) developed corneal blood staining. All of these had persistently elevated intraocular pressure and secondary hyphema.

Table 4
Corneal Injuries

Injury	Number	Percentage
1. Blunt injuries	55	41.04%
Corneal edema	25	
Descemet's folds	20	
Corneal abrasion	9	
Corneal staining	5	
2. Penetrating injuries	50	37.04%
Corneal only	40	
Lamellar tear	5	
Corneoscleral	10	
3. Chemical and other	15	11.20%
Total	120	89.28%

Table 5
Types of injuries to lens

Type	Number	Percentage
1. Traumatic cataract	23	17.17%
Complete opacity	11	
Anterior subcapsular	6	
Posterior subcapsular	3	
Early rosette shape	3	
2. Subluxation of lens	28	20.89%
3. Penetration of lens	20	14.93%
4. Dislocated lens	1	0.74%
Total	72	53.73%

Cornea was involved in all of the penetrating injuries. Out of these, 40 (29.85%) involved just the cornea. Five (3.73%) of these eyes had lamellar tear. Three eyes recovered with conservative treatment of patching and bandage contact lens and antibiotic drops. Two eyes with lamellar tear did not heal with conservative measures and later were repaired with 10-0 nylon sutures.

Seventy-one eyes (52.98%) had iris or pupillary abnormalities. Traumatic mydriasis was the most common, 36 eyes (26.86%), at the time of presentation. However, it improved with the passage of time. Only two eyes developed permanent traumatic mydriasis, with pupil non-reactive to direct and consensual light reflex.

Nine eyes (6.71%) had traumatic iritis which was treated conservatively. Four eyes (2.98%) had iridodialysis which varied from small defects visible only on gonioscopy to large defects involving up to 60° of the iris root. There were eight eyes (5.97%) with pupillary margin tears. These tears characteristically involved the sphincter pupillae muscle, causing the pupil to become irregular and sluggish in reaction.

Uveal tissue, mainly the iris, was found prolapsed in 20 eyes (14.92%) with penetrating injuries. In two of these cases the prolapsed tissue proved to be viable after it was reposited. In the rest of cases it was excised at the time of primary repair.

Five eyes which had alkali burns developed melting of iris tissue as well.

There were four cases (2.98%) of foreign body caught in the iris. Two of these foreign bodies were metallic and were removed with a magnet through a limbal incision. The other two foreign bodies were sulphur granules acquired during blast injuries with fire cracker. These were removed with excision of iris tissue through limbal incision, maintaining anterior chamber with methyl cellulose.

Hyphema was the most common presenting sign of the blunt injuries. It occurred in 48 eyes (35.82%).

Traumatic cataract developed in 23 eyes (17.17%) (Table 5). Eleven eyes (8.20%) developed complete opacification of the lens. Six eyes (4.47%) developed anterior subcapsular cataract and three eyes (2.23%) developed early rosette shaped cataract that was located in the posterior cortex.

Twenty-eight eyes (20.89%) had subluxation of the lens. Three eyes (2.23%) with subluxation also developed cataract. Extracapsular extraction was performed in two eyes and intracapsular extraction was performed in one eye because its lens was severely subluxated.

One patient had dislocation of lens into the vitreous. This patient was followed for four months and there were no signs of intraocular inflammation. This patient's unilateral aphakia was corrected with a contact lens. Twenty eyes (14.92%) had ruptured capsule due to penetrating injuries. The lens matter was removed with irrigation and aspiration during primary repair.

Eleven eyes (8.20%) which developed complete opacity of the lens and seven eyes (5.22%) with subcapsular cataract underwent extracapsular cataract extraction with posterior chamber intraocular lens implantation in three to four months.

One case had retained intraocular foreign body in the lens and it was removed at the time of primary repair.

There were eight eyes (5.95%) with retained intraocular foreign body. We have not included the superficial foreign bodies in this group.

Two eyes had deep corneal foreign bodies which were removed under magnification in operation theater under local anesthesia. Postoperatively, local antibiotics, cycloplegics and patching were used.

There were four eyes (2.98%) with a foreign body caught in the iris.

One patient had a foreign body in the anterior chamber angle. It was also successfully removed.

Table 6
Effet of trauma on visual acuity*

Visual acuity	At admission	At discharge
6/6-6/12	14 (10.44)	27 (20.14)
6/18-6/24	10 (07.46)	13 (9.70)
6/24-6/60	24 (17.91)	29 (21.65)
CF	17 (12.69)	17 (12.69)
HM	19 (14.18)	8 (5.98)
PL	21(15.67)	11 (8.20)
NPL	7 (05.22)	7 (5.22)
Couldn't be assessed	22 (16.43)	22 (16.42)
Total	134 (100.0)	134 (100.0)

* Figures in parenthesis give percentage; CF, counting fingers; HM, hand movements; PL, perception of light; NPL, no perception of light.

Out of a total of 28 eyes (20.89%) that had raised intraocular pressure, 26 eye had raised pressure at the time of presentation while two developed glaucoma during stay in hospital due to secondary hemorrhage.

In all, excepting one, of these cases the intraocular pressure became normal within five to seven days after appropriate treatment.

Table 6 shows visual acuity of patients at the time of admission and discharge. In 22 patients (16.43%) vision could not be assessed because all of them were children. Seven patients (5.22%) presented with no perception of light and remained so. They were found to have associated optic nerve injuries. Fifty-seven patients (42.53%) had vision less than 6/60 (20/200), most of them had hyphema, corneal edema, iritis and associated posterior segment damage. Because of the appropriate treatment of hyphema, iritis and vitreous hemorrhage, this figure improved and only 36 patients (26.86%) had less than 6/60 vision.

Only 55 patients came for follow up examination. Period of follow-up examination ranged from four weeks to 10 months. Fifteen patients had visual acuity less than 6/60. Four patients who came for follow-up had optic nerve damage. Eight patients had other associated posterior segment injuries.

Discussion

The incidence of ocular injuries was first reported by Zander and Geissler, who in 1864 reported it to be between 1.8% to 9% of all eye diseases.[10] The subsequent studies have shown varied incidence.

In a study carried out at Glasgow, UK, ocular trauma was found to be 38% of all injuries. Studies from United States[11], India[12], and Pakistan[5] showed incidence of 52%, 20.53% and 12.9%, respectively. The incidence is found greater in children, as evident from a study carried out in Brazilian children which showed 65% of ophthalmic emergencies below 15 years of age were due to ocular trauma.[3]

Ocular trauma comprises 40% of untreatable monocular blindness in Pakistan,[13] but the eye injuries constitute 6.3% of unilateral blindness in Central African Republic.[14]

Regarding age, the incidence of ocular trauma is highest in the 15-30 years age group.[15,16] The next larger number of patients are below 15 years of age,[8] In Pakistan the younger age group i.e. below 15 years of age are also affected more.[9]

Eye injury is more common in males than in females.[17] This difference is mainly because of great preponderance of injuries occurring at work. Moreover, in our culture the females live in a relatively more sheltered environment and are, thus, protected from many hazards to which their male counterparts are exposed. Ocular trauma is one of the main causes of monocular blindness.

We received a larger number of patients with ocular trauma because of central location of our hospital, easy approach to our clinic, and wider peripheral area drained by our hospital.

The proportion of ocular trauma in our study was high compared to other studies. This is because in our cases the multiple environmental factors were working simultaneously.

Most of the injuries in young children were sustained during sports and play. This is because the children engage in aggressive games and because of a lack of awareness and supervision by their elders, especially in low middle class families. Moreover, in our country the toys are manufactured and sold without any proper legislation.

The next group affected comprises the young, working class who work without using even basic protective measures. Although steady industrialization on modern designs is taking place in Pakistan , the old crude manual industry with no concept of protective measures still exists. Road traffic accidents are also a main factor in anterior segment trauma. Most of the ocular injuries occur due to impact of head against the windshield of the automobile. There is no legislation for compulsory wearing of protective seat belts for drivers and passengers.

The visual prognosis of concussion injuries is better than that of the perforating injuries, where most patients suffered monocular blindness either due to effect of trauma on the ocular tissues, secondary complications, or uncorrected aphakia. New surgical techniques have considerably improved the visual outcome after ocular trauma. The microsurgical techniques, viscoelastic material and intraocular lenses have greater promise, but the cost of viscoelastic materials like sodium hyaluronate (Helon®) and the intraocular lenses is so high that not all patients in Pakistan can afford them.

It is thus clear that ocular trauma is a major health problem in this area of Pakistan, and it demands urgent and constant efforts to improve its management.

However, attention should be given to its prophylaxis. This can be achieved by following measures.

1. Public awareness should be created through public health education about the hazards of dangerous toys and games such as *"goolli danda,"* slingshots, air guns, explosives like firecrackers, sharp kitchen and other household utensils, etc.. Special attention should be given to proper disposal of disposable syringes after use. This should be done through posters, print media and electronic media.

2. Certain members of the society like school teachers, young parents, social workers, and sports organizers should get involved in this public education program.

3. Government authorities should be compelled to enforce mandatory laws in: (a) Compulsory usage of protective eye wear in sports, industry and during war, (b) Compulsory usage of seat belts in transportation vehicles, and (c) Certain dangereous games and toys should be banned or modified to make them safe.

4. Ocular trauma centers sholuld be established in different parts. They should not only provide excellent management but also should conduct research into the etiology, mechanism, effects and prophylaxis of ocular trauma. There should be available better transport facilities to transfer the injured patients to the major, better equipped District Headquarters (DHQ) medical centers or teaching hospital without further delay.

5. To determine the magnitude of the problem, nationwide data should be collected through the implementaiton of sound epidemiological priniciples. Measures to reduce the incidence and severity of injuries may then be introduced. Preventive and effective treatment of ocular trauma is a great challenge that justifies such priority actions.

6. A legislation is required to curb the unlawful blasting of rocks in hilly areas. It is suggested that this should be done by properly trained personnel and under the Government's supervision.

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Malignant Melanoma of the Eyelid in a Pakistani Woman*

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ABSTRACT: Malignant melanotic tumors occur infrequently in Pakistan, and an eyelid malignant melanoma is even rarer. During a prospective study of the eye tumors in Sindh, we saw a 65-year-old woman who had a malignant melanoma of the right lower eyelid, the first such published documentation from Pakistan. The tumor had metastasized to preauricular lymph nodes, the enlargement of which had been apparent to the patient for nearly six months. The management included full thickness eyelid and preauricular lymph node excision followed by local irradiation. No recurrence occurred during the first six postoperative months, after which the patient unfortunately was lost to follow-up. (Pakistan Journal of Ophthalmology 9:41-42, April, 1993.)

Malignant melanoma of the eyelid is rare and has an incidence of about 1% of all cancerous eyelid tumors.[1,2] It usually appears in old age and is uncommon in the young. Most of the literature on malignant melanoma of the lid consists of single case reports. In two recent large series published so for on this subject contained a total of 32 cases.[3,4] We report a very rare case of malignant melanoma of the eyelid in a 65-year-old woman from Sindh, Pakistan.

Case Report

A female patient aged 65 years presented in the outpatient of the Eye Department of the Chandka Medical College Hospital on November 26, 1991. She gave a history of a right lower lid tumor of six months duration. It started as a small growth at the outer lid margin before involving the entire lid, preauricular lymph nodes on the right side were palpably enlarged. On examination darkly pigmented multinodular growth without ulceration involved the full thickness of the lid (Figure 1). On November 30, 1991, the right lower eyelid and the ipsilateral preauricular lymph nodes were excised and submitted for histopathologic study.

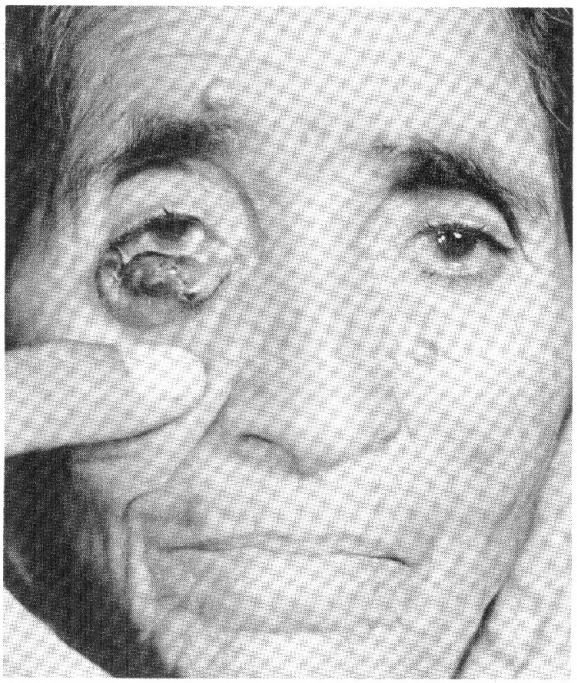

Figure 1 (Halepota, Shaikh): Right eye. Large pigmented lesion involving the whole of the lower eyelid.

Histopathological Findings

The histopathology report stated that in the full thickness cross section of the specimen, sheets of tumor tissue consisting of spindle and polyhedral cells were present under the epidermis. The tumor cells showed considerable atypia and contained large vesicular nuclei with prominent centrally placed eosinophilic nucleoli. The cytoplasm of many of the neoplastic cells contained fine brownish black pigment (melanin) granules. The pigmented mass of epithelioid and spindle cells extended down into the dermis (Figure 2). The sections of a preauricular lymph node confirmed that it also had been invaded by the metastatic melanocarcinoma.

Discussion

Depending on growth pattern, malignant melanoma of the eyelid has been divided into four types: lentigo maligna, acral lentiginous, superficial spreading, and

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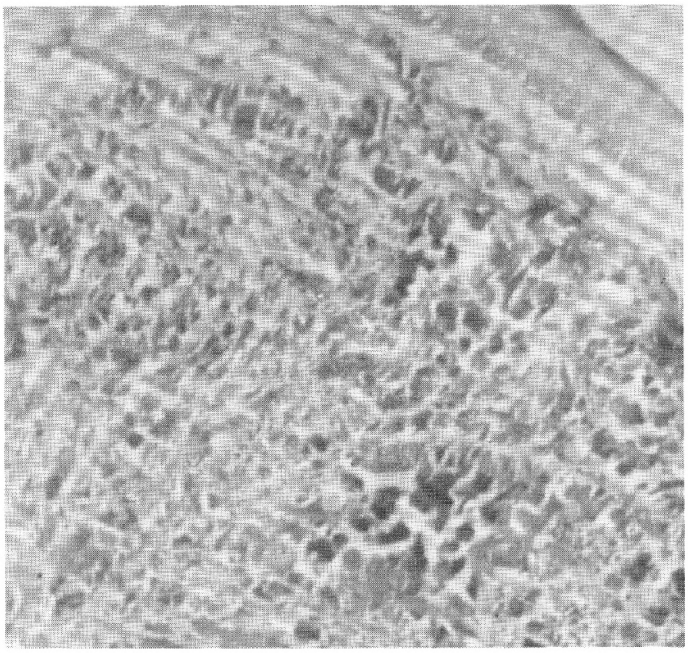

Figure 2 (Halepota, Shaikh): Right eye. The tumor mass consists of polyhedral (epithelioid) and spindle-shaped heavily pigmented cells (H & E; x150).

nodular.[2] Lentigo maligna melanoma is an elevated tumor with dermal invasion that arises from its earlier stage of lentigo maligna, which is a flat, nonpalpable lesion in which tumor cells are located along the basal cell layer of the epidermis. Acral lentiginous resembles lentigo maligna melanoma but remains confined to dermal/epidermal junction, and involves palms and soles, etc. Superficial spreading type is an expanding pigmented macule with faintly palpable borders, and histologically its cells are found singly and in nests at all levels of epidermis in a pagetoid fashion. In the nodular type the lesion grows more rapidly and may be pedunculated, and histologically it involves dermis and has adenoid structure. Malignant melanoma may arise de novo, or from a preexisting junctional, compound or, uncommonly, cellular blue nevus. In all probability, in our patient the tumor arose de novo, because there was no history of antecedent nevus or pigmentation on or around the lids. History suggested that the tumor started at the lateral lid margin and turned bulky in the course of seven months. Histologically, the extensive invasion of subepithelial stroma and multiple sections failing to show any evidence of junctional activity or lateral epidermal spread favored the diagnosis of nodular melanoma.[3]

Although pigmentation is the hallmark of cutaneous melanoma, about half of the malignant melanomas reported in one series were non-pigmented (amelanotic).[2] When the tumor invades dermis metastases are common. The invasion is first through the lymphatics and then via the venous channels. Recurrence and dissemination may occur up to 10 years or after the initial treatment Five year survival with lymph node involvement is only 12%.[1]

In our prospective study[5] of the ocular tumors since 1987, this is the first case of melanocarcinoma of eyelid we have recorded. To our knowledge no such case has ever been reported from Pakistan.

Acknowledgements

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Ophthalmic "Pastpourri"

Of Bullheadedness and Epidermolysis Bullosa

In the early 1950s, the late Professor Mahmud A. Shah undertook the first research project on epidermolysis bullosa in Pakistan. Dr. Shah and his late wife Mubarika wrote an excellent report at the conclusion of their study. He had made excellent photographs of clinical features of the disease in his patients. Unfortunately, the subjects of these photographs, who were women, decided to withdraw their permission to publish these even in a scientific journal. Professor Shah tried to convince the patients that the publication of his work was for the benefit of the medical profession and those who were afflicted with this disease, but the patients did not relent. Instead, they grew more incredulous and hired an attorney, something in those days unheard of in Pakistan. The legal proceedings culminated in Professor Shah's burning the high quality photographs and their negatives in the presence of plaintiffs' lawyer. The article was eventually published in 1955, but without the valuable illustrations.

-Professor Mushtaq Hasan, Former Chairman, Department of Medicine, Dow Medical College, Karachi, Pakistan

A Survey of Blindness in Eye Patients from the Province of Punjab, Pakistan

Samina Jahangir, FCPS

ABSTRACT: A recent editorial in the *Pakistan Journal of Ophthalmology* on the need for properly conducted, meaningful surveys on blindness and its causes in Pakistan prompted this study. To determine the incidence of untreatable monocular blindness and its causes in hospitalized eye patients, we examined 3,726 consecutive patients registered with the outpatient unit of the Department of Ophthalmology, Services Hospital, Allama Iqbal Medical College, Lahore from February 1, 1992 to April 30, 1992. Nine percent (321) of these patients had monocular blindness with visual acuity of less than 3/60 (10/200) or less in the affected eye. The major cause of blindness was the corneal opacification from various pathologic entities, affecting 99 (31%) of the these patients. The second cause of blindness was glaucoma, which was diagnosed in 74 (23%) patients. Trauma caused loss of sight in 45 (23%) patients. Other causes of visual loss in decending order were retinal detachment in 35 (11%) patients, ocular inflammation in 26 (8%) patients, Eales's disease in 10 (3%) patients, and advanced diabetic eye disease in 10 (3%) patients. The remaining 23 (7%) patients lost vision because of miscellaneous causes, such as myopic degeneration, vitreous hemorrhage, disciform macular degeneration, optic atrophy and central retinal vein occlusion. To alleviate blindness from Pakistan, we need to define objectives and formulate strategies to achieve them. Periodic evaluation would help us to determine the effectiveness of our plan and indicate needs to improve upon them. (Pakistan Journal of Ophthalmology 9:43-45, April, 1993.)

The need for blindness surveys in Pakistan in order to formulate plans to fight blindness,[1] prompted us to conduct a survey on hospitalized eye patients in the province of Punjab.

Two recent studies on blindness in Pakistan found the incidence of monocular blindness at 13.7% and 16.8% in the North West Frontier Province of Pakistan.[2,3] The former is a hospital based study from Peshawar, and the latter from the Afghan Eye Hospital for the Afghan refugees in Peshawar. Another more recent and extensive report by Memon[4] from Karachi paints a similarly dismal picture.

Our aim was to create a profile of monocular blindness in the province of Punjab to facilitate further planning and research by others to prevent blindness.

Material and Methods

All patients registered with the outpatient unit of the Department of Ophthalmology, Allama Iqbal Medical College, Services Hospital, Lahore between February 1, 1992 and April 30th, 1992 were examined.

For the purpose of visual capability evaluation, blindness was defined as the visual acuity of 3/60 (10/200) or less in the worse eye that could not be improved by the currently available facilities for treatment. The patients with phthisical, enucleated and eviscerated eyes were also included.

Once the data were collected the patients were grouped according to age and various diseases.

Results

Out of a total of 3,726 patients registered for the study period 321 patients (9%) had useful vision only in one eye, the other eye being blind with a visual acuity of 3/60 (10/200) or less.

Sixty-two percent of the monocularly blind patients were men and remaining 38 percent were women (Table 1). The analysis based on age showed that among the monocularly blind patients, 52 percent (166 patients: 92, men and 74 women) were above the age of 50 years. Twenty-six percent (84 patients: 57 men and 27 womens) were between 30 and 50 years of age

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Table I
Causes of monocular blindness
Sex distribution
(321 patients)

Cause	%	No.	M	F
Corneal opacification	31	99	62	37
Glaucoma	23	74	38	36
Trauma	14	45	30	15
Retinal Detachment	11	35	25	10
Ocular inflammation	8	26	17	9
Eales's disease	3	10	10	0
Advanced diabetic eye disease	3	10	4	6
Miscellaneous	7	22	12	10
Total	100	321	198 (62%)	123 (38%)

influx in NWFP of Afghan refugees with traumatic visual loss has probably influenced these figures there.

Corneal opacification as a result of various pathologic processes was at the top of our list. It affected 31% (99 patients) of the monocularly blind population. All age groups were affected, with the maximum number in the above 50 group. In the younger age group corneal scarring secondary to bacterial, viral and fugal keratitis was a common cause. In the older age group aphakic and pseudophakic bullous keratopathies were responsible for corneal scarring. We categorized the corneal scarring secondary to trauma under the trauma group and not the corneal scarring group. Evidence of trachomatous eye disease was conclusive only in two percent out of 31 percent of patients. Interestingly, the overall incidence of trachoma once was 53% of our total population.[5]

The huge problem of corneal opacification in Pakistan cannot be effectively handled even with sufficient donor corneal material alone. It is important to prevent corneal opacification by increasing community awareness, judicial use of medicines, and performing quality cataract surgery. There also is a need for better laboratory services to recognize various strains of pathogens and determine their sensitivity.

Table 2
Causes of monocular blindness in specific age groups
(321 patients)

Cause	Upto 30			Between 30-50			Above 50		
	M	F	Total	M	F	Total	M	F	Total
Corneal opacification	18	8	26	22	9	31	22	20	42
Glaucoma	3	1	4	5	3	8	30	32	62
Trauma	12	7	19	10	5	15	8	3	11
Retinal detachment	4	2	6	7	3	10	14	5	19
Ocular inflammation	3	2	5	4	2	6	10	5	15
Eales's disease	6	0	6	4	0	4	0	0	0
Advanced diabetic eye disease	0	0	0	3	2	5	1	4	5
Miscellaneous	3	2	5	2	3	5	7	5	12
Total	49	22	71 (22%)	57	27	84 (26%)	92	74	166 (52%)

while 22 percent (71 patients: 49 men and 29 women) were below 30 years of age (Table 2).

Discussion

This study was initiated as a realization of the need for blindness surveys in Pakistan.[1]

In two recently reported studies the incidence of monocular blindness in eye patients was 13.7% in the eye patients of a Peshawar hospital and 16.8% in a hospital for the Afghan refugees, the Afghan Eye Hospital, Peshawar, Pakistan.[2,3] In Punjab, our study shows this incidence to be 9%, which is relatively less as compared to the North West Frontier Province. The

Glaucoma affected 23% (74) patients. It was most prevalent in the oldest age group. It was interesting to note that the majority had been labelled as aphakic glaucoma elsewhere. Our impression was that a majority of them were cases of open angle glaucoma who underwent cataract surgery while their open angle glaucoma remained undiagnosed. The second most common type was lens induced glaucoma. In patients below 30 years, steroid induced glaucoma due to an unsupervised and excessive use of steroids in vernal keratoconjunctivitis was found to be a major cause.

Neovascular glaucoma and misdiagnosed chronic narrow angle glaucoma were among the other causes.

Trauma was the third leading cause of uniocular visual loss in our series and affected 14 percent (45) patients. Khan and his associates[6,7] from N.W.F.P. and Hasnain and Kirmani.[8] from Sind have reported on traumatic visual loss in recent years. Naeem and his colleagues[2] reported trauma to be the cause in 40% of the patients with uniocular blindness in N.W.F.P.

Inoperable retinal detachment affected 11% (35 patients), and the largest number was found in the age group above 50 (Table 2). Trauma induced retinal detachment was not included in this group. Improvements in cataract surgery techniques and diagnosis and handling of retinal detachment at an early stage can reduce this kind of blindness. Ocular inflammation occurred in 8 percent (26) of patients, most commonly as postoperative complication. The other causes included endophthalmitis secondary to keratitis or trauma. Complications of Eales's disease were exclusively found in males and in relatively younger age group patients. Irreversible monocular blindness due to diabetes was found in 3% of our patients as compared to 0.4% in another study.[2] The overall incidence of diabetic retinopathy in Pakistanis has been reported to be between 27 percent to 50 percent of diabetics.[9,10] There is an urgent need for awareness by the general practitioners and the internists about the importance of early referral of diabetic patients to the ophthalmologists and for the ophthalmologists to know the proper timing and techniques of photocoagulation.

Miscellaneous causes affected 7% (22) patients. These causes included tumors, amblyopia, proptosis, myopic degeneration, vitreous hemorrhage due to disciform macular degeneration, optic atrophy and central retinal vein occlusion.

We hope similar surveys would be conducted in other parts of the country, and then on nationwide scale to learn about the overall situation regarding blindness. We strongly emphasize the need for more effective preventive measures and the recognition of responsibility by all concerned within and outside the Government) about the prevention of blindness and the related issues. I hope that the coming meeting of the Ophthalmological Society of Pakistan (OSP) would formulate recommendations for the various provincial Governments of our country. Muslims were the first in the world to establish formally organized care for the blind.[11] This historical background should inspire us to renew our efforts in this noble cause.

Acknowledgements

Thanks are due to Dr. Abdul Hamid Awan and Dr. Seema Qayyum, Medical Officers, Department of Ophthalmology, Services Hospital, Lahore for their valuable contributions toward the collection of data.

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MEMORIAL ISSUE

In recognition of his trailblazing and incomparable services to ophthalmology, medical education, and medical research in Pakistan, one of this year's remaining issues of THE JOURNAL will be dedicated to the memory of the late Professor Mahmud Ali Shah, F.P.A.M.S. There is no doubt that many of his colleagues, students, and friends would want to contribute to this memorial issue. All the original articles, reminiscences, and encomia in Professor Shah's honor will receive full consideration for publication, provided they arrive in the editorial offices of THE JOURNAL at least two weeks before the publication date of the Shah Memorial Issue. *-Editor*

Figures 1 and 2

Toy Suction Cup Subconjunctival Hemorrhage in the Mentally Retarded

Muhammad Humayun, F.P.A.M.S.

ABSTRACT: A 13-year-old mentally retarded girl was playing with a fellow resident of her mental institution with a toy that had rubber suction cups to stick it on smooth surfaces. The companion of the patient removed one of these suction cups, sized 5.5 inch in diameter, from the toy and stuck it on the left side of the face of the patient, completely covering her left orbit. It took nearly two minutes to pry the suction cup loose from the face of the terrified patient. Both left eyelids were heavily bruised and a large subconjunctival hemorrhage also developed. Fortunately, no intraocular bleeding occurred. We strongly advise that the toys with suction cups or any other parts with potential risk should be kept away from all children with mental retardation. (Pakistan Journal of Ophthalmology 9:31, 46, April, 1993.)

Figure 1 shows a large subconjunctival hemorrhage, and Figure 2 is a photograph of a suction cup that was attached to a toy to stick it on the wall or any other smooth surface. The size of this suction cup was 5.5 inches in diameter. The patient's companion had removed it from the toy and stuck on the left side of the patient's face, completely covering the left orbit. Because of the vacuum in it the cup sucked the eyelids and other soft tissues around them into its cavity. The suction of the cup was strong enough to prevent the cup's easy removal. This panicked the patient, and it took nearly two minutes' struggle to pry the cup from the patient's face. After the removal of suction cup, both left eyelids were badly bruised and there also developed a large subconjunctival hemorrhage.

Fortunately, no lasting structural damage or visual loss resulted from this accident. However, this experience has proved that the toys with suction cups carry a heretofore unrecognized danger to children, particularly the one with impaired mental ability. Therefore, it is very important that either such toys be banned from the mental institution, or their use be carefully supervised by responsible adults.

Subconjunctival hemorrhage is a very common finding in ophthalmic practice. These hemorrhages are in most instances quite benign.

The cause of a subconjunctival hemorrhage usually remains unknown. However, the role of such systemic conditions as diabetes mellitus, hypertension, blood dyscrasias, etc, cannot be denied in patients with such disorders. Anticoagulants obviously can increase the risk of subconjunctival bleeding. Infective disorders of the conjunctiva rare well-known for such hemorrhages. The conjunctival hemorrhages are the hallmark of the viral entity called hemorrhagic conjunctivitis. Similarly, hemorrhages in the conjunctiva have been recorded after severe coughing spells, strangulation, severe constipation, strenuous exertion, etc.

Awan[1] reported an interesting case of multiple blotch conjunctival hemorrhages after gonioscopy with Koeppe lens. When at the conclusion of gonioscopy the attempt was made to remove the Koeppe lens, the patient suddenly squeezed her eyelids, causing a sudden suction effect on the conjunctiva with resultant hemorrhages. Browne and Wray[2] reported another interesting case of extensive subconjunctival hemorrhage following ophthalmodynamometry. Their patient, however, was, receiving heparin at the time.

Usually, subconjunctival hemorrhage does not require any therapy other than reassuring the patient. However, it is obvious that when the hemorrhage is due to an infective process, appropriate treatment of such conditions is necessary. If the subconjunctival hemorrhages develop recurrently, a thorough systemic and hematologic evaluation of the patient should be carried out to rule out any bleeding disorders.

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Figure 3

Congenital Upper Eyelid Eversion and Cleft Palate*

Khalid J. Awan, F.P.A.M.S. and Akhtar J. Khan, F.R.C.S.

ABSTRACT: A male infant from Pakistan had rare association of complete cleft palate syndrome and total eversion of the left upper eyelid. Although other eyelid anomalies, such as lid colobomas, have been recorded in patients with cleft palate, we could not find a published report of its association with congenital ectropion or eversion of eyelids. (Pakistan Journal of Ophthalmology 9:32, 47, April, 1993.)

Figure 2 shows complete cleft palate in a newborn. However, what is even more interesting is the presence of total eversion of the left upper eyelid. The lids of the other eye were normal, and no other ocular anomaly was present. As is the case with complete cleft palate syndrome patients, this infant also had marked hypertelorism.

Cleft palate and cleft lip is the most common congenital facial anomaly.[1] Its incidence is from 1 in 600 to 1 in 1250 births.[2] The deformity may be unilateral or bilateral. It is interesting that genetic factors seem to play a role more in the case of cleft palate with cleft lip than in the case of cleft palate alone. The children with these deformities have an increased rate of intellectual impairment and other congenital malformations, especially in structures derived from the first branchial arch. The risk of recurrence among family members of a child with cleft palate is calculated at 3-3.9 in siblings, 3.5-6.2 in offsprings, and 31-40 in twins. It is also suggested by animal experiments that nongenetic factors acting at particular time of organogenesis may also be responsible for the malformation.[2]

Complications of cleft palate include recurrent otitis media and hearing loss, malpositioning of teeth and tooth decay, and speech defects that may leave behind residual difficulties even after satisfactory structural repair.

The management of cleft palate is done in two stages. The immediate concerns after the birth of baby are the provision of adequate nutrition, prevention of aspiration, and control of infection. After the baby begins to show satisfactory growth and weight gain, surgical correction may be undertaken, usually at the age of 1-2 months. The surgery of the craniofacial deformities often requires a multistage approach, which usually needs the team efforts of the plastic surgeons, neurosurgeons, and pediatricians.

In contrast to the cleft palate, the congenital ectropion of the eyelids is such a rare entity that most ophthalmic texts don't even mention it. When in 1959, Pico[3] reviewed the literature, he found only 12 recorded cases. He enumerated the following possible causes for congenital ectropion: (i) absence or anomaly of the tarsus, (ii) persistence of the eversion of the lid that occurred during a difficult delivery, (iii) skin abnormalities, such as hyperkeratosis, ichthyosis, etc., and (iv) microphthalmos or orbital cysts. Biglan and Buerger[4] gave congenital horizontal "tarsal kink" as another possible cause of congenital ectropion. Before Pico's report, Ostriker and Lasky[5] reported a case of congenital eversion of eyelid in 1954, and they did not find any prior report of this entity in literature.

Management of congenital eversion or ectropion of the eyelid may not be cosmetically fully satisfactory. However, tarsorrhaphy or full-thickness wedge resection have shown to hold the defective eyelid in fairly acceptable anatomical position.[6]

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Book Reviews

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

Ocular Emergencies, Edited by Robert A. Catalano and Michael Belin, **1992.** W. B. Saunders Company, The Curtis Center, Independence Square West, Philadelphia, Pennsylvania 19106 USA. Seven contributors, 550 pocket-sized pages, softbound, black and white illustrations, table of contents, index. Price: US$ 45.00.

This book for "new ophthalmology and emergency room residents" is intended "to provide a ready reference for the practical hands-on management of patients with ocular and orbital emergencies." In addition to the Editors five other authors have contributed to the text.

The contents are presented in four sections. The first section, Examination, Diagnostic Tests, and Pediatric Patients, comprises of separate chapters on Examination of the Eye, Diagnostic Testing, and Special Considerations in the Pediatric Patient. The second section, Ocular and Orbital Trauma, contains chapters on Eyelid Injuries, Blunt Injuries and Fractures of the Orbit, Blunt Ocular Injuries, Burns of the Eye, Foreign Bodies and Penetrating Injuries to the Eye. The third section, Nontraumatic Ocular and Orbital Emergencies, has chapters on Evaluation and Management of Nontraumatic Disorders of the Lacrimal Drainage System; Nonpenetrating, Noninfectious Emergencies of the Cornea and Ocular Lens; Glaucoma Emergencies, Nontraumatic Orbital Disorders, Neuro-Ophthalmologic and Nontraumatic Retinal Emergencies, Sudden and Unexpected Loss of Vision, and Functional and Psychologic ophthalmologic Disorders. Two chapters, "Ocular Infections and Inflammation" and "Antibiotics, Steroids, and Tetanus Immunization" make up the last section. An appendix, Common Abbreviations in Ophthalmology, concludes the text.

The book easily fits in the pocket of a doctor's lab coat and has a writing style that is conducive to easy reading. Both these features will definitely add to its appeal for residents and trainees. The authors discuss problems with a directness that leaves no uncertainty in the reader's mind, making this book an emergency text in the true sense of the word.

The contents of the book are carefully selected and well-organized. In many places introductory or summary tables are used to facilitate quick scanning. The Editors have provided generous cross-references in all parts of the text to allow the reader an opportunity to get a complete clinical picture of problems.

Because of the material it contain and in the fashion this material is presented, the first section of the book is the most useful part of the text for a trainee. It deals with all parts of general ophthalmic examination, with special attention to its pediatric aspects, and various diagnostic tests including ultrasonography, computerized tomography (CT scan), magnetic resonance imaging (MRI), fluorescein angiography, laboratory testing, etc. The indications, advantages, and limitations of each technique are given to help the examiner in their proper utilization. Multiple careful readings of this portion of the book are sure to give a trainee a truly solid foundation in ophthalmologic examination, emergency or otherwise.

Chapters 4 through 8, which deal with traumatic injuries, both blunt and penetrating, of the eye and orbit contain discussions of specific conditions. Particularly praiseworthy are the discussions of the blowout fracture of the floor of the orbit, traumatic hyphema (with an excellent table on management), and treatment of chemical burns (also with table). Emergencies not related to trauma are the topic of chapters 9 through 15. Here the descriptions related to congenital stenosis of lacrimal duct, diagnosis and management of various types of acute glaucoma, flow charts on orbital disorders in children and adults, orbital cellulitis, pupillary abnormalities, and headaches are impressive. In the final section, dealing with inflammation and infections and their treatment, the management of endophthalmitis stands out. Strewn throughout the book are black and white illustrations to complement the descriptive text.

On the other hand, some of the illustrations are not of good quality, and a few perhaps are unnecessary, e.g. Figure 7-8. In some areas redundancy is obvious, e.g. "All patients with eyelid injuries should be questioned regarding method, nature, and time of their injury....General guidelines for history taking are noted in Chapter 1." (page 109), "The first priority in treating a thermal burn is to remove the person from the heat...(page 191), etc. Some errors, most like unintentional, are also present, e.g. "A mature lens is one that transmits no light..." (page 256). Certainly, the authors don't mean that all humans turn blind when they reach adulthood. Amusing also is the author's use of "ocular lens" for the standard "crystalline lens." One notices a few omissions as well, e.g. in the discussion of thermal burns the authors mention neither the curling iron burns in adults, nor the cigarette burns in the young children, neither of which is too rare to deserve mention. Chances are that the emergency room physicians will see these ocular burns more often than, or at least as frequently as, the thermal burns from other causes.

These points are rather minor, and it may be safely said that *Ocular Emergencies* accomplishes its purpose very commendably, despite the fact that its price may put it out of the reach of trainees in Pakistan. ■

Abstracts from Elsewhere

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

Ophthalmology

THE JOURNAL OF THE
AMERICAN ACADEMY OF OPHTHALMOLOGY

AN EVALUATION OF OPTIC DISC AND NERVE FIBER LAYER EXAMINATIONS IN MONITORING PROGRESSION OF EARLY GLAUCOMA DAMAGE, HA Quigley, J Katz, RJ Derick, D Gilbert, A Sommer. From annual examinations of 813 ocular hypertensive eyes, the authors compared optic disc and nerve fiber layer photographs in 2 age-matched subgroups: 37 eyes that converted to abnormal visual field tests. Disc change was detected in only 7 of 37 control eyes that retained normal field tests. Disc change was detected in only 7 of 37 (19%) converters to field loss and in 1 of 37 (3%) controls. Progressive nerve fiber layer atrophy was observed in 18 of 37 (49%) converters and in 3 of 37 (8%) controls. Serial nerve fiber layer examination was more sensitive than color disc evaluation in the detection of progressive glaucoma damage at this early stage of glaucoma. The evaluation of cup-to-disc ratio or of the nerve fiber layer appearance in the initial photograph taken 5 years before field loss were equally predictive of future field damage. The position of nerve fiber layer defects was highly correlated with the location of subsequent visual field loss. *(Ophthalmology 99:19-28, 1992) Reprint requests to Harry A. Quigley, MD, Wilmer 120, Dana Center for Preventive Ophthalmology, Johns Hopkins Hospital, 600 N Wolfe St, Baltimore, MD 21205.*

VISUAL RECOVERY IN TWO PATIENTS AFTER INTRAVENOUS METHYLPREDNISOLONE TREATMENT OF CENTRAL RETINAL ARTERY OCCLUSION SECONDARY TO GIANT-CELL ARTERITIS, DC Matzkin, TL Slamovits, R Sachs, RM Burde. Two patients with central retinal artery occlusions secondary to biopsy-proven giant-cell arteritis lost visual acuity to no light perception but recovered to baseline acuity after treatment with intravenous methylprednisolone at a dose of 15 to 30 mg/kg/day. The potential advantages and theoretical basis of early and aggressive treatment with large-dose intravenous corticosteroids in arteritic central retinal artery occlusion are discussed. *(Ophthalmology 99:68-71, 1992) Reprint requests to Thomas L Slamovits, MD, Department of Ophthalmology, Montefiore Medical Center/ Albert Einstein College of Medicine, 111 E 210th St, Bronx, NY, 10467.*

PARACENTRAL RHEUMATOID CORNEAL ULCERATION, CLINICAL FEATURES AND CYCLOSPORINE THERAPY, GN Kervick, SC Pflugfelder, R Haimovici, H Brown, E Tozman, R Yee. Six patients with rheumatoid arthritis (eight eyes) presented with small paracentral perforating corneal ulcers in otherwise quiet eyes. Initial management in five patients (seven eyes) consisted of systemic immunosuppression and therapeutic tissue adhesive with a bandage contact lens or tectonic keratoplasty. Ulceration recurred in all of these eyes, and recurrent ulcers treated with repeat tectonic keratoplasty or therapeutic tissue adhesive and a bandage contact lens all developed recurrent corneal ulceration. The introduction of topical cyclosporine therapy in five eyes with recurrent corneal ulceration was associated with arrest of keratolysis and rapid re-epithelialization of the ulcer in all cases. One corneal ulcer was successfully treated initially with topical cyclosporine, tissue adhesive, and a bandage contact lens. In patients with rheumatoid arthritis and small paracentral corneal ulcerations or perforations, application of tissue adhesive and a bandage contact lens and introduction of topical cyclosporine may be the preferred initial treatment. *(Ophthalmology 99:80-88, 1992) Reprint requests to Stephen C. Pflugfelder, MD, Bascom Palmer Eye Institute, 900 NW 17th St, Miami, FL 33136.*

PRESERVATION OF NERVE FIBER LAYER BY RETINAL VESSELS IN GLAUCOMA, E Chihara, Y Honda. The authors evaluated the correlation between various parameters and the local preservation of the retinal nerve fiber layer in 156 glaucomatous eyes. A vessel-associated preservation of the nerve fiber layer was observed in 45 of the 156 glaucomatous eyes. The presence of "straight" retinal vessels (either arterioles or larger venules) and "tortuous" retinal vessels (large or small venules) inside of the scleral ring was correlated with the local preservation of the nerve fiber layer ($P<0.001$ and $P<0.05$, respectively). A local elevation of the floor of the cup was also correlated with the preservation of the nerve fiber layer ($P<0.01$). However, no correlation existed between either the preservation of the nerve fiber layer and the type of glaucoma, sex or age or patient, tilting of the disc, cilioretinal vessel, vertical cup-to-disc ratio, refractive error, disc size, distance between the disc and foveola, or the index of ovalness of the disc. These results that

retinal vessels in the disc significantly influence the vulnerability of the nerve fibers to glaucomatous damage. *(Ophthalmology 99:208-214, 1992) Reprint requests to Etsuo Chihara MD, Department of Ophthalmology, Faculty of Medicine, Kyoto University, Sakyo-ku, Kyoto 606, Japan.*

EXPERT AGREEMENT IN EVALUATING THE OPTIC DISC FOR GLAUCOMA, R Varma, WC Steinmann, IU Scott. The authors studied intraobserver and interobserver agreement, under monoscopic and stereoscopic conditions, in estimating vertical cup-to-disc ratios and in assessing whether a disc had glaucomatous damage. Six glaucoma experts evaluated 75 optic disc photographs under both viewing conditions. The experts also re-evaluated 25 photographs. Intraobserver agreement in estimating vertical cup-to-disc ratios was high (median weighted kappa, 0.79). Interobserver agreement in estimating vertical cup-to-disc raios was moderate (stereoscopic median weighted kappa, 0.67); individual experts differed by as much as 0.2 disc diameters (DD) monoscopically and 0.16 DD stereoscopically. The observers estimated larger vertical cup-to-disc ratios when evaluating the same discs under stereoscopic conditions than under monoscopic conditions. Intraobserver agreement in assessing glaucomatous disc damage was substantial (median kappa, 0.76). Interobserver agreement in assessing glaucomatous damage was moderate (stereoscopic median kappa, 0.50). This study confirms the ability of experts to reliably evaluate the optic disc within themselves and emphasized the need for developing standardized methods for interobserver evaluation of the optic disc in glaucoma. *(Ophthalmology 99:215-221, 1992) Reprint requests to Rohit Varma, MD, MPH, Wilmer B-23, Johns Hopkins Hospital, 600 N Wolfe St, Baltimore, MD 21205.*

CAT SCRATCH DISEASE ASSOCIATED WITH NEURORETINITIS IN A 6-YEAR-OLD GIRL, GG Ulrich, NJ Waecker Jr., SJ Meister, TJ Peterson, DG Hooper. Cat scratch disease is a subacute regional lymphadenitis usually preceded by a history of being scratched by a cat or young kitten. The spectrum of illness ranges from mild self-limited adenopathy to severe systemic disease, including hepatosplenomegaly, encephalopathy, osteolytic lesions, splenic abscesses, mediastinal masses, and neuroretinitis. Vision loss is a rare complication of the disease. The authors report a patient with cat scratch disease associated with acute febrile illness, lymphocytic meningitis, and acute vision loss secondary to neuroretinitis. To their knowledge, this is the first ophthalmic case reported in which the diagnosis is supported by both a positive skin test and positive histopathology. *(Ophthalmology 99:246-249, 1992) Reprint requests to George G. Ulrich, MD, c/o Clinical Investigation Department, Naval Hospital, San Diego, CA 92134-5000.*

RECOVERY OF ANTERIOR SEGMENT CIRCULATION AFTER STRABISMUS SURGERY IN ADULT PATIENTS, JM Olver, JP Lee. The effects of vertical rectus muscle surgery on the anterior segment and iris fluorescein angiogram were documented in 43 eyes of 41 adult patients. Characteristic iris sector perfusion defects were seen in 33 of 37 eyes (89%) after primary vertical rectus muscle surgery (no previous surgery on these muscles). Although iris perfusion defects were commonly present, associated clinical signs were mild. Two patients developed permanent pupillary changes after simultaneous surgery on two rectus muscles (superior/inferior rectus muscles and contiguous inferior/medial rectus muscles). In most patients, clinical findings resolved and the iris circulation recovered during the first 2 weeks after surgery. In 3 of 8 patients with grade 3 anterior segment ischemia (pupil dysfunction and cells) or early "postoperative uveitis," recovery of iris circulation took up to 12 weeks. These findings indicate that the time course of recovery of the anterior segment circulation after vertical rectus muscle surgery may be shorter than previously assumed. *(Ophthalmology 99:305-315, 1992) Reprint requests to Jane M. Olver, Moorfields Eye Hospital, City Road, London, England EC1V 2PD.*

CONGENITAL UNILATERAL FIBROSIS, BLEPHAROPTOSIS, AND ENOPHTHALMOS SYNDROME, RW Hertle, JA Katowitz, TL Young, GE Quinn, MG Farber. The authors report four cases of the rarest form of the congenital fibrosis syndrome. This disorder is exhibited in infancy as unilateral blepharoptosis, strabismus, limited ductions, globe displacement (enophthalmos and blepharoptosis), and decreased vision, usually due to amblyopia. Forced ductions are positive and surgical exploration confirms anomalous muscle structure. Computed tomography and magnetic resonance imaging studies in these four patients were diagnostically beneficial, showing extraocular muscles and tendinous insertion involvement, and poorly defined intraconal and extraconal masses that had the appearance of scar or inflammatory tissue. All patients had globe displacement. The opposite eye and intracranial contents were normal in all our patients. Results of histopathologic examination obtained at surgery in three of these patients show replacement of affected structures by fibrous tissue and included the extraocular muscles, orbital fat, Tenon's capsule, and conjunctiva. *(Ophthalmology 99: 347-355, 1992) Reprint requests to Richard W. Hertle, MD, Ophthalmology, The Children's Hospital of Philadelphia, 34th & Civic Center Blvd, Philadelphia, PA 19104.*

MANAGEMENT OF GIANT RETINAL TEARS WITHOUT SCLERAL BUCKLING, USE OF RADICAL DISSECTION OF THE

VITREOUS BASE AND PERFLUORO-OCTANE AND INTRAOCULAR TAMPONADE, AE Kreiger, H Lewis. The introduction of intraoperative perfluorocarbon liquids in the management of giant retinal tears has allowed exact anatomic reapposition of the retina and the giant retinal tear. Therefore, the authors managed 11 eyes with giant retinal tears and no proliferative vitreoretinopathy without scleral buckling. Maximum removal of the basal vitreous gel was performed in all cases, and perfluoro-octane was used intraoperatively to unfold the inverted posterior flap and reattach the retina completely. Endophotocoagulation was applied to the edges of the tear and perfluoropropane or silicone oil was used as an intraocular tamponade. Although 1 eye required reoperation for a redetachment from posterior proliferative vitreoretinopathy, all retinas were reattached with final visual acuity of 5/200 or better in 9 eyes. Eight additional major procedures were necessary in seven eyes: removal of silicone oil in four (with removal of perisilicone proliferation in three), repeat vitrectomy and membrane removal with photocoagulation twice in one eye, cataract extraction in one eye, and removal of a macular pucker in one eye. Four eyes required postoperative fluid-gas exchange and three eyes had tissue plasminogen activator injections into the anterior chamber for postoperative fibrin reactions. *(Ophthalmology 99:491-497, 1992) Reprint requests to Allan E. Kreiger, MD, Jules Stein Eye Institute, UCLA Medical Center, 100 Stein Plaza, Los Angeles, CA 90024-7007.*

SMOKING AND THE RISK OF EARLY METASTASES FROM UVEAL MELANOMA, KM Egan, ES Gragoudas, JM Seddon, SM Walsh. Smoking is suspected of altering host immunity and may therefore hasten the development of metastases among cancer patients. The authors followed 946 patients with melanomas of the choroid and/or ciliary body who had been treated with proton beam irradiation and who had provided a smoking history during their evaluation before treatment. After a mean follow-up of 33 months, 98 patients were diagnosed with metastatic disease. Metastasis-free survival rates 3 years after irradiation were similar in association with never, past, and current cigarette smoking (86%, 89%, and 90%, respectively; P = 0.90). Rates also were similar with increasing pack-years of exposure and when the product smoked was cigarettes versus pipes or cigars only. Estimates for smoking effects were unchanged after adjusting for established prognostic factors for metastases. Results suggest that smoking does not alter the risk of metastases during the first few years after irradiation of choroidal melanomas. *(Ophthalmology 99:537-541, 1992) Reprint requests to Evangelos S. Gragoudas, MD, Mass. Eye and Ear Infirmary, 243 Charles St, Boston, MA 02114.*

EXTRAOCULAR MUSCLE REGENERATION IN PRIMATES, LOCAL ANESTHETIC-INDUCED LESIONS, BM Carlson, S Emerick, TE Komorowski, EA Rainin, BM Shepard. Retrobulbar administration of several local anesthetics (0.75% bupivacaine, 2.0% mepivacaine or 2.0% lidocaine plus 1:100,000 epinephrine) in monkeys resulted in a low incidence of muscle fiber lesions in the extraocular muscles closest to the site of injection. Most lesions resulted in the degeneration and regeneration of muscle fibers on the surface of the muscles, but occasionally a massive internal lesion was seen. In contrast, large lesions were common in rectus muscles that received direct injections of local anesthetics in both monkeys and humans. The morphology and temporal sequence of muscle fiber degeneration and regeneration was similar to that seen in primate thumb muscles injured by anesthetic agents. *(Ophthalmology 99:582-589, 1992) Reprint requests to Bruce M. Carlson, MD, PhD, Department of Anatomy and Cell Biology, 4643 Medical Sceince II Building, University of Michigan, Ann Arbor, MI 48109-0616.*

ULTRASTRUCTURAL ALTERATIONS IN THE ENDOTHELIUM IN A PATIENT WITH TOPICAL ANESTHETIC ABUSE KERATOPATHY, JM Risco, LC Millar. A 40-year-old patient frequently self-administered topical oxybuprocaine drops for approximately 7 days after bilateral ultraviolet-light keratitis. Initially, he developed bilateral chronic epithelial defects with diffuse stromal infiltration and edema. After a protracted initial healing period, the patient underwent a penetrating keratoplasty in one eye because of significant corneal scarring. Pathologically, the corneal button revealed scarring and thinning of the central stroma. Results of scanning electron microscopy showed endothelial polymorphism, focal endothelial necrosis, and numerous filamentous processes emanating from abnormally enlarged intercellular gaps. Results of transmission electron microscopy showed markedly attenuated to absent apical cell attachments at the endothelial intercellular junction. Abuse of oxybuprocaine appears to produce irreversible damage to the apical cell attachments at the level of the corneal endothelial cells. *(Ophthalmology 99:628-633, 1992) Reprint requests to J. Miguel Risco, MD, c/o Medical Library, King Khaled Eye Specialist Hospital, P.O. Box 7191, Riyadh 11462, Saudi Arabia.*

MALIGNANT GLAUCOMA AFTER LASER IRIDOTOMY, LF Cashwell, TJ Martin. Malignant glaucoma was initially reported as developing after surgery for glaucoma. Subsequently, associations with trauma, inflammation, and the use of miotic agents, as well as spontaneous occurrence have been noted. Laser iridotomy has been assumed to avoid the risk of subsequent malignant glaucomas in eyes with angle-closure glaucoma by avoiding surgical

incision of the eye. However, the authors report six cases of malignant glaucoma after laser iridotomy. In all but two cases, medical therapy for the malignant glaucoma resulted in deepening of the anterior chamber and normalization of the intraocular pressure. Malignant glaucoma recurred in five of the patients, and two patients had malignant glaucoma in the fellow eye. *(Ophthalmology, 99:651-659, 1992) Reprint requests to L. Frank Cashwell, MD, Department of Ophthalmology, Wake Forest University Eye Center, Medical Center Boulevard, Winston-Salem, NC 27157.*

PSEUDOTUMOR CEREBRI FROM CRANIAL VENOUS OBSTRUCTION, BL Lam, NJ Schatz, JS Glaser, BC Bowen. Dural sinus hypertension from cerebral venous outflow impairment is a cause of pseudotumor cerebri. The authors documented six such patients: two with unilateral neck dissection, one with surgical ligation of the dominant sigmoid sinus, two with thrombosed central intravenous catheterization, and one with dural sinus thrombosis. The site of cerebral venous outflow obstruction was variable and identified in three patients with computed tomography, conventional magnetic resonance imaging, magnetic resonance angiography, and/or angiography. Magnetic resonance angiography used in two patients characterized the venous flow pattern and identified the site of obstruction, confirming magnetic resonance angiography as an effective noninvasive blood flow technique in diagnosing and following these patients. Three patients were treated successfully with medical therapy and one patient with optic nerve fenestration. The two patients with thrombosed central venous catheters had serious systemic illnesses and suffered permanent visual loss. *(Ophthalmology 99:706-712, 1992) Reprint requests to Joel S. Glaser, MD, Bascom Palmer Eye Insititute, PO Box 016880, Miami, FL 33101.*

INCIDENCE OF VITREOUS LOSS AMONG THIRD-YEAR RESIDENTS PERFORMING PHACOEMULSIFICATION, RW Allinson, DC Metrikin, RG Fante. The incidence of vitreous loss among third-year residents learning phacoemulsification was retrospectively evaluated. One hundred thirty-six cases of phacoemulsification were performed by six different third-year residents with the same attending physician supervising all cases. The incidence of vitreous loss was 14.7%. This study demonstrates that the rate of vitreous loss among residents learning phacoemulsification is higher than the reported incidence of vitreous loss for residents learning planned extracapsular cataract surgery with expression of the lens nucleus. *(Ophthalmology 99:726-730, 1992) Reprint requests to Richard W. Allinson, MD, Department of Ophthalmology, College of Medicine, University of Arizona, Tucson, AZ 85724.*

VITRECTOMY FOR DIABETIC MACULAR TRACTION AND EDEMA ASSOCIATED WITH POSTERIOR HYALOIDAL TRACTION, H Lewis, GW Abrams, MS Blumenkranz, RV Campo. Pars plana vitrectomy with separation of the posterior hyaloid was performed in 10 eyes with diabetic macular edema and traction associated witha thickened and taut premacular posterior hyaloid. Nine of the 10 eyes had previous macular photocoagulation. Preoperative fluorescein angiography showed a deep and diffuse pattern of leakage in the macula. Intraoperatively, the attached and thickened posterior hyaloid was lifted and separated from the retina. Postoperatively, vision improved in nine eyes. The macular traction and edema resolved in eight eyes and decreased in two. Complications included a vitreous hemorrhage, a rhegmatogenous retinal detachment, cataract formation, and a mild epimacular membrane, each occurring in one eye. Vitreous surgery can improve the visual prognosis of some eyes with diabetic macular traction and edema associated with a thickened and taut posterior hyaloid. *(Ophhtalmology 99:753-759, 1992) Reprint requests to Hilel Lewis, MD, Jules Stein Eye Institute, 100 Stein Plaza, Los Angeles, CA 90024.*

RESULTS OF INPATIENT AND OUTPATIENT CATARACT SURGERY, A HISTORICAL COHORT COMPARISON, GN Holland, DT Earl, NC Wheeler, BR Straatsma, TH Pettit, RS Hepler, RE Christensen, RK Oye. Purpose: The transition from inpatient to outpatient cataract surgery during the last decade was not accompanied by prospective investigation of its effect on visual outcomes or surgical complications. The authors performed this study to assess the impact of this transition on surgical results. Methods: The authors reviewed 600 extracapsular cataract extractions performed by 4 experienced ophthalmic surgeons during a 36-month period; in 300 cases, patients were hospitalized after surgery (inpatient group), and, in 300 cases, patients were never hospitalized (outpatient group). The same surgical techniques were used in all cases. Visual outcome and rates for operative and postoperative complications were compared. Results: There were no statistically significant differences between the inpatient and outpatient groups for visual acuity. Excluding patients with pre-existing nonlenticular ocular disease, a best-corrected visual acutiy of 20/40 or better was achieved in 93.1% of inpatient cases and in 97.2% of outpatient cases 6 months after surgery. Postoperative, clinically apparent cystoid macular edema was more common in the inpatient group (P=0.03); however, after exclusion of patients with diabetes, hypertension, age younger than 65 years, and eyes with pre-existing nonlenticular disease, there was no statistically significant difference between groups. No significant differences in rates for other operative and postoperative complications were identified, including wound dehiscence, unplanned postoperative

filtering blebs, infectious endophthalmitis, retinal detachment, persistent iridocyclitis, glaucoma, and corneal edema. Conclusion: This study does not demonstrate that the transition to outpatient cataract extractions has had an adverse effect on surgical outcomes. *(Ophthalmology 99:845-852, 1992) Reprint requests to Gary N. Holland, MD, Jules Stein Eye Insitute, 100 Stein Plaza UCLA, Los Angeles, CA, 90024-7003.*

RETINAL PIGMENT EPITHELIUM LESIONS AS A BIOMARKER OF DISEASE IN PATIENTS WITH FAMILIAL ADENOMATOUS POLYPOSIS, A FOLLOW-UP REPORT, A Romania, N Zakov, JM Church, DG Jagelman. Background: The sensitivity of retinal pigment epithelium (RPE) lesions as a predictive congenital marker for the development of familial adenomatous polyposis (FAP) is evaluated. Methods: In a prospective study, 34 patients at 50% risk of inheriting FAP were examined. Based on the presence or absence of four or more RPE lesions, patients were categorized as those who had inherited or those who lacked the FAP genes. All patients received dilated fundus examinations with binocular indirect ophthalmoscopy and all RPE lesions were documented with fundus photography. All patients underwent annual sigmoidoscopy to determine the presence or absence of polyps. Results: A 3-year follow-up analysis showed that 8 of 14 patients who were positive for RPE lesions later developed polyps. Of the 20 patients considered negative for FAP based on normal fundus examination, none has developed polyps. Conclusion: The authors urge all patient at risk of inheriting FAP to undergo dilated fundus examination with binocular indirect ophthalmoscopy and wide-angle fundus photography at the earliest age possible. All patients with 4 or more RPE lesions should undergo annual sigmoidoscopic examinations beginning before 10 years of age. *(Ophthalmology 99:911:913, 1992) Reprint requests to Anthony Romania, MD, Southwestern Eye Center, 831 Gail Gardner Way, Prescott, AZ 86301.*

ALCOHOL CONSUMPTION AND THE PREVALENCE OF DIABETIC RETINOPATHY, SE Moss, R Klein, BEK Klein. Objective: To determine if alcohol consumption is associated with the prevalence of diabetic retinopathy. Participants: This study surveyed a population-based sample (n=1210) of younger-onset diabetic persons (diagnosed before age 30 years and taking insulin) and a stratified random sample (n=1780) of older-onset diabetic persons (diagnosed after age 30 years). Baseline and 4-year follow-up examinations completed by 996 and 891 (730 by persons age 21 or older) younger-onset persons, respectively, and 1370 and 987 older-onset persons, respectively. Data analyzed are from the 4-year follow-up examination. Questionnaires concerning consumption were completed at follow-up. Main Outcome Measure: Diabetic retinopathy as determined from stereographic fundus photography. Results: After controlling for known risk factors in the adult younger-onset group, average alcohol consumption, as determined by questionnaire, was inversely associated with prevalence of proliferative diabetic retinopathy (PDR), odds ratio, 0.49; 95% confidence interval, 0.27 to 0.92. The trend was similar for recent consumption, odds ratio, 0.63; confidence interval, 0.37 to 1.09. In the older-onset groups taking or not taking insulin, average or recent alcohol consumption or usage history were not significantly associated with the prevalence of any retinopathy or PDR. Conclusions: Alcohol consumption does not appear to increase the risk of retinopathy and may have a beneficial effect in younger-onset persons, although further study is needed. *(Ophthalmology 99:926-932, 1992) Reprint requests to Dr. Ronald Klein, Department of Ophthalmology, Clinical Science Center, 600 Highland Ave, Madison, WI 53792.*

SURGICAL TREATMENT OF SUBLUXATED LENSES IN CHILDREN, DA Plager, MM Parks, EM Helveston, FD Ellis. Background: Surgical removal of subluxated lenses has traditionally been discouraged because of concerns about poor surgical results and unacceptably high complication rates. Methods: The authors reviewed the surgical results of 29 eyes in 15 consecutive patients who were operated on for subluxated lenses. Results: Best-corrected visual acuity improved in all 29 eyes and was limited only by amblyopia. There were no significant complications in follow-up ranging from 5 months to 12 years. Conclusion: Modern surgical techniques using vitrectomy instruments allow the vitreous to be handled more effectively and have led to improved results and lower complication rates. Surgery for subluxated lenses can be done effectively and safely when indicated. *(Ophthalmology 99:1018-1023, 1992) Reprint requests to David A. Plager, MD, 702 Rotary Circle, Indianapolis, IN 46202.*

TENDON LAXITY IN SUPERIOR OBLIQUE PALSY, DA Plager. Background: Some congenital superior oblique palsies are known to be due to anomalous or lax superior oblique tendons. This prospective study of 24 patients with a diagnosis of superior oblique palsy was performed to determine the prevalence and significance of anatomic tendon anomaly or laxity as diagnosed by traction testing of the superior oblique tendon. Methods: Traction testing was performed on 24 consecutive superior oblique palsy patients to determine the relative laxity of the tendons. Results: All 14 patients who were believed to have congenital palsy by history and clinical examination were found to have lax tendons. No patient with acquired unilateral palsy showed similar

tendon laxity. Conclusion: These findings have significant implications regarding the diagnosis and possible cause of congential superior oblique palsy as well as implications for surgical management. *(Ophthalmology 99:1032-1038, 1992) Reprint requests to David Plager, MD, Indiana University School of Medicine, Department of Ophthalmology, 702 Rotary Circle, Indianapolis, IN 46202.*

OPHTHALMOLOGIC ASSESSMENT OF YOUNG PATIENTS WITH ALPORT SYNDROME, M Jacobs, B Jeffrey, A Kriss, D Taylor, G Sa, TM Barratt. Background: Alport syndrome is an X-linked disease affecting basement membrane collagen. It is characterized by nephritis associated with high-tone sensorineural hearing impairment and ophthalmic signs. Although ocular changes have been described in adults, few data exist regarding thre incidence of abnormal ocular features in adolescence and childhood. Methods: Fifteen male and five female patients with Alport syndrome underwent ophthalmologic, audiologic, and nephrologic assessments. All patients studied had hematuria and a positive family history of Allport syndrome. thirteen patients had a renal biopsy that showed characteristic electron microscopic changes of the disease. Eleven patients had high-tone sensorineural impairment. Electrophysiologic investigations performed included electroretinography, visual-evoked potentials, and electro-oculography. Results: Two patients had early signs of anterior lenticonus, three had flecks in the retina, and two patients also had posterior subcapsular cataracts. None of the patients had significant electrophysiologic abnormalities. Conclusion: These findings indicate that ocular changes are uncommon and subtle in young patients with Alport syndrome, and suggest that the signs increase in frequency and severity with age. *(Ophthalmology 99:1039-1044, 1992) Reprint requests to David Taylor, FRCS, FRCP, Department of Ophthlamology, Hospital for Sick Children, Great Ormond St, London, England.*

OCULAR SURFACE ALTERATION AFTER LONG-TERM TREATMENT WITH AN ANTIGLAUCOMATOUS DRUG, JM Herreras, JC Pastor, M Calonge, VM Asensio. Background: This study was undertaken to see whether long-term locally applied ocular medications produced any alterations in the ocular surface, and, in particular, whether it caused damage to the mucus layer of the tear film. Methods: The authors studied the ocular surface of 40 control subjects (group 1), 21 patients (group 2) chronically treated with a commerical preparation of 0.5% timolol maleate, and 20 previously untreated glaucomatous patients (group 3) in need of treatment with the same drug. Parameters studied were Schirmer's test, lacrimal meniscus height, break-up time, fluorescein and rose Bengal stains, conjunctival impression cytology, mucus staining, and the ferning test. Results: Patients in groups 2 and 3 showed a significant decrease ($P<.0.001$) in the number of normal Schirmer's and break-up time tests. All had positive vital stains. Results showed a significant decrease ($P<0.001$) in goblet-cell density, mucus granules, and reticular sheets, and an increase ($P<0.001$) in pathlogic crystallization patterns. Conclusion: These results demonstrate that chronic application of a commerical preparation of timolol maleate damaged the ocular surface, especially the mucus layer of the tear film. *(Ophthalmology 99:1082-1088, 1992) Reprint requests to Jose M. Herreras, MD, Insititute de Oftalmobiologia Aplicada, Facultad de Medicina, Universidad de Valladolid, Ramon y Cajal 7, Vallodolid 47005, Spain.*

EFFECTS OF JOGGING EXERCISE ON PATIENTS WITH THE PIGMENTARY DISPERSION SYNDROME AND PIGMENTARY GLAUCOMA, WL Haynes, T Johnson, WLM Alward. Background: Exercise-induced anterior chamber pigment dispersion with intraocular pressure (IOP) elevation has been reported in patients with the pigmentary dispersion syndrome. Marked pigment dispersion with or without elevation of IOP could predispose these patients to visual field loss. The authors designed this study to evaluate the effects of jogging excercise on anterior chamber pigment and IOP in a group of patients with the pigmentary dispersion syndrome or pigmentary glaucoma. Methods: Fourteen subjects with the pigmentary dispersion syndrome, 10 subjects with pigmentary glaucoma, and 10 control subjects underwent a 45-minute protocol of jogging exercise. Anterior chamber pigment was graded and IOP was measured before and up to 3 hours after completion of the exercise protocol. Results: Eyes of experimental subjects were significantly more likely to develop exercise-induced pigment dispersion than were eyes of control subjects. In experimental subjects, eyes treated with pilocarpine at the time of the study were significantly less likely to develop exercise-induced pigment dispersion than eyes not treated with pilocarpine. In two experimental subjects, pre-exercise treatment with pilocarpine appeared to inhibit exercise-induced pigment dispersion. Conclusions: The authors do not believe that all patients with the pigmentary dispersion syndrome or pigmentary glaucoma need to avoid exercise. However, for patients with these disorders who regularly engage in jogging or more strenuous or more jarring types of excercise, they suggest an evaluation before and after the type of exercise in question. If marked exercise-induced pigment dispersion occurs, pilocarpine therapy may be an alternative to avoidance of the exercise. *(Ophthalmology 99:1096-1103, 1992) Reprint requests to Wallace L.M. Alward, MD, Department of Ophthalmology, University of Iowa Hospitals and Clinics, Iowa City, IA 52242.*

CONTACT LENS FAILURE IN KERATOCONUS MANAGEMENT, MR Dana, JL Putz, MAG Viana, J Sugar, TT McMahon. Purpose: Surgery is indicated for keratoconus when management with contact lenses fails. The authors sought to determine the relative contribution of various preoperative patient and ocular factors to the ultimate causes of contact lens failure. Methods: The records of unoperated eyes of keratoconus patients whose contact lesnes were managed intensively before undergoing penetrating keratoplasty (PK) at the authors' institution between 1981 and 1990 were selected for study. Univariate and multivariate analyses were performed to identify risk factors for early contact lens failure. Results: The records of 99 keratoconic eyes of 75 patients with an average age of 34 years and average keratometry readings of 57.5 diopters at presentation were studied. Cases had been followed for an average of 27 months before PK. The primary reasons for PK were a best-corrected visual acuity of under 20/40 (despite good contact lens fit) causing disability for the patients (43%), contact lens intolerance (32%), frequent lens displacement (13%), and significant peripheral thinning of the cornea (12%). The referral source of the patient, sex, a history of PK in the fellow eye, or of contact lens wear in either eye did not alter the relative contributions of these parameters to surgery. Conclusion: Poor best-corrected visual acuity at presentation, higher keratometry readings (≥55D), age (≥40 years), and duration of disease (>5 years) were significantly associated with failure due to poor functional acuity and peripheral thinning, frequently leading to surgery within the first 12 months after presentation. *(Ophthalmology 99:1187-1192, 1992) Reprint requests to Timothy T. McMahon, OD, Dept. of Ophthalmology and Visual Sciences, UIC Eye Center, 1855 W Taylor St, Chicago, IL 60612.*

ULTRASOUND BIOMICROSCOPY OF ANTERIOR SEGMENT TUMORS, CJ Pavlin, JA McWhae, HD McGowan, FS Foster. Background: Ultrasound biomicroscopy is a new method of imaging the anterior segment of the eye at microscopic resolution using high frequency ultrasound. Methods: A prospective study was performed to evaluate the use of ultrasound biomicroscopy in imaging anterior segment tumors. Forty-five patients underwent clinical examination followed by slit-lamp photography, anterior segment B-scan ultrasonography, and ultrasound biomicroscopy according to an established protocol. Results: All lesions were clearly imaged by ultrasound biomicroscopy, while only 17 were detectable by conventional B-scan ultrasound. Ultrasound biomicroscopy allowed precise measurement and visualization of subsurface features in small tumors. Differentiation between solid and cystic lesions was easily achieved. The margins of ciliary body tumors could be more accurately defined. Histopathologic correlation was possible in four cases managed surgically. Ultrasound biomicroscopy images compared favorably with low-power microscopy. No complications were encountered. Conclusion: Ultrasound biomicroscopy proved a valuable new noninvasive technique in the evaluation of anterior segment tumors. *(Ophthalmology 99:1220-1228, 1992) Reprint requests to Charles J Pavlin, MD, FRCS (Can), Ocular Oncology Clinic, Princess Margaret Hospital, 500 Sherbourne St, Toronto, Ontario, Canada M4X 1K9).*

OUTCOME AND COST ANALYSIS OF SCHEDULES VERSUS EMERGENCY SCLERAL BUCKLING SURGERY, AJ Hartz, TC Burton, MS Gottlieb, DJ McCarty, DF Williams, A Prescott, P Klein. Background: Retinal detachments are usually considered to be surgical emergency. However, there are additional risks and costs for unnecessary emergency surgeries. The purpose of this study is to evaluate whether the conventional wisdom for treating all retinal detachment as emergencies needs to be re-examined. Methods: Forty-eight patients who had an emergency scleral buckle and 89 patients who had a scheduled procedure were randomly selected from 884 consecutive patients who had a primary scleral buckling procedure during a 4½-year period. The medical records of each patients were used to obtain detailed information related to prognosis. The visual acuity measurements of each patient, taken 6 months after the procedure, were obtained from the records of the ophthalmologist following the patient. Linear regression analysis was used to compare the final visual outcome for patients who had emergency surgery with patients who had scheduled surgery after taking into account patient factors related to prognosis. Results: Patients selected for emergency surgery had better visual prognoses than scheduled patients but had the same risk of systemic complications and the same extent of detachment if th macula was not involved. None of the 18 patients with an attached macula experienced macular involvement while awaiting scheduled surgery. There were no differences beetween emergency and scheduled patients in ocular or systemic complications, rate of reattachment, rate of decreased visual acuity after surgery, visual outcome adjusted for prognsis, or, since 1985, length of hospital stay. A greater cost was incurred for the patients having emergency surgery due to difference in pay scales for support personnel. Conclusions: Because the study is not large and the patients were not randomized to treatment, the results are not definitive. However, they suggest that emergency surgery is unnecessary for many patients with a detached retina. *(Ophthalmology 99:1358-1363, 1992) Reprint requests to Thomas C. Burton, MD, The Eye Institute, 8700 W Wisconsin Ave, Milwaukee, WI 53226.*

MINIPLATE RECONSTRUCTION OF THE LATERAL ORBITAL RIM AFTER ORBITAL DECOMPRESSION FOR GRAVES DISEASE, JW Shore, J Carvajal, CT Westfall. Background: Removal of lateral orbital bone with or without simultaneous removal of the lateral orbital rim is an accepted method of orbital decompression for Graves disease. Once removed, the bone is no longer available for reconstruction and secondary complications such as rounding of the canthal angle, canthal dystopia, and globe dystopia may result. Methods: The authors replaced the excised bone with a titanium miniplate to protect the globe and fixate the lateral canthal tendon in 18 patients (33 orbits). The orbital rim and lateral orbital wall were completely removed, and the inner aspect of the orbit was enlarged with a cutting burr. A standard titanium miniplate was then anchored to remaining bone, and soft tissue was secured to the miniplate to reconstruct the lateral canthus. Results: The results, as manifest by appearance of the lateral canthus and position of the eyelid in apposition to the globe, were graded as excellent in all patients and orbits. There were no early or late complications. Conclusion: Miniplate reconsruction of the lateral orbital rim after decompression for Graves disease allows the beneficial affect of lateral decompression and preserves the functional aspect of the lateral orbital wall. *(Ophthalmology 99:1433-1439, 1992) Reprint requests to John W. Shore, MD, 50 Staniford St, 3rd Floor, Boston, MA 02114.*

PARS PLANA VITRECTOMY FOR INTRAOCULAR INFLAMMATION-RELATED CYSTOID MACULAR EDEMA UNRESPONSIVE TO CORTICOSTEROIDS, A PRELIMINARY STUDY. PU Dugel, NA Rao, S Ozler, PE Liggett, RE Smith. Purpose: To determine the role of pars plana vitrectomy in patients with intraocular inflammation-related cystoid macular edema that is unresponsive to corticosteroids. Methods: Eleven eyes of nine patients underwent a standard three-port pars plana vitrectomy. The primary indication was intraocular inflammation-related cystoid macular edema that was unresponsive to oral, sub-Tenon's and topical corticosteroids. Preoperative follow-up ranged from 20 months to 144 months (average, 70 months). Postoperative follow-up ranged from 3 months to 108 months (average, 21 months). Results: Seven eyes (64%) improved 4 or more lines of Snellen visual acuity within macular edema improved by clinical examination and fluorescein angiography in 9 eyes (82%) and by clinical examination alone in 2 eyes (18%). No intraoperative complications were noted. Postoperative ocplications consisted of cataract formation in 1 eye (9%), glaucoma in 2 eyes (18%), and epiretinal membrane formation in 1 eye (9%). Conclusion: Pars plana vitrectomy may have a role in the treatment of intraocular inflammation-related cystoid macular edema that fails to respond to corticosteroids. The subgroup of patients who benefit most remains to be identified. *(Ophthalmology 99:1535-1541, 1992) Reprint requests to Ronald E. Smith, MD, Doheny Eye Institute 1450 San Pable St, Los Angeles, CA 90033.*

STERILE ENDOPHTHALMITIS AFTER SUTURELESS CATARACT SURGERY, DB Nelson, ED Donnenfeld, HD Perry. Background: Sutureless cataract surgery has recently increased in popularity because of the rapid visual rehabilitation and the inherent reduction of surgically induced astigmatism. Methods: This procedure is dependent on a lamellar, multiplaned incision. As with new surgical techniques, associated complications become evident with time. Recently, there have been several cases of infectious endophthalmitis after this procedure. The authors report on nine cases of sterile endophthalmitis. In all nine cases, surgery was performed with refrigerated balanced salt solution (BSS) and 100 mg of cefazolin and/ or 20 mg of methylprednisolone sodium succinate, given subconjunctivally, at its completion. Results: All nine cases occurred in a period of time during which 68 cases were preformed using refrigerated BSS for irrigation. These nine cases came from two different surgeons using basically the same surgical technique. After the investigation of these complications, the refrigerated BSS was discontinued, and there have been no episodes of sterile endophthalmitis in the last 650 cases. Conclusion: It appears that refrigerated BSS should be avoided if periocular injections are going to be used. It may be that the cold BSS fails to allow sufficient tissue swelling to seal the surgical incision, allowing for subconjunctival injections to seep into the wound, and leading to a sterile endophthalmitis. *(Ophthalmology 99:1655-1657, 1992) Reprint requests to David B. Nelson, MD, 2000 N Village Ave, Rockville Centre, NY 11570.*

HIGH INCIDENCE OF SYMPATHETIC OPHTHALMIA AFTER CONTACT AND NON-CONTACT NEODYMIUM:YAG CYCLOTHERAPY. S Lam, HT Tessler, BL Lam, JT Wilensky. After becoming aware of a report of two cases of sympathetic ophthalmia following Neodymium:YAG cyclotherapy, the authors report three new cases of this dreaded complication related to this procedure. They reviewed the topic in literature and warn that the incidence of sympathetic ophthalmia after Neodymium:YAG cyclotherapy for glaucoma procedure is higher compared with other ocular procedures. Therefore, it is most important that the patients who undergo this procedure are carefully monitored for this complication over an extended period of follow-up. *(Ophthalmology 99:1818-1822, 1992.) Reprint requests to Sheridan Lam, MD, UIC Eye Center, 1855 W. Taylor Street, Chicago, IL 60612.* ■

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Whoever therefore sees,
Does so for himself;
And whoever remains blind,
Does so to his own loss.
-Holy Qur'an 6:105

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

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

B. FOR BOOKS:

1. Newell, FW: Ophthalmology: Principles and Concepts. 6th ed., St. Louis. C.V. Mosby Company, 1986, p 73.
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, part 2. St. Louis, C.V. Mosby Company, 1965, pp 110-114. *(Recheck publisher, city, etc.)*

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