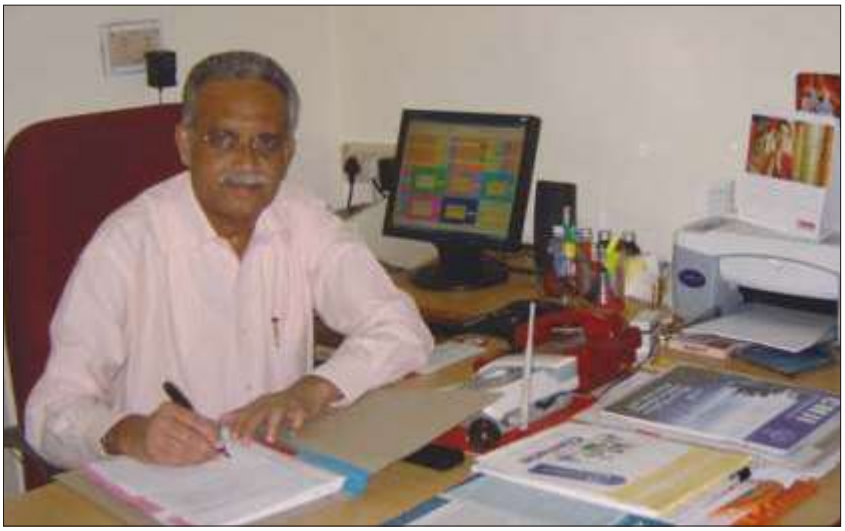
KSOS News Letter
Official News letter of Kerala Society of Ophthalmic Surgeons
For Private Circulation only
June 2008
Vol. IX Issue - 2



Dr. P.I. Mohan
The Ophthalmologist-cum -Administrator

Dr. S.J. Saikumar, Cochin

Dr. Sasikumar had requested me to interview Dr. P.I. Mohan more than a month back. But I could not find time to go to Pathanamthitta to meet him. Finally we hit upon a novel idea, a combination of e mail and telephonic conversation to finish the interview. And here we are!

Right from the time I requested him to answer a few of my questions, the most humble and unassuming Dr. Mohan kept on asking me, "Why me"? And I asked back "Why not"? Senior Ophthalmologist, KSOS Past President, Oration Awardee for Drishti 2008, yeoman service in Rural and Community Ophthalmology, Ophthalmic Administrator…..so Why not?

I congratulated him for being selected for the T.K.Alexander Oration 2008 and started off enquiring about his childhood and why he took up Medicine as a profession. He still vividly remembers the visits with his grandfather to the Salvation Army Leprosy Hospital at Varikkoli near Puthencruz, where he grew up. The stigma associated with leprosy, the deformities, Christmas celebrations with leprosy patients, the customary 'antiseptic wash' at the end of the visit, all these came back to his mind like a flashback. Fate brought him back to the same hospital years later. While working at Kolenchery he went back to the Leprosy Hospital to conduct surgeries for cataract and lid deformities. Probably these visits and the neighborhood LMP doctor inspired him to take up Medicine.

Dr. Mohan studied for his MBBS at KMC, Manipal from where he graduated in 1973. He was instrumental in setting up a Malayali Association in Manipal in 1968 and the same is active even now. He still remembers the Onam celebrations they used to have for which all the faculty members were invited.

Ophthalmology fascinated him even while he was an MBBS student, mainly because theirs was the first batch in Mysore which had a separate examination for Ophthalmology including theory and viva. 'I still remember Dr. C.R. Kamath performing "no suture cataract surgery" using the von Graefe section and forceps delivery of nucleus. He was a great influence for me taking up this beautiful science of Ophthalmology.'

Dr. Mohan did his DOMS from KMC, Mangalore and later his MS from OEU Institute, KMC, Manipal. He eloquently described his post graduate days at Manipal

> Dr. Mohan kept on asking me, "Why me"? And I asked back "Why not"? Senior Ophthalmologist, KSOS Past President, Oration Awardee for Drishti 2008, yeoman service in Rural and Community Ophthalmology, Ophthalmic Administrator….. So Why not?

under Prof. Srinivasa Rao. "Professor was a task master. He had an overpowering personality. He had a vision about the Ophthalmology department at KMC Manipal. Professor worked very hard to achieve his dream. He made OEU institute of Ophthalmology. We also became workaholics by the time we left the institution".

We conducted 2 to 3 major free operating camps per month. At each camp about 200 cataract surgeries (Ab externo, IC Cryo extraction, 3 sutures) were done. Two doctors stayed back for a week for post operative care. Though we had several difficulties during the operating sessions in the camp it gave us an opportunity to learn and realize the importance of what we are doing. We were to keep meticulous records of all patients. Pre, per and 7 days post operative daily findings observations were recorded. My thesis was "A comparative study of complications of cataract surgeries done in the hospital (200) and in the camps (200)".

"I painfully recall an incidence of expulsive hemorrhage while operating in one of the eye camps. I was shaken. Professor said "These things happen. Go, have a coffee and come back."

contd... page 9



President's Message

Respected members of the fraternity and dear friends,

Greetings and best wishes to all of you.This summer has been long hot and hectic with CME programmes in different parts of the state. They have been well conducted and with very good faculty. But what was disappointing was the low attendance. I call upon members to make use of these programmes to update their skills in modern trends of diagnosis and surgical management of cases.

We need more ophthalmic surgeons coming foreword with all the latest techniques and this can only come about with proper training, initiative, infrastructure and support of the fraternity.When cases are referred to a tertiary center or to an expert they should be kind to the referring doctor and all possible help should be given to the patient and the doctor. Unwanted comments will definitely trigger legal proceedings and an atmosphere of animosity. If we cannot help our colleagues who else will?

Let us strive, to serve the profession,our colleagues and the humanity to the best of our ability.

May God bless each
one of you with everything good in life.

Jai Hind Jai KSOS



Secretary Writes

The second quarter of KSOS 2008 has been very active and we had quite a few CMEs through out the length and breadth of the State. Memberships upto 975 have been ratified by the KSOS Executive committee. We are in the process of bringing out Preferred Practice Guidelines for various common ophthalmic diseases. Please visit the ksos website to see the preliminary draft and give your valuable suggestions. Once accepted by the Govt: of Kerala, any deviation from the PPP in managing these cases will invite trouble. Hence before finalizing the draft one should ensure that the PPP is complete at the same time practical. I am not getting reports from most of the Ophthalmic clubs. CME reports are also few. The various Ophthalmic clubs and institutions should send their reports in time for inclusion in the Newsletter. There has been a proposal to increase the KSOS membership from 2009 onwards and it will be put up before the next General body. Please see that all ophthalmologists in our State become members of the KSOS before the hike. After all Unity is Strength.

The March issue of the Newsletter was well received by the members. Please send in your suggestions to improve it further.

Dr. Sasikumar S.

drsk93@gmail.com; drsk93@yahoo.com

Have You Tried this?

Dr. Sasikumar, Kochi

Luer lock syringes

Did you ever had a pc tear with the visco cannula while injecting OVD? It is one of the most frustrating situations a surgeon can face. If the cannula is blocked, forceful injection of OVD can result in extrusion of the cannula. This can be prevented by use of luerlock syringes where the cannula can be screwed tight. Prefilled syringes also come with luerlock system.





Phaco 'tips'

Surge and collapse of AC is one of the main difficulties faced by phacosurgeons, especially the beginners. Putting phaco in the continuous irrigation mode can keep the AC formed even if you are not pressing the footpedal. It can function like an AC maintainer.

Ophthalmic club reports

Report of TACO activities : March – May 2008

TACO meeting in March was held at Nethra Eye Institute, Irinjalakuda Reception to Padmasree Dr. Tony Fernandez was the highlight of the event. The occasion also saw Dr. K C Mathai being honored as TACO personality of the year 2007. The academic session was lively with a very useful talk on OCT basics by Dr. Merine Paul Consultant, Vijayasree Eye Hospital, Thrissur. In April TACO had a







comprehensive update on dry eye by Dr. Bhaskar Sreenivasan, Associate consultant , cornea services Sankara Nethralaya Chennai. Monthly meeting of TACO in May was graced by Dr. Mohan Rajan who took us on a tour of Phako complications with his award winning video titled " The dirty dozen". We also had a brief update on collagen crosslinkage by Dr. Sujatha Mohan

- Dr. V.K. Lathika, Secretary, TACO

Details of camp activities of TACO March – May 2008

Month	No. of camps	Patients Screened	Patient selected for surgery
March	10	2956	420
April	7	1248	227
May	14	2365	353
Total	31	6569	1000

Kottayam Ophthalmic club

The 25th meeting of Kottayam Ophthalmic Society was held at Hotel Pearl Regency ,Kottayam on May 11, 2008. Padmashree Dr S Tony Fernandez was felicitated with a citation and memento by Dr Zachariah Thomas on behalf of the society.Dr K C Baby, President,KOS, Dr Sarojam G and Dr Thomas Zachariah offered the felicitations.

Dr Tony Fernandez released the first NEWSLETTER of Kottayam Ophthalmic Society by handing over a copy to Dr George Peter.

In the scientific sessions, Dr Thomas Mathew of Caritas Hospital, kottayam spoke on "Phacoemulsification- an approach to challenging cases".Dr Sony George of KGM Eye Hospital, Thammanam spoke on " Recent trends in the management of dry eye".Dr Himashree T, PG student, MCH, Kottayam, made an interesting case presentation on "Primary Ewing's Sarcoma of Orbit". Dr Harsha K P, PG student, MCH, Kottayam made an interesting case presentation on "Floppy Eyelid Syndrome in a newborn".

This was followed by "Sharing Moments" by Dr E V Sugunadevi.

The secretary, then expressed the vote of thanks and meeting was adjourned for lunch.

- Dr Manjit P S, Secretary, KOS

Cochin Ophthalmic club

Greetings from Cochin. 2008 is half way down and at this juncture Cochin Ophthalmic Club is really busy preparing for the forthcoming events of the year namely August Ophthalmica and also DRISHTI. In the past months of the year our members have been active conducting CMEs, camps and starting new activities in their various hospitals on a regular basis. CME programmes have been conducted by Little Flower Hospital, Giridhar Eye Institute, AIMS, Chaitanya Eye Hospital, Vasan Eye Care, to name a few. Since the number of these CME programs are constantly on the rise the challenge has been to plan and execute a theme for the CME so interesting that the attention of the delegates is maintained from start to finish of the program. To achieve this end the organizers of both August Ophthalmica and DRISHTI 2008 have been working very hard and I hope the end results will satisfy all. The scientific committees with Drs Mahesh and Saikumar at the helm are already on overdrive.

Several achievements of our members and member hospitals need special mention. The first among these is of course the award of Padmasree to Dr Tony Fernandez. Little Flower hospital has started Electro physiology, AIMS has got governmental acceptance for their tele ophthalmology proposal, Chaitanya eye hospital has expanded, shifted to new premises and introduced several speciality departments.

The membership drive for the club has been good thus far. This year we have enrolled ten new members and hope to enroll more before the year end. Our club meetings continue to be held on a regular basis on the stipulated third Thursday of every month. I am happy to note the attendance at these has been steadily on the rise.

Dr Gopal Pillai has brought out the first newsletter of COC under his editorship. He hopes for a bigger edition next issue with more member participation by virtue of articles etc.

- Dr Revati Ramesh, Secretary, COC

CME of Calicut Medical College

The topic this year is
" glaucoma Update 2008"
to be conducted on sunday
24th august 2008.
Eminent faculty from AIIMS
New delhi,sankar netralaya-
chennai, , Shell's eye hospital-
vellore, RIO chennai glaucoma
experts from kerala
are expected.For details contact
bindunarayanadas@gmail.com

Operation Theatre Ventilation (Part-1)

No area of the hospital requires more careful control of Indoor Air Quality (IAQ) than does the operating or surgical suite. The air-conditioning systems serving the operating rooms require careful design to reduce to a minimum the concentration of airborne organisms. Do you think that adding more barriers (doors) to outside keeps the theatre clean? Then how many door? Is your operation theatre door the 2nd or 3rd or 4th or 5th barrier from so-called outside world (clean room 50, 00,000)? Are you satisfied with the normal split A/C? Now do you think that you are far away from pathogens?

The answer is a big NO. By using normal split A/C and adding more doors to OT complex means you are cutting the fresh air supply which contain sufficient oxygen

A normal split A/C doesn't supply fresh out door air (filtered or unfiltered) .

There is no filtration of air, no humidity control, no pressure control. Remember

air conditioning is the simultaneous controlling of dry bulb temperature, relative humidity, cleanliness, odor, noise, and pressure inside a conditioned area.

Modern operation theatre ventilation design is based on clean room technology

Cleanroom

A **cleanroom** is an environment, typically used in manufacturing or scientific research, that has a low level of environmental pollutants such as dust, airborne microbes, aerosol particles and chemical vapors. More accurately, a cleanroom has a controlled level of contamination that is specified by the number of particles per cubic meter and by maximum particle size. To give a perspective, outside would be considered about a 5,000,000 class clean room and an operation theater is class 100.



Binoy B. Raj
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Overall principles

The function of operating theatre ventilation is to prevent airborne microbial contaminants from entering surgical wounds. Under normal circumstances, the main source of airborne microbial contaminants is microscopic skin fragments given off by staff in theatre. A proportion of these skin fragments will be contaminated with micro-colonies of bacteria resident, or perhaps transiently present, on that individual's skin. Whilst individuals will have different dispersion levels, overall dispersion is increased with movement and numbers of individuals present.

Other sources of airborne micro-organisms are usually less significant. These include improperly-filtered outdoor air, contaminated fabrics worn by theatre staff and backtracking of contaminated air from outside the theatre. The patient is not usually a significant source of airborne contamination; their movement is usually minimal. However, there exists the potential that power tools can create an aerosol from the tissues and any micro-organisms within them.

Airborne micro-organisms can enter surgical wounds by one of two routes: they can either fall directly into wounds or they can land on exposed instruments, and possibly surgeons' hands, and can later be transferred into the wound. The significance of this latter route will vary with the area of exposed instruments and the duration of their exposure, but is thought usually to exceed the contribution of direct wound contamination.

The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) which has carried out considerable research over many years on this subject recommends that CO2 concentrations in occupied buildings should not exceed 1000ppm.More importantly, knowing the difference between inside and outside concentrations can help us determine how much outside air is being introduced to an occupied space. As people Exhale CO2, they also exhale and give off a wide range of other 'bioeffluents" which can include gases ,odours, pherons, particulate matter, bacteria and virus.

ASHRAE gives designers the choice of;

- Introducing hundred per cent outdoor air with a minimum of fifteen air changes per hour and full exhaust, only when building Codes in some countries or some states in America require it,or
- A minimum of twenty per cent outdoor air out of a minimum total of twenty five air changes per hour.

Some consultants may call for sixty per cent outdoor air, some forty and some hundred per cent. These is no uniformity of thought and no Building Codes to go by

Ventilation engineering

The risk from airborne micro-organisms is minimised in the ventilation of theatres in three ways:

1) by filtration of supplied air
2) by dilution of contaminated air in the theatre
3) by preventing entry of contaminated air from areas outside the theatre

Control of postoperative infection caused by airborne micro-organisms is achieved in theatres by exclusion of contamination from the wound. ASHRAE recommends a 25%, 90%, and a HEPA filter in series.

Bacteria intercepted by filters eventually die from dehydration or natural causes, while spores may live indefinitely. Antimi crobial filters and ultraviolet germicidal irradiation(UVGI) are two weapons in the war against microbial growth on filters

Filtered air descends in a uni-directional flow over the patient, creating a "clean zone", rapidly removing contamination generated within that zone and preventing entry of contaminated air.The large volumes of air required to maintain this zone make it

contd. page 11

US FED STD 209E cleanroom standards

particle/ft³							
ISO 14644 -1Class	US FED Class	0.1 µm	0.2 µm	0.3 µm	0.5 µm	1 µm	5 µm
ISO 2	1	35	7	3	1		
ISO 4	10	350	75	30	10	1	
ISO 5	100	3500	750	300	100	10	1
ISO 6	1,000				1,000	100	10
ISO 7	10,000				10,000	1,000	100
ISO 8	100,000				100,000	10,000	1,000

CME Reports

Comtrust Telly - Eye a Systematic Approach

Comtrust Eye Care Hospital, Thalassery in association with Canannore Academy of Ophthalmology organized a CME – Eye A Multispeciality Approach on 25th May 2008. It was in many ways a different CME Programme. The faculty included, Neonatologist , Cardiologist, Endocrin ologist, Oncologist and experts in Hospital Administration along with Ophthalmolo gist of the first order.

The sessions included one on Retinopathy of prematurity in which neonatologist Dr.Preetha Ramesh and Dr.Biju Raju spoke. In the session which focused on Diabetes Mellitus – Dr.Harish Kumar spoke on new medicines and techniques in management of Diabetes Mellitus and perioperative management of Diabetes Mellitus. Dr.Simi Manojkumar and Dr.Mihir Shah spoke on various aspects of diabetic retinopathy.

Dr.Unni Nair gave a video presentation on retinal lasers and Dr.Sreeni Edakhlon dealt with cataract surgery techniques in Diabetes Mellitus. Oncologist, Dr.Gangadharan, spoke about the approved systemic use and complications of Avastin. Dr.Gopal.S.Pillai gave an excellent presentation on diagnosis of systematic diseases through retinal examination . Dr.Manojkumar – Cardiologist, explained the new accepted levels of blood sugar and serum lipids. Dr. N. Sunil gave a talk on "What is new in management of retinal vessel block".

Dr.Sasikumar spoke on his most favorite topic-Operation Theatre. Dr.K.G.R.Nair, Dr.B.V.Bhatt and Dr.K.P.Thomas spoke on various aspects of group practice. But the most interesting talk of the day was on the application of astrology in modern medicine. Dr.Harish Kumar, H.O.D – Department of Endocrinology, AIMS, Kochi, argued that astrology could be used to predict diseases, get an idea about prognosis of diseases, make a decision on timing of the surgery etc.



In the CME programme which was inaugurated by honourable Minister for Home,Vigilance & Tourism –Sri Kodiyeri Balakrishnan. 102 delegates participated. Dr.Sreeni Edakhlon said that Comtrust Eye Care Hospital, Thalassery ,is planning to organize similar Ophthalmology CME programmes which are useful to all groups of doctors, every year.

AIMS Kochi – The Final Frontier- When complications strike

Department of Ophthalmology, AIMS organised a 1 day CME and wetlab at AIMS for ophthalmologists across the country.The CME was titled The final frontier- When complications strike. The theme of the CME is complications during ocular surgery. Speakers across the country including Dr Titiyal from Dr RP Center, New Delhi, Dr Arul Mozhi Varman from Chennai, Dr Ramamurthy from The Eye Foundation Coimabtore and a host of our own local speakers enlightened the delegates with their vast experience and videos. The CME was basically a video assisted skill transfer program. A surgical skill wetlab in Phacoemulsification and lasers and a south zone quiz competition along with the CME was an icing on the cake. It was well attended by about a 100 delegates. The CME was inaugurated by Dr Prem Nair, the Medical Director of AIMS and Dr Rajagopalan Nair and Dr Augustine Mampally gave felicitations on the occasion. The KSOS president stressed the need of compassion to fellow doctors who referred complications to bigger tertiary care centers. 18 people took part in the hands on Phacoemulsification and trabeculectomy wetlab. The South zone Quiz was a big hit and the first prize was to the team from AIMS.

Surgical Scrub Sink

- Manufactured from heavy gauge stainless steel sheet
- Constructed with seamless welds which minimise surface areas where bacteria can collect
- Features a sloping bottom surface which helps to control splashing
- Faucets and foamflow can be removed for disinfection
- Automatic / Foot operated mechanism
- Available in Three station / Double station and single station models



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Dr. Minu Mathen
Trivandrum

Courtesy Eye World - ASCRS

Before the 2008 ASCRS-ASOA Annual Symposium in Chicago got underway, attendees got a jump start on excellent programming during Cornea Day and Glaucoma Day. Attendees also had the opportunity to attend several educational symposia like "New directions in laser vision correction."

Cornea Day 2008 Draws Record Attendance

Speakers at Cornea Day presented to a full house Friday morning, as some of the most pertinent issues to cornea surgeons were discussed. The comprehensive coverage of topics included ocular surface disease, infections and inflammatory disease, refractive surgery and corneal/anterior segment surgery.

Stephen Pflugfelder, M.D., professor of ophthalmology, Baylor College of Medicine, Houston, expounded the current diagnosis and management of tear dysfunction. He presented treatment recommendations by the Delphi Panel based on the severity of symptoms. He stressed that Dysfunctional Tear Syndrome (DTS) as conceptualized by the Delphi Panel in 2006 emphasizes tear composition as opposed to tear volume and therefore includes both dry and wet eyes with tear abnormalities. In answering follow-up questions to his presentation, Dr. Pflugfelder said that in patients with chronic dry eye, structural changes can be seen in the meibomian gland and the chronic condition is associated with a high prevalence of meibomian gland disease. He also mentioned that there is increasing evidence that omega-3 fatty acids are effective as anti-inflammatory agents.

Allan R. Slomovic, M.D., MA, associate professor, ophthalmology, University Health Network, and chairperson, Canadian Cornea/External Disease Society, suggested that the single most important innovation in the surgical management of pterygium in the last five years is Tisseel glue (Baxter Healthcare, Deerfield, Ill.), a commercial human fibrin glue. Presenting results assessing the efficacy of fibrin glue when used in conjunctival autograft during primary pterygium, Dr. Slomovic said it was a safe and effective method of managing both primary and recurrent pterygia. He also said that Tisseel offers advantages over sutures such as decreased patient pain (operative and post-op), significant reduction in post-op inflammation, conjunctival graft stability and minor and correctable port-op complications.

During follow-up questioning, panelists raised the issue of potential risks and complications related to the use of Tisseel. Dr. Slomovic agreed that patients should be informed if evidence has shown these risks.

John Kanellopoulos, M.D., Laservision.gr Eye Institute in Athens, Greece, and Department of Ophthalmology, Manhattan Eye, Ear, and Throat Hospital, N.Y., shared with attendees his experience in treating ectasia with riboflavin and UV crosslinking after seeing 500 cases. Presenting various data, Dr. Kanellopollous said there was significant improvement in patients following treatment and a continued improvement over three years.

Physicians recommend more diagnostic steps in glaucoma treatment

Diagnosing glaucoma remains critical for ophthalmologists so they can begin treatment before the disease progresses.

Measuring central cornea thickness (CCT) is important to gain a more complete understanding of intraocular pressure (IOP), but more studies are necessary to determine how CCT categories should be defined. **Douglas J. Rhee, M.D.**, assistant professor, Harvard Medical School, Boston, said that while it is important to measure CCT, ophthalmologists should not correct the IOP measurement based on the CCT. The various formulas that attempt this correction have failed in agreeing with each other and therapeutic alterations are patient-specific dependent on their baseline, Dr. Rhee said. Instead, CCT should be a criterion based on categories such as "thin," "average" and "thick" corneas. He suggested using less than 510 microns as thin, more than 590 microns as thick, and between 510 and 590 microns as average, but he admitted that these groups need more definitive, study-based boundaries.

Thomas W. Samuelson, M.D., adjunct associate professor, University of Minnesota, Minneapolis, reminded physicians that despite advances in diagnostic technology, it is ultimately the clinician that must decipher and collate all of the clinical information. Therefore, glaucoma management requires incorporating a variety of complex factors such as disease severity, life expectancy, rate of progression and family history, to name a few. Dr. Samuelson also suggested against using imaging in every patient because of prohibitive costs. Rather, he recommended using imaging in patients with less severe glaucoma and using the visual field for patients with more advanced stages of glaucoma.

Wavefront-optimized versus wavefront-guided

Using wavefront-optimized treatments, the overall retreatment rate is extremely low, said **David T. C. Lin, M.D., FRCSC**, clinical associate professor of ophthalmology, University of British Columbia, Canada. In his practice, using the wavefront-optimized procedure, the overall retreatment rate is 0.53% for primary LASIK cases with a 400 Hz laser, Dr. Lin said. Retreatment rates traditionally are more like 5 to 6%, he said. "With these excellent wavefront-optimized results, custom treatments are not necessary for every case," Dr. Lin said.

Dr. Lin continued by discussing wavefront-guided treatment. While some surgeons advocate wavefront-optimized treatment, others still say there is a place for wavefront-guided for patients with high amounts of spherical aberration. Dr. Lin has found methods to completely eliminate its

use from his practice.

He noted because most patients don't need spherical aberration treatment, he has used wavefront-optimized treatment in 92.3% of cases with a 400 Hz laser. With the same laser, he has not performed a single wavefront-guided procedure. In cases where patients do have special corneal needs, such as irregular corneas, he uses topography-guided treatments. He also uses asphericity-guided treatments. "If you have a regular cornea, do wavefront-optimized no matter what the wavefront says," Dr. Lin said

As the 34th Annual Symposium and Congress of ASCRS and ASOA got underway, Saturday, time was taken to honor a few "greats" in the field of ophthalmology. The day's educational sessions began with a smattering of hot topics including glaucoma pearls, spherical aberrations, and femtosecond lenticule

Take extra steps to insure better glaucoma medication compliance

It will take a team effort to improve patient compliance in taking glaucoma medications retired Lt. Col. **Herbert P. Fechter, M.D.**, assistant professor, Uniformed Services University, Atlanta, said. Some tips he provided to create the ideal team are to educate patients about the need to take their medications; insure access to them; use creative memory aids; and designing devices to help administer drops. Dr. Fechter credited industry for taking some steps toward these goals by altering bottles and creating new devices that make administering drops easier, especially for arthritic patients. There also are prescription savings programs available, and practices should help patients get access to them, he said. Also, practices can get creative about reminding patients to take their medications by sending automated e-mail and/or telephone reminders or use visual- and audible-reminder bottles.

Ophthalmologist addresses target spherical aberrations

Douglas D. Koch, M.D., professor and the Allen, Mosbacher, and Law Chair in Ophthalmology, Baylor College of Medicine, Houston, provided several pearls for targeting zero spherical aberrations (SA) in the pseudophake. The SA of the eye should be slightly negative, Dr. Koch said, and on average, the intraocular lens' (IOL) SA should be less than –0.30. Even with decentration of up to 0.5 mm, IOLs with negative asphericity outperform those with zero or positive asphericity. Following myopic LASIK, the SA should be –0.45, but after hyperopic LASIK, the SA should be –0.02. And finally, a reduction in SA does not clinically compromise the depth of focus, Dr. Koch said.

20/16 faster with IntraLase

Marguerite McDonald, M.D., clinical professor of ophthalmology, Tulane University, New Orleans, and Ophthalmic Consultants of Long Island, New York, has traditionally been an advocate for surface ablation, but now she finds IntraLase (Advanced Medical Optics, Santa Ana, Calif.) LASIK to be optimal in certain regards.

Although she still maintains that flap creation can result in 3rd and 4th order aberrations and biomechanically unpredictable corneas, she finds some major benefits with IntraLase. For instance, she said, it takes a relatively long time for PRK patients to achieve 20/16 vision. IntraLase, meanwhile, can make that happen virtually overnight.

Single Arm Pendant

The single over head suspension arm offers:

- Procedures and tasks easily adapted
- Reduction of work and personal movement is attained
- Good designed allows for overall overview
- Easy moving and positioning
- Maximum access around the patient
- Concealed cable and tubes
- Reduced space requirements, unlimited equipment combinations
- Practically all accessories are detachable and interchangeable

Technical Data:

Max.Load	: 80 Kg
Arm length	: 800-600
Rotation angle	: 340 Degree
Electrical Socket	: Up to 10 units each console
Outlet	: Up to 8 units



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"I have certainly not given up PRK," Dr. McDonald said. "I do plenty. Though the final results are now the same [between PRK and IntraLase LASIK], and PRK pain is conquered, there is now a very significant gap of return to great vision at the highest levels of vision."

More FLEx Results Are In

Researchers are getting better acquainted with Femtosecond Lenticule Extraction (FLEx, Carl Zeiss Meditec, Jena, Germany/Dublin, Calif.). Six-month results are now in, and according to one researcher, are promising. There now are 108 eyes that underwent FLEx that have three months follow-up data, and 82 eyes with six-month results. Of all eyes, 12% gained two or more lines of best-corrected vision. Two eyes lost more than two lines at 3 months, but 1 resolved at 6 months.

"Stability is remarkable," said **Walter Sekundo, M.D.**, department of ophthalmology, Gutenberg University of Mainz, Germany. Seventy-eight percent of patients have achieved 20/20 vision or better. Six eyes did have mild haze. Ten eyes did develop microstriae. Six eyes developed dry eye. But overall, FLEx is safe and effective for treatment of myopia and myopic astigmatism, he said. Dr. Sekundo has begun offering the procedure to his patients.

Sessions continued Sunday at the 2008 ASCRS-ASOA annual symposium in Chicago with hot topics in cornea and glaucoma. The highlighted event at Sunday's general session included the Manus C. Kraff lecture, honoring Michael Merzenich, Ph.D., for his contributions to the field of neuroscience and his research in brain plasticity.

Managing Ametropia

As part of a symposium on Hot Topics in Cornea and External Disease, corneal controversies in the management of ametropia were discussed.

Among the issues talked about was dry eye after LASIK, by **John Sheppard, M.D.**, professor of ophthalmology, microbiology, and immunology, Eastern Virginia Medical School, Norfolk. Dr. Sheppard said it was important for surgeons to be diligent in looking out for dry eye post-op and listed the kinds of patients who were at high risk for dry eye. Detailing the mechanisms of the condition, he also listed ways in which to detect dry eye such as visual acuity fluctuation, getting patient history, using the slit lamp, performing the Schermer test and tear film break-up time. Dr. Sheppard also discussed treatment of dry eye as recommended by the Delphi Panel. Should dry eye occur post-lasik, he said doctors should repeat the therapy conducted pre-op.

Another issue related to LASIK, the assessment of patient risk for ectasia post surgery, was discussed by **J. Bradley Randleman, M.D.**, Department of Ophthalmology, Emory University, Atlanta. Dr. Randleman started off with a case presentation of a patient who developed ectasia even though the pre-op factors: high myopia, low residual stromal bed, and forme fruste keratoconus, traditionally thought to be the main risk factors, did not apply to him.

Dr. Randleman then went on to talk about a risk score model he and colleagues at the Emory Eye Center devised through a retrospective study of all patients with ectasia who sought treatment at the center from 1998 to 2005 as well as those found in the English language literature through December 2005, identifying a total of 171 cases that were compared with 186 controls. Patient age, gender, preoperative manifest refraction spherical equivalent, preoperative corneal thickness, predicted residual stromal bed thickness, and topographic patterns, were analyzed and the topographic patterns were broken down into three categories: normal, suspected (mildly or significantly), and abnormal.

Dr. Randleman and colleagues determined main risk factors through the data and came up with a risk factor score point system that generated a cumulative score based on the presence of a risk factor in the patient. When they applied this scoring system to their study groups, they found that 98% of the control population was identified as low risk and 93% of the patients with ectasia were identified as high risk. When applying this system to the case he presented at the beginning of his talk, Dr. Randleman said the patient had a score that would not recommend him for LASIK. Dr. Randleman warned that the research team did not have enough data to know if the scale is applicable to surface ablation patients.

Phaco reduces IOP in glaucoma patients

Given the success he found in his data, **Brooks J. Poley, M.D.**, Minneapolis, said he could foresee a future in which a clear lens extraction would be a surgical option for glaucoma regardless if the patient has a cataract.

"Phacoemulsification with IOL [intraocular lens] implantation may be the most successful and unrecognized way to treat glaucoma," Dr. Poley said.

To get to this conclusion, Dr. Poley performed a retrospective study to assess phaco's effects on glaucomatous eyes in the long term. For the study, he stratified 131 eyes into five groups according to their pre-op IOP: 29 – 23 mmHg (n = 21); 22 – 20 mmHg (n = 22); 19 – 18 mmHg (n = 30); 17 –15 mmHg (n = 34); and 14 – 6 mmHg (n = 24).

Eyes with the highest pre-op IOP saw the greatest reductions at one-year post-op and at the final measurement.

Average IOP reduction of all eyes was 3.3 ± 2.9 mmHg at one year and 3.2 ± 3.1 mmHg at final. Patient age at surgery did not influence the post-op IOP response. All of the patients with IOPs of at least 20 mmHg (n = 43) had a reduction.

Dr. Poley also noted that patients with the narrowest anterior chambers, which also had the largest lenses, experienced the largest reduction. He postulated that as the lens ages, it becomes a major cause of ocular hypertension and adult glaucoma.

Canaloplasty-phaco procedure effective for patients with OAG, cataracts

In a prospective, international, multi-center study of canaloplasty to treat open angle glaucoma (OAG) in patients who also presented with visually significant cataract, **Bradford J. Shingleton, M.D.**, assistant clinical professor, Harvard Medical School; and clinical instructor, Tufts University of Medicine, Boston, and his colleagues treated 57 eyes with a combined canaloplasty-phaco procedure. Pre-op study eyes presented with an average IOP of 24.1 mmHg (n = 57, SD = 6.1) with an average of 1.5 glaucoma medications. At 12 months the average IOP was 14.0 mmHg (n = 29, SD = 4.3) with 0.2 medications. Dr. Shingleton said there were not any threatening complications. Visual acuity on average improved by 0.2 logMAR (2 lines), with no eye demonstrating a loss of visual acuity of 0.3 logMAR (3 lines) or greater. The incidence of surgical complications was low. The most common complication of trace blood in the anterior chamber at one day post-op (28.3%), but it was resolved in almost all cases by one-week follow-up. Other complications included Descemet's membrane separation (1.8%), post-op IOP spike greater than 30mmHg (1.8%) and iris prolapse (1.8%).

Dilation and tensioning of Schlemm's canal in combination with cataract surgery may be an effective surgical treatment for open angle glaucoma and visually significant cataract.

Dr. P.I. Mohan ....contd. from page 1

We then traveled further down Dr. Mohan's career. After his MS, he joined MOSC Medical Mission Hospital (now Medical College) with Dr. Naomi Vettath. This hospital was partnered with CBM, Germany for it's community activities. With the young energetic Dr. Mohan joining the department, the outreach services were extended further and the first eye camp in the Highranges was conducted at Vellathooval in Idukki District. They also had a School Screening Program and a Vocational Rehabilitation Center for Blind and Physically Challenged Women.

During one of the Regional meetings, CBM officials requested the Kolenchery team to initiate Community work in North Kerala. Thus surgical eye camps were conducted at many places in Wayanad including Cherpuzha, Sulthan Bathery, Puduppady and Codacal. "This culminated in establishing an eye hospital at Kariambady (Wayanad Dist.) in January 1986. Establishing such an endeavour situated 300 kms away was a real challenge. Our team at Kolenchery was a great strength; and the management was always willing to support. I visited Kariambady once a month. During each visit, I had to conduct OP, do surgery, look after the administration, meet local people, and raise funds", Dr. Mohan said.

The first CT Scan in Kerala was established at Kolenchery in 1983, and there was a great increase in the number of trauma cases. This gave Dr. Mohan an opportunity to handle a large number of cases with associated ocular and orbital trauma.

Later Dr. Mohan shifted full-time to Kariambady. He descibes many innovative ideas that he implemented. "More than 60% of the population was below the poverty line which included 150000 tribals. CBM supported us in our services at Kariambady. I conceived an idea of raising funds to give subsidy to poor patients – "Give Sight". To all donors a receipt was issued. This was followed by a letter with complete address of the patient who benefited by their contribution and occasionally pre and postoperative photographs were also enclosed. There was tremendous response to this project. I remember receiving a donation from Iraq!"

They gave full free treatment to the tribals including food. Except few sects most of the tribals are very poor. They do not have money to come to the hospital to avail free treatment.

A comprehensive eye health care programme was launched to benefit 250000 people. A few volunteers were selected and trained to check vision, identify cataract, Pterygium, Chronic Dacryocystitis, Squint etc. They were deployed to visit each house



in a given area and examine the occupants. All persons found to have eye disease were motivated to report to the base hospital.

After he left Kariambady, Dr. Mohan had a brief stint at Parumala before taking up his current assignment as Medical Superintendent of MGM Muthoot Medical Center in Pathanamthitta. This is a corporate set up, much different from the Community based hospitals he worked in before. His success in this new corporate environment shows his adaptability to any situations. He had a special interest in Hospital Administration and was inspired by Dr. K.C. Mammen in Kolenchery and Mr. P.G. Michael who was the Regional Representative of CBM. "Administration is one area where there are constant changes. You would need a clear and tolerant mind. Quick decisions are mandatory. There are difficult situations. All the time you are solving problems and while you are at it you create more problems to be solved. However, I love my job (not my chair!), said Dr. Mohan.

He was all praise for the various NGO's working in the field of Ophthalmology in India. Dr. Mohan feels that many of the present Ophthalmic Hospitals in India wouldn't be there, but for such organizations. "Once it starts running for a few years with support, it can easily find local funding and become self-sufficient", Dr. Mohan explains. Other than Kariambady, Dr. Mohan also had the fortune of setting up a hospital at Puduppady in Wayanad with CBM support, and a hospital at Yacharam village in Andhra Pradesh with support from OEU and LV Prasad Eye Institute.

He considers his Presidency as his greatest contribution to KSOS. He was all praise for the Calicut team which organized Drishti 2000. It was here that he took over as President. The most notable event during his term was the registration of our organization as Kerala Society of Ophthalmic Surgeons.

Before signing off, I enquired about his family. Mrs. Remani (Remani chechi to many of us) has been a source of support and inspiration throughout his professional career. Their elder daughter Dr. Sangeetha, a Microbiologist is married to Dr. Joseph John a Hematologist, both working at CMC, Ludhiana. Their younger daughter Dr. Sweetha is doing her PG in Anesthesia and is married to Dr. Vinay Samuel, a Surgeon, both in CMC, Ludhiana. Dr. Mohan and Remani Chechi are proud grandparents to Jonathan, Ryan and Natasha.

I wish to thank Dr. Mohan for the 'electronic' interview and wish him many more active years both in his professional and personal lives.

Report of Website editor



Dr. Thomas George
Trivandrum

The site has been updated and is up. The addresses are accessible to all and the members have an address change form to make changes, add email ID, add phone numbers etc. All changes in postal addresses are forwarded to the editor journal and general secretary by email. I would appreciate it if more members log on to this form and register their email ids.

I have been sending group mails regarding CMEs registered on the site. I hope they are being received by you all from an email id web.ksos@gmail.com . I also request organizers of CMEs to log on to the site and post the CMEs on the conference tab.

In the articles tab in the left hand side set of tabs we have uploaded tentative "standard practice guidelines". This is actually part of a Kerala state government initiative. I request all of you to go through these and give feedback. We still have a few more weeks to make changes before submitting these to the government for publication. Have your say in the first practice guidelines to be put forth by a State government in India. The feedback will be forwarded to the section authors and coordinator for decision regarding incorporation into the guidelines.

The details of Drishti 2008 are on the site and are being made upto date on a regular basis. The abstract submission and registration forms are available on the site.

From the Desk of Editor



Greetings from the Editorial Board of Kerala Journal of Ophthalmology.

The second issue of the journal which you will receive along with the newsletter is probably one of the more balanced issue so far and has managed to include almost all subspecialties - I sincerely hope that it will make good thought provoking reading. We have been considering having a section on "Letters to the Editor" in the forthcoming issues. Your constructive criticism and suggestions as well as your valuable contributions are most welcome.

The invitation for abstract submission form for the Annual Drishti Conference 2008 will be carried as an insert along with the journal.

Your suggestion as well as any change in address can be intimated to me by e-mail or post.

With warm regards,

Dr. Meena Chakrabarti, Editor.

New data supports new technology in presbyopia treatment

The presentations made during Monday afternoon's discussion on presbyopia-correcting intraocular lenses (IOLs) provided further proof how much ophthalmologists are involved in the early pioneering work of this field, said **D. Michael Colvard, M.D.,** assistant clinical professor, University of Southern California, Los Angeles.

One example that supports Dr. Colvard's statement is the work being done by **Stephen A. Updegraff, M.D.,** St. Petersburg, Fla., and his colleagues. Dr. Updegraff presented a retrospective review of eight patients who received a total of 10 piggyback IOLs of which five were multifocal and five were spherical. Dr. Updegraff said all multifocal piggybacks resulted in improved range of vision. Piggyback IOLs provide excellent refractive outcomes for either reducing hyperopia or providing multifocality for spherical pseudophakes.

There will be a growing need for more piggyback technology choices as the number of refractive lens implantation increases as patients develop lenticular changes. For many of these patients, an intraocular approach is more stable and avoids possible ocular surface issues encountered with corneal refractive procedures, Dr. Updegraff said.

Another example of pioneering work can be seen in the work of **J.E. "Jay" McDonald II, M.D.**, Fayetteville, Ark. Dr. McDonald presented results from a new method he is developing for quantifying ocular dominance to determine whether patients are good candidates for the correction of presbyopia correction with monovision.

Dr. McDonald said the degree of ocular dominance and the ability of the patient to produce bilateral fusion of images at the cortical level are critical to success in using monovision to achieve continuous vision as a treatment for presbyopia. The new methodology uses electronic shuttered goggles to assess the patients' neuro cognitive visual cortex integration.

At three months post-op, about 20% of 42 patients used spectacle for near vision. All patients were 20/30 or better at distance, and 73% were 20/20 or better. Near visual acuity was J2 or better for 88%, and J1 or better for 48% of patients.

Robert P. Lehmann, M.D., clinical associate professor of ophthalmology, Baylor College of Medicine, Houston, said interim visual results in binocular testing of subjects bilaterally implanted with ReSTOR or ReSTOR Aspheric IOLs (Alcon, Fort Worth, Texas) indicate the aspheric IOL may provide advantages.

Dr. Lehmann compared the two IOLs in a prospective comparative study of nine bilateral ReSTOR subjects and 11 bilateral ReSTOR Aspheric subjects.

The mean uncorrected distance logMAR visual acuity for the ReSTOR group was 0.07 compared to –0.03 for the ReSTOR Aspheric group. Mean uncorrected near logMAR visual acuity at best distance is 0.11 for the ReSTOR group and –0.05 for the ReSTOR Aspheric group, he said.

Ricardo Alarcon, M.D., Department of Ophthalmology at Servioftalmos, Bogotá, Colombia, provided an update on the long-term data for patients implanted bilaterally with the Synchrony Dual optic IOL (Visiogen, Irvine, Calif.). In his prospective, non-comparative series of cases of 42 patients (84 eyes) the mean uncorrected visual acuity (UCVA) at one for distance was 0.02 logMAR, –0.10 logMAR for intermediate vision and 0.10 logMAR for near, Dr. Alarcon said. After two years, the mean UCVA remained stable: 0.03 logMAR for distance vision, –0.10 logMAR for intermediate vision and 0.06 logMAR for near vision. Also after two years, more than 90% of patients can read 0.3 logMAR (20/40 Snellen), Dr. Alarcon said. This study demonstrates that Synchrony can provide adequate and stable functional vision at all distances without inducing halos or glare, he said.

Decentered multifocal IOLs very problematic

Decentered monofocal IOLs change very little in terms of image quality, said Pablo Artal, Ph.D., Laboratorio de Optica, Universidad de Murcia, Spain. But if you decenter a multifocal IOL by 0.5 mm, "the situation is really terrible," Dr. Artal said. That's because the patient will likely complain of diplopia. "Centration is extremely important," for such cases, he said. Can neural adaptation help with optical problems? "We do not know yet what happens with adaptation to scatter and other irregular artifacts in the retinal image," Dr. Artal said. "I don't think you should rely on posterior neural adaptation to try to avoid ocular problems."

What causes PCIOL dislocation?

Nick Mamalis, M.D., John A. Moran Eye Center, Salt Lake City, Utah, has investigated potential issues leading to PCIOL dislocation. In an analysis of 84 cases, 42 were associated with pseudoexfoliation. Fifteen had retinal detachment or previous vitrectomy. Trauma was uncommon (4 cases). Silicone IOLs (34), PMMA lenses (28), and acrylic ones (22) were all involved in dislocation. So were one piece lenses and three piece lenses. Of note, the mean time from surgery to dislocation was 9.2 years so onset is clearly delayed. "What can we do to prevent this?" Dr. Mamalis said. "Minimize stress at the time of surgery." He also said placement of a CTR could help, but the jury is still out on that one. It also is unknown if IOL placement in the sulcus subjects patients to higher risk.



Dr Minu M Mathen with the ASCRS President Dr. Bradford J Shingleton

necessary to recirculate air from within the theatre. Filtration of this recirculated air is essential to prevent contaminated particles also being recirculated. The filters used are HEPA (high efficiency particulate air) filters. Supply of cool, filtered air from the ceiling of the operating theatre, in a flat, downward movement, called 'laminar flow', to several exhaust outlets located on opposite walls at a low level near the floors, is probably the most effective air movement pattern for maintaining the concentration of contamination around the patient at an acceptable level.

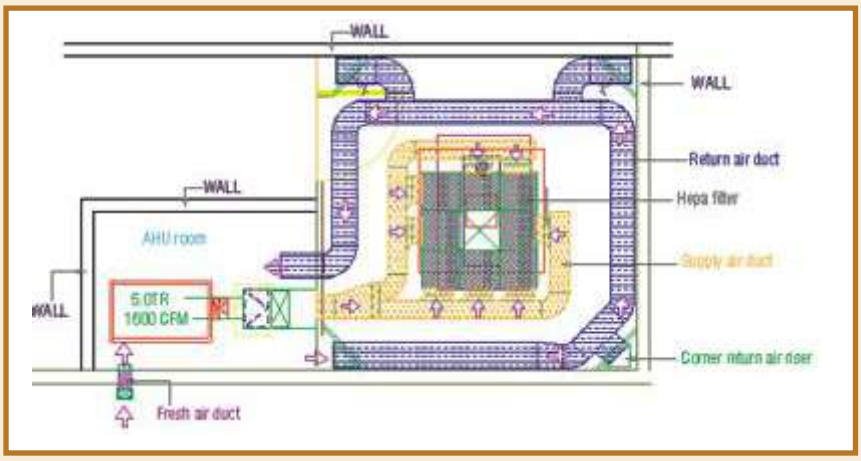


Fig-1 A typical operation theatre system plan

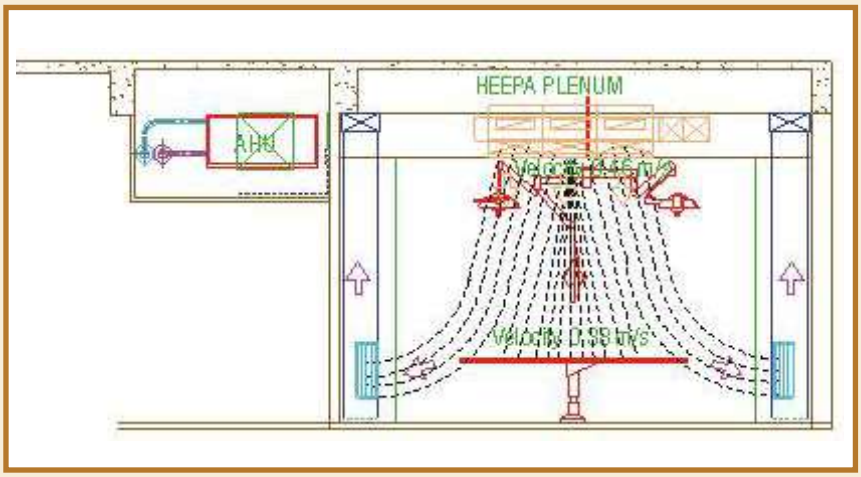


Fig-2 A typical operation theatre system sectional view

Air Handling Units

The Air Handling Unit (AHU) is centrifugal type fan that pumps air. The fan is usually located in the Air Handler /Water Coil Cabinet. Its purpose is to create a pressure differential so that the air from the conditioned space is drawn to the unit. The air is passed through a filter first to remove the dust particles and then over the cooling coils or chilled water tubes where the heat is rejected. This cooled and dehumidified air is then drawn into the suction side of the fan and discharged back into the conditioned space .a damper arrangement in the suction side of the AHU is kept a little open to draw in fresh air.

Ducting

Ducts are usually aluminium sheets or stainless steel sheet, shaped into rectangular boxes or round tubes. They are used to distribute the cool air from the air Handling Unit (AHU) , uniformly through out the building to be air conditioned. They start at the AHU, or the packaged air conditioner, and travel to the spaces to be conditioned carrying the cool air. Galvanised iron ducts should not be used for operation theatre ventilation use.

Laminar flow plenum

This is the delivery end of supply duct which will be mounted in the ceiling above the surgical table . HEPA filters are mounted inside this plenum. The air velocity should average 0.38m/s at the surgical table position.

Return Air

Since a substantial amount of energy goes into cooling the air in the first place it is a practice to recycle the air. The air is therefore brought back to the AHU, or the packaged air conditioner , using return air ducts. It is common to route the return air through the gap between false ceiling and the main ceiling, a space referred to as a Plenum. But this false ceiling plenum system is not at all recommended for operation theater ventilation instead a separate return air duct has to be provided.

Fresh air Intake

A certain volume of fresh, outside air is sucked into the building near the AHU. This air is usually drawn in through a 'damper' which is adjusted to allow the specified volume of air into the building.This keeps the air pressure within the building a little higher than the outside air pressure.This prevents dusty, moist or any undesirable external air from infiltrating into the building.



Fig-3 HEPA filter with continuous pleated media to reduce leakage

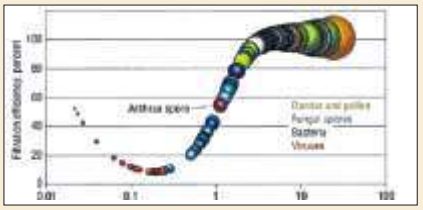


Fig-4 Airborne microbes overlaid on the performance curve of a 60-to-65- percent –dust-spot-efficiency filter.The circular areas represent the mean diameter of microbes in relative proportion

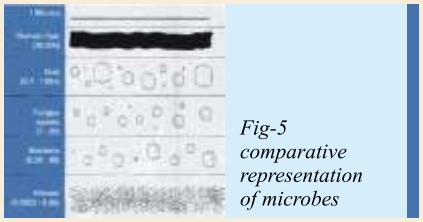


Fig-5 comparative representation of microbes

A positive air pressure

To prevent infiltration of air of questionable quality into the operating rooms from adjoining rooms, air pressure inside the OT must be maintained at a positive level with respect to any adjoining room by supplying 15%excess air over the exhaust air. The air distribution system must be carefully balanced after installation to ensure that air movement is from clean to dirty areas and not the reverse.

....To be contd

AMENSCO

Stainless Steel operation theatre,
Ultra Clean Air Ventilation with 0.3 micron HEPA filters,
Seamless flooring, Stainless Steel scrub sinks,
Stainless Steel sterile storage system,
Stainless Steel door with manual / automatic option
Surgical Control Panel
Surgical / Anaesthesia Pendant
Wall coating using epoxy, epoxy polyurethane
Operation Theatre complex designing





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