



Elite School of Optometry Alumni Association

Newsletter-July/August 2009

Hi...!!!

I'm sure that you are as delighted as we are to know that our online newsletter and our website is one year old...

Your contributions have given life to the newsletter in all the issues that have come out so far. We only wish that you will stand by our side to steer forward this pleasant great task

Please do post your valuable suggestions and help us to grow..

-Editors

-Aiswaryah R (BO18)

-Abinaya Priya V (BO 18)

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@ Elite School

- 🌐 **Empowered by technology:** ESO's website was launched and can be accessed through the given web link- <http://www.sankaranethralaya.org/eso>
- 🌐 **Visitors:** A team from Luxottica India Eyewear Private Limited visited ESO in the month of June. They were briefed on Education, Research and Community activities at ESO by Dr Krishna Kumar. The team expressed its interest in collaborating for training students in hands on frame making techniques

🌐 Community Service



- 🌐 ESO is actively participating in various screening programmes for school children and general population. We are proud to be a part of “**Palli sirar kannoli Kappom Thittam**” co-ordinated by Govt of Tamilnadu
- 🌐 Around 2000 people underwent vision screening conducted by ESO. About 400 were referred to tertiary care centers for further management
- 🌐 A powerpoint presentation on Eye care and awareness of eye disease was prepared in Tamil and English for teleoptometry/teleophthalmology camps

🌐 Education







- 🌐 Board of Studies met during the third week of June. Some courses in both BS and M.Phil were restructured
- 🌐 ESO re-opened for the BO25 batch on July 6th!!!
- 🌐 29 candidates were chosen in for 25th batch of BS Optometry degree.
- 🌐 As a part of industrial visit the third year students (BO22) went to ESSILOR Bangalore. They were accompanied by Alumni Ms Anuja (BO10) and Ms Revathy (BO14)
- 🌐 ESO constantly keeps abreast with latest trends in optometry. The weekly CMEs and grand rounds cover variety of topics including Case discussions apart from routine lectures.



Research

-  15 M.Phil students and 29 BS optometry students completed their research projects and presented their projects reports.
-  The projects were concentrated in broad areas The details of the projects can be found in ESO website.

EIVOC Update:

-  Our ESO is planning to celebrate the 25th anniversary in a grand manner.
-  EIVOC-ESO International Vision science and Optometry Conference-2010 will be conducted on 12-14th August 2010 at Chennai Convention Center as a part of ESO's 25th anniversary.
-  Eminent personalities like Prof Jay M Enoch, Dr Lakshminarayan Vasudevan, Dr Sarita Soni, Dr Suresh Viswanatha, Prof Eli Peli, Prof Christine Dickinson, Dr Mitchell Scheimann and Dr Rakhi Dandona have consented to participate.
-  The conference will have Scientific sessions on essential optometry areas such as Refractive Errors and Aberrations, Binocular Vision, Low Vision, Ophthalmic Dispensing, Contact Lens, Ocular Diseases, Public Health and Teleoptometry and workshops on Specialised Contact Lens Fittings, Low Vision Management, Vision Therapy, Optical Dispensing Techniques, Imaging and Diagnostics, Research Methodology, Optometry Education and Practice
-  More details available @ www.eivoc2010.org
-  A get together for ESO alumni is being planned





Name: Saraniya A S

Elite: BO 7

Date of Birth: 10th June

Saranya Sachi Balasubramaniam (alias Saraniya A S)

Hello I belong to the 7th batch of ESO graduates. My journey towards becoming an optometrist started when one of my dad's colleagues suggested optometry as a career option. Not knowing much about optometry I went over to SN to meet one of the optometrists who took time and explained about optometry and the options available after I finished the course.

College started with the entrance and interview, and getting to know the seniors. I could tell you how many matchsticks can line the floor of the library!!! Classes were fun, with us jumping out of the windows at the earliest opportunity to play volleyball and throw ball at the nets behind the classrooms. Second year saw us going to the clinic at REH there were always more optometrists than patients then, so we practiced on each other. We fought and took turns to see real patients, with Satya and Akila on hand to break up fights over who gets to do the work up on this patient. The Thursday seminars and Saturday grand rounds were but an excuse for a lively debate and discussion.

After graduating from the course I decided to continue on at SN, I started off as a junior optometrist and worked my way up to being in charge of the contact lens clinic. My first day of being an optometrist I was posted to work under Dr LG, and then next under Dr SSB,

now if that isn't a baptism of fire, then I have no idea what else is. At one point I was called to the DBR room and told, well there are patients waiting, start doing the A Scans, imagine my shock, because all I knew was the theory and till then only the PG s did it, but then like everything else I decided to do the best I could. Dr SKR checked the first few ones I did and oked them, and then no looking back, now it is part of the optometry dept. If I started naming all the consultants who have been an influence on me, then I would never finish, but I cant go on without mentioning Dr TSS and Dr LV, busy as they were, they always had time to clear doubts without getting annoyed. I had my share of tears and triumphs, but I wouldn't trade my time at SN for anything else; it gave me the confidence and knowledge that I required for my exam in the UK.

Now that was fun!!! You see I didn't have anyone to ask about their experience as I was the first candidate from India to take this exam, but I had good friends. The professors at Anglia Polytechnic took interest in the fact that I was the first Indian candidate to do the exam and spent a good few afternoons helping me plan my study, thanks to Preethi who had introduced me to Prof Dan O Leary. Pinakin helped me with text books and more importantly the much needed boost of confidence, he kept saying 'of course you would clear it, who else if not u!!!' Thanks Pinakin. It is thanks to them and the time at SN and our dinner table quizzes, (my husband kept at me during my preparations) that I cleared the exams at one shot.

Working in UK for six years, it was much easier in the sense that people there recognise optometrists as professional



practitioners and who were responsible for all the primary eye health care needs. They saw the ophthalmologist only if we referred them. I had the opportunity to work with the award winning cataract and diabetic retinopathy screening teams. The work there was wonderfully challenging, as well as rewarding. This is something that I miss now that I am back in India, the recognition of my profession. Furthering my professional experience and education, (of course I had to keep up my tradition of being the first Indian optometrist), I went ahead with doing the Postgraduate Diploma in Ophthalmology in London. This course is open to practitioners registered in the UK with experience in clinical work. I have now been back in India since the end of 2006 and started practice 'Acchutha Eye Care' in Erode, Tamil Nadu, with my husband Bala (Dr KCB as he was known at SN) who is an ophthalmologist. It has been a whole new experience, and so far has kept me on my toes.

All through this journey of being an optometrist, I have had the support and guidance of a lot of people whom I consider a privilege to having worked for and with. Dr E Vaithilingam was a great teacher, though we didn't understand half of what he used to tell us in the clinics, I wish I could tell him that I understand now. Satya who told me to learn the working of a retinoscope before she let me touch it, Akila who was always there to guide us, poor thing we used to come up with these really really weird doubts, but she always answered us with a smile. Uma and Geeta at ESO who always had a smile for us. Chief who has been an inspiration, Dr TSS who used to communicate through the mirror, and put with a lot of 'Sir why is this like this' with a smile and all the support staff, at SN and

But most of all I feel blessed to have a wonderful family my parents who always believed in me even when I didn't really believe I could. The incident that comes to my mind is during my final exams, ours used to be a two-day affair then with external examiners from GOH etc. I came back after the first day of the exam all upset and 100% sure that I had failed and lost all the seven or eight medals that I had accumulated through the years but my mom and dad kept saying go on of course it could not be so bad as I thought and any case just finish the exam, So armed with this acceptance I completed the exam and when I called home with the results and the fact that I was the best outgoing student, my parents just said 'well we always knew that you would be'. And on my graduation day when I stood on the stage with the medals and certificate I was just so happy that I had lived up to their belief in me. I guess that is the true mark of an academician that my father could actually see my potential even before I realized I had it in me and my mom instilled the work ethics of doing whatever I did to the best I could. My parents always told us (me and my two sisters) that the competition we had to beat was only ourselves; they never asked us which rank or grade, all they wanted to know was that we did the best that we could. That makes all the difference in our performance even today. My elder sister who always lets me borrow her clothes, I still do it today, she carried my bags to school, irritating and embarrassing as I was, she looked out for me then and continues to do so, and my younger sister who always has a kind word and encouraging thought and still thinks I can sing. My son who always has a smile for me and my husband who stands by me always.



On the lighter side...

Jumble Fumble

Unjumble the following terms

NOSTISSIIHCER

PAMISAYDRSCOOOTH

CONADIBUT

HYSISCNSY

MRIENCAA

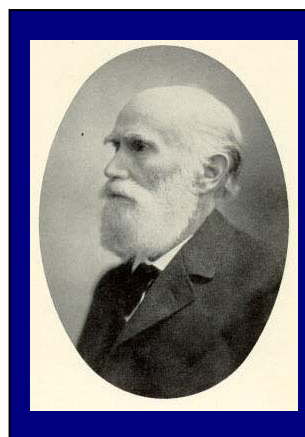
MOPSALLGAOHHT

CATLEENHSTU

OPIOMASPUDEY



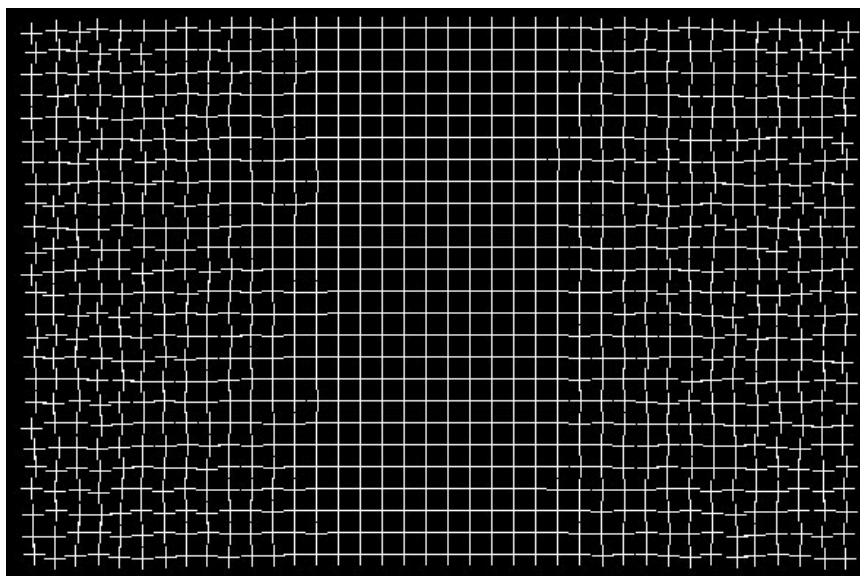
Identify the Personality



CLUE: Cat eye reflex

Send your answers to esoaa.nl@gmail.com before 25th Sept. Names of first five correct responders in each segment will be published in the next issue

Illusion of the month



The image is regular at the center, but the grid pattern is less regular at the peripheral parts of the images (both on the left and right edges). As you stare at the center of the grid for say 20 seconds, the regularity of the grid pattern at the center spreads into the irregular parts in the periphery. This illusion seems to indicate the preference of the visual brain to see regular patterns.



Winners!!!

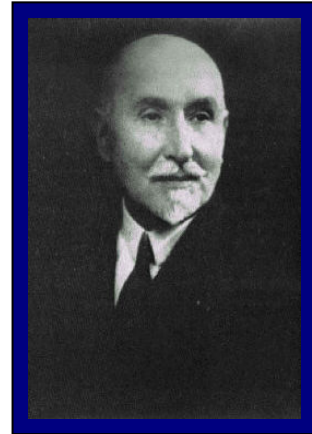
Jumble Fumble

FOURIER
RETINOSCHISIS
EXCIMER
NUMMULAR
CHALASIS
VISCOELASTIC
TURVILLE
PLEXUS
SYMBLEPHARON
CAT CARD

No correct responses!!!

Heartiest congratulations to the winners
of picture quiz!!!

Identify the Personality



Ans: Bernard-Jean Antoine Marfan

Winner s of last month's picture quiz

Ms Deepika Sridhar (BO 11)

Ms Kavita Balajee(BO8)

Mr Karthikeyan (BO 16)

Ms Rizwana Hussain (BO 16)

Ms Sivagami Al (BO 15)

Hall of Fame

Anton Elschnig (1863-1939)

Austrian ophthalmologist

- 🌐 He studied medicine in Graz and graduated in the year 1886
- 🌐 Studied Ophthalmology in University of Graz
- 🌐 Practiced as assistant ophthamologist at Graz and Vienne till 1892
- 🌐 Became full time Professor in Ophthalmology in German University from 1900
- 🌐 Published the Handbook of Ophthalmology in German
- 🌐 Co-authored books on Surgical Procedures
- 🌐 Popular for finding Elschnig's pearl (translucent mass following cataract surgery caused by aberrant attempt of lens epithelium to form lens fibres)

**Post your views, comments suggestions and intellectual
contributions to esoaa.nl@gmail.com**



CARPAL TUNNEL SYNDROME

The carpal tunnel is a narrow, rigid passageway of ligament and bones at the base of the hand

Occurs when the median nerve running from forearm into the hand is damaged

Most common and widely known of the entrapment neuropathies in which the body's peripheral nerves are compressed or traumatized

Causes

Edema of irritated tendons

Work-Related

Hormonal Change

Genetic factors

Injuries and Medical Conditions



Symptoms:

Pain

Weakness or numbness in the hand & wrist

Frequent burning, tingling, or itching especially the thumb and the index and middle fingers

Decreased grip strength

Population @ risk:

Women > men, older adults

Systemic illness like diabetes/ metabolic disorders directly affecting body's nerves and obesity

Occupational risk: People involved manufacturing, sewing, finishing, cleaning and typists

Psychosocial Factors such as poor social work environment

Diagnosis

Early diagnosis and treatment important to avoid permanent damage to the median nerve.

A physical examination for tenderness, swelling, warmth, discoloration and sensation.

TINEL TEST: Is positive when a tingling sensation occurs when the median nerve is tapped or pressed

THE PHALEN/WRIST-FLEXION TEST: Increasing in numbness when the patient holds his or her forearms upright by pointing the fingers down and pressing the backs of the hands together. The presence of carpal tunnel syndrome is suggested if one or more symptoms, such as tingling or increasing numbness

Electrodiagnostic tests like myography and ultrasound imaging may be necessary to assess the functional and structural damage

Treatment

Drugs: like NSAIDS provide symptomatic relief

Physiotherapy is suggested in early cases

Yoga has been shown to reduce pain and improve grip strength among patients with carpal tunnel syndrome.

Surgical management involves release of the carpal tunnel ligament.

Recurrence after treatment is rare and prognosis is usually good



PRESCRIBING ASPECTS

We are coming to the end of the American Optometric Association (AOA) guideline. This issue we can see the prescribing guidelines for Presbyopia. AOA classifies presbyopia into five different types and has given prescribing guidelines for each one. They also have given general guidelines that should be followed while prescribing glasses for presbyopia.

🌐 Incipient Presbyopia:

- 🌐 Correction based on specific vision needs
- 🌐 Symptomatic patients are likely to benefit from a low power reading addition
- 🌐 Low myopia can be advised to remove the spectacle for near works

🌐 Functional Presbyopia:

- 🌐 Prescribe the minimum of plus power required
- 🌐 When a greater change in lens power is needed because the patient delayed seeking care, it may be advisable to increase the power of the addition gradually over 6 to 12 months to avoid patient adaptation difficulties

🌐 Absolute Presbyopia:

- 🌐 Prescribe according to the need. Care should be taken to consider prescribing for intermediate working distance if any

🌐 Premature Presbyopia:

- 🌐 Management of this type of presbyopia requires attention to identify environmental, nutritional, disease related or drug induced evidence
- 🌐 Removal of causative factors is the first step
- 🌐 Residual presbyopia can be managed by temporary plus lens correction

🌐 Nocturnal Presbyopia:

- 🌐 Patient can be advised to improve the lighting at his/her work place
- 🌐 Plus lens correction is only additional if the above initiative does not fully benefit the patient

🌐 General Considerations:

- 🌐 Some common complaints which may arise from the use of multifocal lenses include:
 - 🌐 Difficulty navigating curbs or stairs
 - 🌐 Jumping of image when the line of vision crosses the bifocal line



Connainsances

- 🌐 Distortions of vision with the use of PALs
- 🌐 Difficulty driving when wearing multifocal contact lens corrections
- 🌐 Night vision problems associated with multifocal contact lens corrections
- 🌐 Prescribing Considerations for Presbyopia
 - 🌐 Beware of changing the form of correction if the patient is satisfied (e.g., conventional spectacles to progressive addition lenses, multifocal spectacles to contact lenses)
 - 🌐 Beware of changing any aspect of the near segment if the patient is well adapted
 - 🌐 Beware of overly delaying the initial near correction
 - 🌐 Beware of overplussing the near correction
 - 🌐 Beware of fully correcting refractive changes of more than 1.00 D at distance or near
 - 🌐 Beware of reducing total plus power of the near correction
 - 🌐 Beware of prescribing cylinder, especially that which is monocular or obliquely oriented, for previously uncorrected astigmatism
 - 🌐 Beware of changing cylinder axis if the patient is well adapted to the existing cylinder axis
 - 🌐 Beware of different cylindrical axes for distance and near in moderate to high astigmatic corrections
 - 🌐 Beware of changing plus-cylinder correction to minus-cylinder correction
 - 🌐 Beware of fitting the borderline presbyopic spectacle-corrected myopic patient with contact lenses
 - 🌐 Beware of the loss of intermediate field when prescribing an initial near addition for the low myopic presbyopic patient or when prescribing minus power at distance for the presbyopic patient undergoing a myopic shift in both eyes
 - 🌐 Beware of induced near vertical imbalance when the anisometropic presbyopic patient views through the near segment of a multifocal spectacle

With this we come to the end of the first chapter. In a nutshell, first chapter shared with you the different in approaches of glass prescribing patterns by two different associations, each representing ophthalmologists and optometrists. In the following issues we can see few interesting cases that do not fit any specific guidelines.

(More to come)



BEHAVIORAL OPTOMETRY

🌐 Specialisation focusing attention on the QUALITY of visual skills rather than just the ability to “see”

🌐 Helps in understanding of the developmental sequence of learning and growth, interaction with the other sensory-motor systems of the body for optimum development and to explore how efficiently we have developed the necessary visual skills, and whether they are resilient enough to cope with intense near work demands

It deals with

- 🌐 Visual stress and binocular instability
- 🌐 Reading, writing and copying difficulties
- 🌐 Diagnosed learning difficulties
- 🌐 General classroom and workplace difficulties
- 🌐 Visual stress from the computer
- 🌐 Sports vision difficulties
- 🌐 Visual stress symptoms such as headache and double vision, poor coordination and clumsiness
- 🌐 Dyslexia, Dyspraxia (DCD), Aspergers
- 🌐 ADD / ADHD - Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder
- 🌐 Strabismus, Amblyopia

Special assessments

Visual efficiency evaluation

- 🌐 Visual Acuity, Refraction
- 🌐 Ocular Motility and Alignment+Qualitative analysis
- 🌐 Accommodative-Vergence Function+
- 🌐 Standardized observational rating systems
 - 🌐 For eg: Northeastern State University College of Optometry and Southern California College of Optometry grading systems

Quantitative evaluation

- 🌐 Simulate reading, using a rapid number-naming strategy
- 🌐 Numbers are placed in horizontal spatial arrays
- 🌐 Reading ability from left-to-right and top-down fashion assessed
- 🌐 Clinical outcome measures
 - 🌐 Time to complete the task Vs Number of errors

Visual information processing evaluation

- 🌐 Visual Spatial Orientation Skills
 - 🌐 Bilateral Integration
 - 🌐 Laterality and Directionality
- 🌐 Visual Analysis Skills
 - 🌐 Visual Discrimination
 - 🌐 Visual Figure-Ground Perception
 - 🌐 Visual Closure
 - 🌐 Visual Memory
- 🌐 Visual-Motor Integration
 - 🌐 Eye-Hand Coordination
- 🌐 Visual-Verbal Integration
 - 🌐 Reading and Spelling

The goal of the management

- 🌐 Opportunities for learning
- 🌐 Optometric intervention in conjunction with other professionals
- 🌐 Identification and treatment of specific visual deficits
- 🌐 Reduction of the signs and symptoms associated with particular visual deficits
- 🌐 A behavioral optometrist believes that vision is much more than just having 20/20 sight



IOL MASTER

A non-contact optical device that measures the distance from the corneal vertex to the retinal pigment epithelium

Principle:

Partial coherence interferometry

Procedure:

- Patient data entered
- Chinrest/forehead rest/height adjusted
- Corneal stability ensured, patient fixates at respective targets for each measurement
- Axial length first measured. Reflex at pupil center focused and coincided with the center of vertical and Horizontal line intersection
- Keratometry: Focus hexagonally arranged 6 dots
- ACD measurement: Spot focused onto lens surface and corneal inner arc aligned inside the box

Advantages:

- Accuracy: ± 0.02 mm
- Precise axial length measurements
- Non-contact optical biometry
- Repeatable
- Personalized IOL constants available
- Provides all biometric parameters

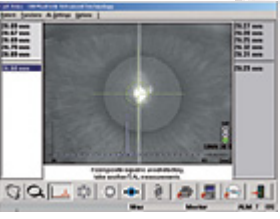
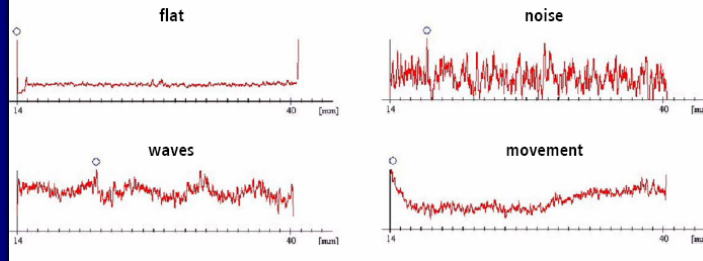
Disadvantages:

- Overestimates axial length in high myopes/ larger axial length

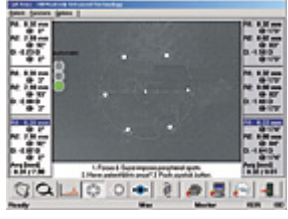
Uses:

- No anaesthesia
- Faster measurement
- Formulae for post Refractive Surgery IOL power calculation available (Hoffer Q/Haigis L formulae)

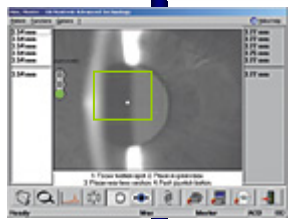
Ideal spike: one tall spike ending in a clearly defined single peak, Signal to Noise ratio (SNR) > 2.0, All measurements repeated thrice



Axial length measurement



Keratometry

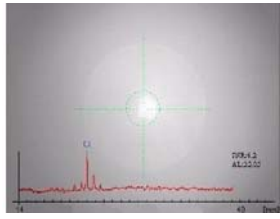


ACD measurement

White to white measurement



Ideal Spike



White-White Measurement:

Iris flecks focused along with the central corneal reflex

