FIRST ALL NEPAL OPHTHALMOLOGICAL CONFERENCE - 2011 (1st ANEOPHCON) & SIXTH EASTERN REGIONAL OPHTHALMOLOGICAL CONFERENCE - 2011 (6th EROPHCON)

THEME: STRIVING FOR EXCELLENCE IN EYE SERVICE, EDUCATION AND RESEARCH

ORGANISER: NEPAL OPHTHALMIC SOCIETY

VENUE: MECHI EYE HOSPITAL
ANARMANI-7, JHAPA, NEPAL

ABSTRACT BOOK

CONFERENCE SECRETARIAT: MECHI EYE HOSPITAL
Email: mecc@ntc.net.np Ph. No: 00977-23-541992, 00977-23-541993, 00977-23-540153 Fax: 00977-23-541492

SPONSOR: EYE CARE FOUNDATION, THE NETHERLANDS

DATE
February 17-18, 2011
Rajesh Bhagat
Area Sales Manager
Mobile: 9841256655
Email: rajesh.nhagat@agnindia.com
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## Nepal Ophthalmic Society

**Executive Committee (2010-2012)**

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<td>President</td>
<td>Prof. Dr. J K Shrestha</td>
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<td>Immediate Past President</td>
<td>Prof. Dr. D N Shah</td>
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<tr>
<td>Vice President</td>
<td>Prof. Dr. R N Byanju</td>
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<td>General Secretary</td>
<td>Dr. Sunu Dulal</td>
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<td>Joint Secretary</td>
<td>Dr. Rohit Sainju</td>
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<td>Treasurer</td>
<td>Dr. Indira Paudel (Rupakheti)</td>
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<td>Joint Treasurer</td>
<td>Dr. Archana Pokharel</td>
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<td>Members</td>
<td>Dr. Purushottam Joshi</td>
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**Contact Address**

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Tripureshwor, Kathmandu, Nepal  
P.O. Box No. 23041  
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Fax (+ 977-1) 4720142  
Website: www.nepjoph.org.np  
Email: nepophsoc@yahoo.com  
nosnepal@gmail.com
Message

On behalf of Nepal Ophthalmic Society, I extend my heartiest welcome to you all in this conference being held at Mechi Eye Hospital in the eastern part of Nepal on February 17-18, 2011. As you all know, this is the first time that a national ophthalmic congress is being held out of the capital city. The ophthalmologists of the Eastern Region of Nepal took a great initiative to have this congress together with their **VI Eastern Regional Ophthalmological Conference**. Similarly, Eye Care Foundation, the Netherlands and a team of Dutch ophthalmologists have shown a great interest in supporting us for the success of this congress. I express special thanks to them!

The organizing committee has worked very hard to make this congress a useful and memorable one. The academic program has been planned to promote the exchange of knowledge among the participants in all important topics of ophthalmology. The team of Dutch Ophthalmologists with their presentation and deliberation on recent advances will exchange their knowledge among their Nepalese counterparts so as to make this scientific program much vibrant.

The Nepal Ophthalmic Society has organized two successful congresses on sub-specialty topics – oculoplastics in October and cornea in December 2010. The society plans to expand its activities beyond organizing the congresses. We would like to explore how the society can contribute with representation of all ophthalmologists from Nepal and honorary members from abroad towards excellence in eye care services, teaching and research activities throughout the country. We need to be united and helpful to each other to achieve the common goal of prevention of avoidable blindness in this part of the world.

I hope you will have the most pleasant and memorable academic events. You will also witness here the rich cultural heritage of Eastern Nepal. I do hope this congress will open the doors of ophthalmology for new frontier such as going beyond the borders, bringing together the expert ophthalmologists and high standard eye care services to the people.

Most of all, I thank all the participants – ophthalmologists, ophthalmic managers, nurses, optometrists, ophthalmic assistants and all eye care workers for their support to this congress.

**Prof Dr. Jeevan K Shrestha**
President
Nepal Ophthalmic Society
Message

It is a matter of contentment and pride for us all that Nepal Ophthalmic Society is organizing its congress outside the Kathmandu valley for the first time. I am confident that it will provide better opportunity for the ophthalmologists and other ophthalmic personnel with additional chance to participate and contribute for the success of the congress. It is also a time to congratulate the ophthalmic stakeholders who have been organizing ophthalmological conference in the eastern region regularly for last 6 years. It is the right time to learn from the colleagues working in the eastern region and start similar activities in the remaining regions, namely middle, western and far western regions. Organizing such type of activities will create a sense of unity, solidarity and security. It will also enhance cooperation and understanding among the ophthalmologists and other eye health personnel working in the same region. It will ultimately lead to a better quality of service and better working environment and job satisfaction.

Let us hope that the Nepal Ophthalmic Society will be able to organize its subsequent conferences in the other regions as well and strengthen and promote eye care services on regional basis.

I look forward for the active participation of you all and for the grand success of the First All Nepal Ophthalmological Conference and the VI Eastern Regional Ophthalmological Conference.

Dr. Sunu Dulal
MD, FICS, FRSPH, MSc Public Health for Eye Care (London)
Secretary
Nepal Ophthalmic Society
Message

Let me start this write up by quoting the following Sanskrit couplets from the Vedic Era and Chanakya’s time of around 350 BC: “पर्यंत पद्म: लम्बू ॥” and “सर्वनिदाणां नयमन ज्ञानम् ॥” which translate into “( O Lord! ) May we enjoy a hundred autumns, with our eyes – the most important of our senses”.

The essence of these statements, as I understand, is that they call attention to the importance of a long life with healthy eyes and vision. Presumably, the causes of blindness in old age during those ancient times were the same as we face today: cataract, glaucoma, age-related macular degeneration, and diabetic retinopathy if it was then present. The world is literally dark to very many people in this part of the world today as a result of these same causes of blindness. All what we have been able to attain with the use of a much-advanced technology is, what appears to be, only some reduction in the prevalence of blindness due to these conditions.

In recent years there has been an explosion of ophthalmic publications on recent advances all over the world. To keep up with this development and to try to add to it, one has to have the enthusiasm to learn from each other. Albert Einstein aptly said that knowledge has to be continually renewed by ceaseless effort, if it is not to be lost.

It is commendable that in pursuance of this objective of working for the renewal of knowledge, the Nepal Ophthalmic Society has recently succeeded in laying down certain milestones in its development. These are: the launching of the Nepalese Journal of Ophthalmology, the success of getting it subsequently indexed for medline and organizing frequent and periodic continuing medical education programs on a regular basis. This, The First All Nepal Ophthalmological Conference – 2011, being held in Mechi, the east-most zone of the country, is certainly another milestone. At this juncture of time, we are all deeply aware of the fact that all this has been possible because of the dynamic involvement and the wide representation of self-motivated ophthalmologists from various regions of Nepal in the Society’s activities. At the same time, we, with a deep sense of pride, express our sincere gratitude to those ophthalmic pioneers of the previous generation who created, 26 years ago, the Nepal Ophthalmic Society – a common professional platform for us!

The theme of this conference is “Striving for excellence in eye health service, education and research”. The stakeholders of eye care in the eastern region of the country have set an example of holding an annual conference in the region. I wish to quote Einstein again: “The only rational way of teaching is to be an example.” We wish that such programs will continue and be organized in the other regions of the country as well in the years to come.

I now wish to welcome all the participants and delegates of this academic endeavor and thank the Nepal Ophthalmic Society for providing us with this opportunity and privilege of organizing such a wonderful national ophthalmic event.

The organizing committee has made every effort to make this event a useful and memorable one. On behalf of the Organizing Committee, I wish to express sincere gratitude to all the people who have contributed to the success of this conference.

Prof Dr. Badri P Badhu
Chairman, Organizing Committee
All Nepal Ophthalmological Conference - 2011 & VI Eastern Regional Ophthalmological Conference – 2011
Email: editor@nepjoph.org.np
Message

It is a proud privilege to carry out the responsibility of an organizing secretary of the historical First All Nepal Ophthalmological Conference and the Sixth Eastern Regional Ophthalmological Conference. It is my pleasure and honour to welcome all the speakers, participants and delegates to this conference.

This first national conference is being held with the theme “Striving for Excellence in Eye Service, Education and Research” at Mechi Eye Hospital. The Mechi Eye Hospital is providing eye care services to the people of eastern region of Nepal especially of Mechi Zone. It is involved in enhancing the practical skills of the MD residents from the various national ophthalmic institutions and offers training programs to the allied medical professionals. Mechi Eye Hospital is proud to be associated with and to host this historical First All Nepal Ophthalmological Conference. The scientific sub-committee has drawn out an excellent scientific program that includes enriching CME, guest lectures by renowned speakers from home and abroad. The conference will be a forum for all of us to share our knowledge and experience with eminent ophthalmologists from different parts of the world. I would like to welcome you all to this unique and interactive educative events. The scientific sub-committee has tried to make the relevant presentations sequentially in the same session as far as possible.

I would like to thank the Nepal Ophthalmic Society, Mechi Eye Hospital staff, Mechi Eye Hospital Sangh and the members of the organizing committee. I would also like to thank all national and international speakers and participants for their valuable contributions.

I would also thank the Eye Care Foundation, the Netherlands for sponsoring this conference. The pharmaceutical trade and the manufacturers of the ophthalmic equipments will be showcasing their products. I thank the traders for their support and co-operation.

I welcome you once again and wish you a pleasant stay at Mechi Eye Hospital and Jhapa.

Lastly, this is the initiation only. The Herculean tedious task ahead is its continuation. We must focus and work together for its accomplishment in the days to come.

Dr. Purushottam Joshi, MD  
Secretary  
Organizing Committee
Message

It gives me an immense pleasure to share a few words among ourselves as the Chairman of the Scientific Sub-committee of this historical and memorable event “The First All Nepal Ophthalmological Conference” being held at Mechi Eye Hospital in the Eastern Region of Nepal.

I would like to welcome all our respected guests, key speakers, chairpersons and participants in this beautiful Eye Hospital at Mechi.

I am very much convinced and hopeful that this conference will bring us together and provide us with a good atmosphere to share our knowledge, practice and research achievements for improvement of the eye care delivery system of Nepal.

My deep sense of gratitude goes to the President of the Nepal Ophthalmic Society, Prof Dr. Jeevan K Shrestha and Chairman of Organizing committee Prof Dr. Badri Badhu who initiated this journey giving it a new dimension in the history of our Society.

On behalf of the Organizing Committee, I would like to express my sincere thanks to our national and foreign guest speakers, chairpersons, participants and sponsors and urge to make this “Mega Event” a grand success.

At the end, I am grateful to the organizer for entrusting me to carry out this responsibility as the Chairman of the Scientific Sub-committee. I wish everyone here will have a memorable stay and enjoy rich natural scenario of eastern region of Nepal. May every one witness the fruitful scientific event in the First All Nepal Ophthalmological Conference-2011.

Dr. Ananda K Sharma, MD
Chairman
Scientific Sub-committee
On behalf of Eye Care Foundation, the Netherlands I want to express our gratitude to be invited to this auspicious annual congress. It is a great privilege to be with you and exchange ideas and scientific developments to the benefit of our patients.

As a donor we are very proud to see, we provided you with a newly constructed and well-equipped eye hospital which was inaugurated in Nov 2009 by the President of Nepal Dr. Ram Baran Yadav.

I sincerely favor the fact we were able to invite faculty from the Netherlands, from Belgium, and from India New Delhi to inform you on some new trends and developments in the fast changing field of our profession: eye care.

I wish you all a fruitful conference and lively discussions.

Dr. Gerard Smith  
Co-founder and Medical Advisor  
Eye Care Foundation, the Netherlands
ORGANIZING COMMITTEE

Patron: Prof Dr. Jeevan Kumar Shrestha
Chairman: Prof Dr. Badri Prasad Badhu
Secretary: Dr. Purushottam Joshi

Co-patron: Dr. A Hennig
Co-chairman: Dr. Sunu Dulal
Treasurer: Dr. Sabita Palikhe

Members
Prof Dr. KR Kaini, Manipal Medical College, Pokhara
Dr. Sanjay Kumar Singh, Biratnagar Eye Hospital
Dr. Basanta Raj Sharma, Lumbini Eye Institute
Dr. Ananda Kumar Sharma, BP Koirala Lions Centre for Ophthalmic Studies
Dr. BN Adhikari, Bharatpur Medical College
Dr. Bidya Panta, Geta Eye Hospital
Dr. Damodar Pradhan, Janaki Medical College
Dr. Chandan Banerjee, Kedia Eye Hospital
Dr. Harish Chandra Jha, Gaur Eye Hospital
Dr. Rohit Saiju, Tilganga Institute of Ophthalmology
Dr. Basu Adhikari, Nepalgunj Eye Hospital
Prof Dr. Sudesh Subedi, Nepal Eye Hospital
Dr. Mahesh Neupane, Koshi Zonal Hospital
Dr. Rudra Timsina, Koshi Zonal Hospital
Dr. Sweta Tapariya, Golchha Eye Hospital
Dr. Rinki Kumari Singh, Sagarmatha Chaudhary Eye Hospital
Dr. Poonam Lavaju, BP Koirala Institute of Health Sciences
Dr. Sudhir Gautam, Lion’s Eye Center, Kathmandu

Advisors
Dr. ND Joshi
Prof Dr. MP Upadhyaya
Prof Dr. OK Malla
Prof Dr. PC Karmacharya
Dr. KP Adhikari
Prof Dr. CR Panta
Prof Dr. SP Shrestha
Prof Dr. BP Nepal
Dr. YB Joshi

Prof Dr. RP Pokharel
Dr. Yanta Mani Pradhan
Prof Dr. SP Dhital
Prof Dr. DB Karki
Dr. Gopal Prasad Pokharel
Prof Dr. S. Ruit
Prof Dr. DN Shah
Prof Dr. Suraj Shakya
Prof Dr. RN Byanju
SUB-COMMITTEES

Scientific Sub-committee

Chairperson: Dr. AK Sharma
Co-chairperson: Dr. Sweta Tapariya

Members
Dr. Manoj Sharma
Dr. Indira Paudel
Dr. Pratap Karki
Dr. Sabita Palikhe
Mr Ajit Thakur
Dr. Madhu Thapa
Dr. Poonam Lavaju
Dr. Archana Pokharel
Dr. Tushar Sarbajna

Accommodation and Transportation Sub-committee

Chairperson: Dr. Prabha Subedi Basnet

Members
Suraj Kumar Rauniyar
Pawan Baral
Narad Sapkota
Mohan Adhikari
Digjen Sujaku
Mamlal Rajbanshi
Sharmila Shrestha
Durga BK

Master of Ceremony – Dr. Chandani Pradhan Shrestha

Invited International Faculties

Prof Dr. Rajvardhan Azad, India
Prof Dr. A Panda, India
Dr. SK Aarya, India
Prof Dr. Sandeep Kumar, India
Dr. SKD Thakur, India
Dr. Narendra Dhoj Joshi, UK
Prof Dr. JS Stilma, the Netherlands
Dr. Steve Waller, USA
Dr. E Feron, Belgium
Dr. Abhishek B Dagar, India
Prof Dr. JS Titiyal, India
Prof Dr. M Srinivasan, India
Prof Dr. Yogesh Gupta, India
Dr. Gerard Smith, the Netherlands
Dr. JHJ Klaver, the Netherlands
Dr. Stephen Wallace, USA
Dr. Martin Spencer, Canada
Dr. Inna Sasim, the Netherlands
Dr. SK Samantha, India

Registration Fees:

Faculty/Ophthalmologists : Rs. 1000/-
Residents : Rs. 500/-
Ophthalmic Paramedicals : Rs. 250/-
Program

16th February 2011:
Afternoon – Arrival and Hotel Accommodation
Evening – Reception Dinner

17th February 2011:
8 – 9 AM Registration
9 – 10 AM Inauguration Session Master of ceremony
✓ Welcome address by Chairman of the Organizing Committee
  – Prof Dr. BP Badhu
✓ Address by Prof Dr. Jeevan K Shrestha, President, Nepal Ophthalmic Society
✓ Highlights of the theme and keynote address – Dr. Gopal Prasad Pokharel, Member, Mechi Eye Hospital Sangh and Mechi Eye Hospital Board
✓ Address by Dr. Gerard Smith, Medical Advisor, Eye Care Foundation
✓ Address by Chief Guest –
✓ Vote of thanks by Secretary of Organizing Committee
  – Dr. Purushottam Joshi, Act. Medical Director, Mechi Eye Hospital

10 - 10:30 AM Tea Break

SCIENTIFIC SESSION

10:30 – 11.30 AM : Session I

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<th>Title</th>
<th>Authors (Presenter)</th>
<th>Institution/Affiliation</th>
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<td>Ophthalmic Medical Centre, Haarlem, Netherlands</td>
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<td>Karki P</td>
<td>Biratnagar Eye Hospital</td>
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### Demographic and awareness of diabetic retinopathy among patients attending the vitreo-retinal service at a tertiary eye care center in Nepal

**Authors:** Thapa R., Paudyal G, Maharjan N, Bernstein PS  
**Institution:** Tilganga Institute of Ophthalmology

### Retinoblastoma: A rare presentation

**Authors:** Sainju R., Duwal S  
**Institution:** Tilganga Institute of Ophthalmology

### 11:30 – 12:30 PM: Session II

**Chairperson:** Prof Dr. RK Adhikari  
**Co chairperson:** Dr. Rohit Sainju

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**12:30 – 1:30 PM : Lunch Break**
# Session III

**Chairperson**: Dr. A K Sharma  
**Co chairperson**: Dr. S Adhikari

<table>
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<tr>
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<td>Surgical outcomes and parental satisfaction of strabismus surgery</td>
<td>Sharma A K, Jaufar SF, Thapa M, Shrestha GB, Shrestha JK</td>
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## 2:30 – 3:30 PM: Session IV

**Chairperson:** Prof Dr. Badri Badhu  
**Co-chairperson:** Dr. I Paudel

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**3:30 – 4:00 PM:** Tea Break
### 4:00 – 5:00 PM : Session V

**Chairperson:** Dr. S Dulal  
**Co chairperson:** Dr. RR Wagle

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**Dinner:** 7 PM onwards
### 18th February 2011

Morning – Scientific Session  
9:00- 12:00 Noon

**Chairperson:** Dr SK Samantha  
**Co chairperson:** Dr. Purushottam Joshi

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12:00 – 1:00  Valedictory Session and Business Hour

1:00 PM Lunch
Outcome of phacoemulsification and small incision cataract surgery with rigid IOL in Mechi Eye Hospital: a comparative Study

Dr. Purushottam Joshi, MD, Mr. Ajit Kumar Thakur, B. Optometry, Sharmila Shrestha
Mechi Eye Hospital, Jhapa

Background: Cataract remains the leading cause of visual impairment in the world. Phacoemulsification with rigid IOL implant has been the choice of surgical procedure for novice phaco learners to enhance their skill without causing extra risk and financial burden to the patients.

Purpose: To compare the efficacy and safety of phacoemulsification and the suture less small incision cataract surgery with rigid PMMA IOL implant.

Subjects and methods: A total of 1000 patients, 500 SICS (Group 1) and 500 phaco (Group 2), who completed 6 weeks follow up, in 2010 operated by a single surgeon, were enrolled in the study. The patients’ data were reviewed from the medical records. The parameters studied were pre-op keratometry, axial length, type of surgery performed, intra-operative complications, type of lens implanted, post-op visual acuity, and post-op complications. All the variables were compared between the two groups.

Results: The mean age of surgery in Group 1 and Group 2 were 61.74±12.34 and 60.05±11.95 years respectively. At first post op day, 305(61%) were with normal visual status in group 2 as compared to 195(39%) patients with normal visual status in group 1. PCR was noted in 14(2.8%) in group 1 and 12(2.4%) in group 2. 40% patients in Group 1 and 54% in Group 2 had a good surgical outcome. The mean UCVA at 6 week follow up was 6/22 (0.27) in Group1 and 6/16(0.37) in Group 2. The mean BCVA were 6/9 (0.7) in each group. The mean astigmatism was 1.42±0.87 and 1.08±0.88 D in Groups 1 & 2 respectively.

Conclusion: Phaco with rigid IOL has a better visual out-come than that of SICS.

Key-words: Phacoemulsification, sutureless SICS, visual outcome

Cataract surgery training in Lahan: Structured and stepwise approach

Dr. Lila Raj Puri
Sagarmatha Chaudhary Eye Hospital, Lahan

Introduction: Cataract continues to be the cause of almost half the cases of blindness worldwide. Cataract surgery has evolved from couching, first practiced several thousand years ago, through intra- and extra capsular extraction (ECCE), to phacoemulsification.

Materials and methods: There is a stepwise training system for cataract surgeries (ECCE,
SICS and PHACO) to ophthalmologists, fellows, residents in Lahan. The trainee surgeons monitor their own surgical skills in the form of prospective self evaluation of cases. Evaluation of training is done by the trainer through regular close observation and assessment of skills. 26 fellows and Ophthalmologist underwent structured, supervised and stepwise training for cataract. Retrospective analysis of the training was done.

**Results:** An evaluation of 26 fellows and ophthalmologists on surgical training showed that with a supervised stepwise approach the surgical complication rate was very low. Surgical outcome improved with experience. There was less than 3% posterior capsule rupture during their first 300 fishhook extractions. Also, the surgically related prevalence (e.g. corneal edema and hyphaema) of poor uncorrected visual acuity (<20/200) on the first postoperative day was 3.1% during the first 100 surgeries and decreased with more experience.

**Conclusion:** The stepwise, structured and supervised training system for cataract surgery is effective in developing comprehensive cataract surgeons that can play a significant role in the reduction of cataract blindness.

**Key-words:** ECCE, SICS, phacoemulsification, fishhook technique, supervised training

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**Peripheral Eye Hospital posting of ophthalmology residents: Mechi Eye Hospital Experience**

**Dr. Purushottam Joshi,**  
**Mr. Ajit Kumar Thakur,**  
**Miss. Sharmila Shrestha**  
Mechi Eye Hospital

**Background:** Competent surgical performance requires a level of expertise only gained through deliberate practice of key surgical steps.

**Purpose:** To study the significance of peripheral eye hospital posting of ophthalmology residents.

**Subjects and Methods:** This study was designed to analyze the surgical skill acquired by the residents their short term peripheral posting. A retrospective cohort study was carried out in Mechi Eye Hospital. The medical records of patients that had undergone cataract surgery by residents during 2007-2010 were reviewed.

**Results:** Forty residents completed their posting at the hospital from three recognized institutes of Nepal. Their mean duration of stay was 5.23±1.23 weeks. The number of cataract surgery performed by a resident was 78.45±56.20. Total number of cataract surgeries performed by the residents in this period was 3249. Major intra-operative complication occurred in 204(6.27%), 2552
eyes were operated using conventional sutured ECCE. The intra-operative complications were seen in 92 (3.6%) cases. 524 eyes were operated using SICS technique. The complications were seen in 41(7.82%) cases.

Conclusion: The residents get hands on training on a good number of cases to enhance their surgical skills during their peripheral posting. The complication rate for conventional cataract surgery is significantly less than that of SICS.

Key-words: Peripheral posting of MD phthalmology residents.

**Visual outcome after cataract surgery in surgical eye camp compared to base hospital**

**Dr. Sunu Dulal**

Nepal Netra Jyoti Sangh

**Introduction:** Cataract is the commonest cause of blindness. Majority of the cataract blind people live in rural community of the developing countries. Fortunately, cataract is a treatable condition and cataract surgery is the most cost-effective public health intervention at present time. Surgical eye camp is one way to increase the uptake of cataract surgery. But it is necessary to know the visual outcome in eye camp and hospital.

**Purpose:** The aim of the study was to establish whether an eye camp was as effective in terms of visual outcome and complications as hospital settings for cataract surgery in rural community of Nepal.

**Materials and methods:** A two-site prospective non-randomised comparative quasi experimental study between patients operated at surgical eye camp in the rural community and base hospital was carried out. Same surgeon operated at both the places. Pre-operative, discharge and follow-up available and best corrected visual acuity was recorded among the two groups.

**Results:** 104 patients from the surgical eye camp and 102 from the hospital participated in the study. Best corrected visual acuity at the time of discharge was good (VA ≥6/18) among 87.6% in eye camp and 85.3% in hospital patients. Surgical complication of 0.96% (1/104) in eye camp and 2.9% (3/102) in hospital was encountered.

**Conclusion:** Good quality surgical outcome can be obtained from surgical eye camps provided skills and experiences of surgeons and paramedical staff, consumables, equipment and instruments are standardized. Proper post surgical follow up and continuous monitoring of the camp is necessary for better outcome.

**Key-words:** cataract, visual outcome, surgical eye camp, hospital
Proptosis: main reasons, differential diagnosis and treatment

Dr. Inna Sasim
Oogziekenhuis Zonnestraal
Odijkerweg 96, 3709 JJ, Zeist, the Netherlands

Proptosis has more than 100 reasons to develop. One of the most common causes is thyroid eye disease. During the lecture etiology, pathogenesis of the Graves’ orbitopathy and modern methods of treatment will be discussed. Additional attention will be given to the differential diagnoses.

Profile of lid surgeries requiring reconstruction in Lumbini Rana Ambica Eye Hospital

Prof Dr. Rishikant Adhikari, Dr. Pragati Gautam, Dr. Basanta Raj Sharma
Lumbini Eye Institute

Aim: To report the conditions requiring eye lid reconstructions.

Subjects and Methods: All the cases of oculoplastic lid surgeries for 2 years (Jan 2007 to Dec 2008) in Lumibini Rana Ambika Shah Eye Hospital were evaluated.

Results: A total of 43 cases attended the oculoplasyn clinic requiring reconstruction in 2 years. The mean age of presentation was 42 years (4- 84 years). Female patient comprised 54% of the cases while male patients were 46%. 37% of the lesions were tumor of lid followed by trauma of lid (6.9%). Histologically benign tumor was most common followed by basal cell carcinoma and squamous cell carcinoma.

Conclusion: Lid tumor and trauma are the most common cause for oculoplastic lid surgeries. Unlike other series benign tumor is the commonest tumor followed by basal cell carcinoma.

Key-words: lid, oculoplastic surgeries, trauma, tumor
Profile of ocular trauma in Mechi Eye Hospital

Dr. Sabita Palikhe,
Dr Purushottam Joshi,
Ajit Kumar Thakur
Mechi Eye Hospital

Purpose: To study the epidemiology and clinical profile of victims of ocular trauma presenting in Mechi Eye hospital in six months.

Materials and methods: The data were retrospectively reviewed from the hospital records. The data included were patients profile, time of presentation, treatment history, mode of injury.

Results: Of 152 patients included in the study, males were significantly more affected (74.3%). Majority of the patients were from productive age group accounting for 69.73%. 73% were Nepalese and 27% were Indian. Blunt trauma was the commonest (78.3%) mode of injury out of which 83.19% were Nepalese. 21.7% were of open globe injury out of which 66.66% were Indian. 54% of the open globe injury cases were limited to Zone one. The majority of patients presented to the hospital in <1 week period (88%). Out of this, 44.07% were already treated elsewhere. Post traumatic endophthalmitis was found in 6% of open globe injuries.

Conclusion: Blunt trauma was the most common mode of presentation in Nepalese but patients requiring surgical intervention were common from the neighboring country.

Key-words: ocular trauma, open globe, epidemiology, endophthalmitis.

Clinical pattern of various types of orbital lesions, eye lid and intraocular tumors in the Eastern Region of Nepal

Dr. A Sharma,1
Dr. S Karki2,
Dr. P Lavaju1,
Dr. A Sinha2,
Dr. BP Badhu1
1Department of Ophthalmology,
2Department of Pathology, BPKIHS

Introduction: Ocular tumors and eyelid lesions are commonly encountered in ophthalmic practice.

Objective: To study the clinical pattern of different types of orbital lesions, lid and intraocular tumors in the eastern region of Nepal.

Materials and methods: A hospital based retrospective study of patients presenting with various orbital pathologies, intraocular tumors and lid tumors admitted and treated at BP Koirala Institute of Health Sciences over a period of five years (January 2006 to December 2010) was done.

Results: Out of 201 medical records studied, 92(45.7%) patients had different types of orbital lesions. Orbital cellulitis was the commonest 24 (26%). There were 37 (40.2%) patients with orbital tumors out of which, 28 (75.6%)...
were benign and 9 (24.3%) malignant. 63 (68.4%) of all the orbital lesions required surgical management. Lid tumors comprised of 84 (41.7%) patients where 55 (65.4%) was benign and 29 (34.9%) malignant. Basal cell carcinoma was the commonest lid malignancy seen 14 (48.2%) and retinoblastoma was the most common malignant intraocular tumor in the pediatric age group 24 (96%).

Conclusion: Basal cell carcinoma and retinoblastoma were the commonest ocular malignancies seen in adult and children respectively. Orbital cellulitis was the commonest orbital pathology seen in both the age groups. Rare orbital lesions like cysticercosis, rhinosporidiosis and ocular leishmaniasis were also seen in some patients.

Key-words: orbital lesions, lids, intraocular tumors, benign, malignant

Epidemiology and clinical pattern of herpetic eye disease in a tertiary eye care centre

Dr. Meenu Chaudhary, Dr. Swapanil Taori, Prof Dr. DN Shah, Prof Dr. Jeevan K Shrestha
BPKLCOS, IOM

Introduction: Herpes simplex virus (HSV) remains an important source of ophthalmic morbidity and the most common cause of unilateral corneal blindness worldwide. The documentation of clinical and virological features of this important ocular pathogen is far inadequate in developing and under developed countries.

Purpose: To document the epidemiology and clinical pattern of herpes simplex eye disease.

Materials and methods: Eyes with clinically documented pattern of Herpetic eye disease manifestation were prospectively analyzed for 1 year (1st Jan 2010 to 31st Dec 2010)

Results: The total no. of patients seen in cornea clinic was 1263. Herpetic eye disease cases were 130 (27.4%). 56.9% cases were male and 43.1% were female. Mean age of the patients was 36.63. Clinical pattern of herepetic eye disease seen was: blepheroconjunctivitis (26.15%), dendritic ulcer (22.31% , disciform keratitis (27.7%), keratouveitis (5.3%) and stromal keratitis (10.8%).

Conclusion: Herpes simplex eye disease is prevalent in male patients. The common clinical manifestations are blepheroconjunctivitis, dendritic ulcer, disciform keratitis, keratouveitis and stromal keratitis.

Keywords: Herpes simplex virus, blepheroconjunctivitis, dendritic, keratouveitis, disciform
**Vitreo – retina: recent developments**

**Dr. Eric Feron**  
Middelheim Hospital, Belgium

In this presentation I would like to share my personal experience of the significant changes in the field of vitreoretinal surgery over the last years, which has been possible by advances both in our diagnostic equipment and in our vitreoretinal instrumentation.

Among the diagnostic tools, the advent of the OCT has provided better insights in the natural evolution and the postoperative course of known vitreoretinal pathologies such as macular epiretinal membranes, macular holes and retinal detachments. Also new vitreoretinal pathologies have been discovered thanks to the OCT, such as the vitreomacular traction syndrome, diffuse (diabetic) macular edema associated with vitreomacular traction, maculoschisis (foveoschisis) and lamellar macular holes. The feedback of the OCT after vitreoretinal surgery is also extremely valuable to continually refine our indications and optimal timing for surgery.

Among the recent advances in vitreoretinal equipment, the use of small gauge (23 and 25-gauge) valved trocars and of high-speed small gauge vitrectomy cutters, illumination and laser fibers has revolutionized the field of vitreoretinal surgery with significant improvements in anatomical and functional results with minimal discomfort for the patient.

In the presentation, a brief overview will be given of the most current indications for vitreoretinal surgery, with particular emphasis on diabetic retinopathy.

**New developments in macular degeneration**

**Dr. J.H.J. Klaver**  
Ophthalmic Medical Centre, Haarlem, the Netherlands

**Introduction**: According to the World Health Organisation (WHO) Ageing Macular Degeneration (AMD) is the third cause of visual impairment and is associated with a worldwide blindness prevalence of almost 9%. Most people (80%) have the non-neovascular form, but the neovascular form accounts for most of the cases with severe visual loss. Increases in life-expectancy will lead to the disease becoming more important in Nepal in years to come.

**Purpose**: To describe the recent advances in aetiology, diagnosis and treatment of AMD

**Materials and methods**: A survey of the literature gives an overview of the current state of the art and a peek into probable future developments.

**Results**: In 2001 Photodynamic Therapy with verteporfin (Visudyne®) gave us the first relatively successful treatment of AMD. In more recent years intravitreal injections with antibodies to Vascular Endothelial Growth Factor (anti-VEGF) like ranibizumab (Lucentis®) and bevacizumab (Avastin®) are able to stop progression of neovascular AMD in 90% of cases and can improve vision to some extend in 30%. An important aid in following the course of the disease is the OCT. Several genes have been associated with increased risk of AMD, possibly giving clues to future therapies.

**Keywords**: AMD, anti-VEGF, OCT
Diabetic eye camp
BEH experience

Dr Pratap Karki
Biratnagar Eye Hospital

**Introduction:** With urbanization and change in diet, diabetic retinopathy is slowly becoming an important cause of visual impairment in Nepal. Efforts to create awareness and treat diabetic retinopathy in time are required to prevent blindness.

**Purpose:** To describe the protocol of diabetic camp in BEH, the barriers and solution to reach diabetic patients in a hospital setting

**Patients and methods:** 278 diagnosed diabetic patients were screened for diabetic retinopathy in a hospital setting. Patients were counseled regarding their diet and retinopathy. Those with severe retinopathy and macular edema were called for follow up for further treatment.

**Results:** The average age of the subject was 56.9 years. Average duration of diabetes was 7.82 years. Male:Female ratio was 1:2. The visual activity was 17%. The average blood sugar was 214.69%. Proliferative Diabetic Retinopathy in 3.7% and maculopathy 13.3%. Bilateral peripheral photocoagulation was required for 2.5% patients.

**Conclusion:** With diabetic retinopathy becoming an important cause of visual impairment and blindness, diabetic eye camps are a useful tool to create awareness and reach patients in time.

**Key-words:** Diabetic retinopathy, eye camps, awareness

Demographics and awareness of diabetic retinopathy among diabetic patients attending the vitreo-retinal service at a tertiary eye care center in Nepal

Dr. Raba Thapa¹, Dr. Govinda Paudyal¹, Dr. Nhukesh Maharjan¹, Dr. Paul S. Bernstein²

¹Tilganga Institute of Ophthalmology, Kathmandu, Nepal.
²Moran Eye Center, University of Utah, Salt Lake City, Utah, USA.

**Purpose:** Diabetic retinopathy (DR) is one of the leading causes of blindness in Nepal.

**Methods:** This study investigates the demographic characteristics and awareness of DR among new cases of diabetes mellitus (DM) attending the vitreo-retinal service of a tertiary eye care centre in Nepal. This was a hospital based, cross-sectional study conducted at Tilganga Institute of Ophthalmology during the period of March 2009 to January 2010. All consecutive new cases of DM were included. Cases with a prior history of laser therapy or surgical intervention elsewhere were excluded from the study.
**Results:** A total of 210 patients with a mean age of 57±10.4 years were included. The male:female ratio was 1.4:1. Brahmin (34.8%) and Newar (34.3%) were the predominant ethnic groups. Housewives (38.6%) and office workers (18.6%) were the major groups affected. Two-fifths (37%) of the cases were unaware of DR and its potential for blindness. Awareness was significantly higher among literate patients (P=0.006). Fundus evaluation was done for the first time in 48.6%, although almost four-fifths had duration of diabetes of 5 years or more. DR was found in 78% of the cases, with 16.7% already at the proliferative stage and ~40% with CSME.

**Conclusion:** Lack of awareness of DR and a high proportion of cases already at a sight-threatening stage of retinopathy at their first presentation reflects the need for improved awareness programs to reduce the burden of blindness due to DR in Nepal.

**Key-words:** demographics, awareness, diabetic retinopathy, Nepal.

**Retinoblastoma: A report of two cases**

Dr. Rohit Saiju, Dr. Sushma Duwal
Tilganga Institute of Ophthalmology

Retinoblastoma is the most common primary intraocular malignancy of childhood. It is extremely rare in adults. We report a case of retinoblastoma diagnosed by histopathology in an enucleated specimen of a 37 year-old patient who presented with pain and diminished visual acuity with intraocular mass and serous detachment. CT head and orbit showed uniform hyperdense mass in nasal quadrant of left globe projecting into adjacent vitreous cavity. In view of poor visual prognosis enucleation was done. Sections from the enucleated eyeball showed diffuse proliferation of tumor cells. A diagnosis of poorly differentiated retinoblastoma was made.

Its annual incidence is the highest in the first few months of life, thereafter, the yearly incidence decreases steadily and is extremely low by 6 years of age. In spite of its early onset in most children, retinoblastoma is rarely diagnosed congenitally or even within the first 3 months of life, except in familial cases. We here report a case of bilateral retinoblastoma with positive family history in a 13-day old female baby.

This paper highlights the delayed and early presentation of retinoblastoma.

**Key words:** retinoblastoma, adult, Nepal

**A case report of choroidal melanoma**

Prof Dr. Jeevan K. Shrestha, Dr. Gulshan B Shreshtha, Dr. Prerana Aryal
BP Koirala Lions Center for Ophthalmic Studies, IOM

**Introduction:** Malignant melanoma of the choroid is a rare disease.

**Clinical features:** A 55 year old male presented with VA of HM+ in LE. There was a mass in the temporal side with inferior
retinal detachment. Enucleation was done. After 2 ½ years he had metastasis to the liver and the lungs for which chemotherapy was administered. After 5 years and 8 months of detection of choroidal melanoma the patient still surviving with normal life style.

**Conclusion:** The most common site of metastatic involvement choroidal melanoma is the liver and lungs.

**Key-words:** choroidal melanoma, metastasis, survival rate

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**Clinical profile and outcome of esotropia in children**

**Dr. Srijana Adhikari**
Tilganga Institute of Ophthalmology

**Purpose:** To study different types of esotropia in children and the treatment outcome.

**Subjects and methods:** It is a retrospective medical record review of children attending pediatric ophthalmology clinic of Tilganga Institute of Ophthalmology.

**Results:** A total of 91 children with esotropia were included in the study. The mean age was 6.6± 3.7 years. Male: Female ratio was 1.5:1. The most common type of esotropia was essential infantile (58%) followed by accommodative (37%) including its different types. Remaining children (5%) had paralytic and restrictive (Duane’s retraction syndrome). There were 62% of children with esotropia and amblyopia, with 66% unilateral and 33% bilateral. Only 23% of children with amblyopia gained final visual acuity of 6/9 or better after treatment with either optical correction or patching therapy.

**Conclusion:** Esotropia is the most common form of esotropia in children. Most of them presented late though the onset in early childhood. The treatment of dense amblyopia as a consequence of strabismus has poor outcome.

**Key-words:** Amblyopia, esotropia

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**Comparison of horizontal tropia before and after strabismus corrective surgery**

**Pawan Baral,**  
**Dr. Purushottam Joshi**  
Mechi Eye Hospital

**Aim:** This is a retrospective study to compare the preoperative and postoperative amount of horizontal tropia in patients at Mechi Eye Hospital in 2010 A.D.

**Materials and methods:** Out of 121 patients with heterotropia, 27 patients who underwent strabismus corrective surgeries in the year 2010 AD were taken. Surgeries were performed by 2 ophthalmologists at Mechi Eye Hospital. The surgical process used was either recession or resection of each of the horizontal recti muscles on the deviated or the nondominant eye. The amount of heterotropia before and after surgery for varying number of follow ups with varying number of time interval
was compared. The data was analysed using software SPSS 15.

Results: The mean age of the patients was 24.37±5.982 years (range: 11 to 37 years). The mean preoperative horizontal tropia was 62.11±18.779 prism dioptres (PD) (range, 30 to 125) that was reduced to post operative mean horizontal tropia of 13.19±14.794 PD (range, -10 to 55 prism dioptres). Mean follow up period was 27.15±-62.297 days (range, 1 to 300).

Conclusion: The study showed a significant reduction in horizontal tropia in patients after the strabismus corrective surgery in order to provide a better cosmetic appeal. It was seen that in patients with a moderate or lesser amount of tropia the treatment had a better outcome.

Key-words: Horizontal tropia, strabismus surgery

Surgical outcomes and parental satisfaction of strabismus surgery

Dr. AK Sharma, Dr. SF Jaufar, Dr. M Thapa, Dr. GB Shrestha, Dr. JK Shrestha
BP Koirala Lions Center for Ophthalmic Studies, Institute of Medicine, Kathmandu

Background: Strabismus is often managed surgically.

Aim: To evaluate surgical outcomes of strabismus surgery using fornix approach in a tertiary level eye centre.

Materials and methods: A hospital based prospective study including 60 patients who underwent surgery for strabismus was done. Postoperative evaluation of the cases was performed at 2 weeks, 6 weeks and 12 weeks. Surgical outcomes were measured in terms of postoperative alignment, cosmetic appearance and parental satisfaction.

Results: Of 59 patients with horizontal strabismus, 32 (53.3%) had esotropia (ET) and 27 (45%) exotropia (XT). The age of the patients ranged from 28 months to 38 years. The ocular deviation ranged from 22 pd to 114 pd in ET and 25 pd to 90 pd in XT. 68.8% esotropes had associated refractive errors, hypermetropia being the commonest (40.6%). Similarly, 40.7% exotropes had refractive errors and myopia was less prevalent. Twenty cases (33.3%) had associated amblyopia. A total 11 cases of exotropia (40.7%) and 6 of esotropia (18.8%) gained gross binocular vision postoperatively. Orthophoria and residual deviation ≤ 10 pd were obtained in 65% of the cases (n=37) and satisfactory alignment i.e. > 10-20 pd in 26.5% of the cases (n=16). Above 90% parents were satisfied with surgical results.

Conclusion: Strabismus surgery can yield good surgical outcome in terms of alignment. The majority of the parents are satisfied with the results. Some amount of gross binocularity is possible with timely surgical intervention.

Key-words: strabismus, surgery, binocularity, amblyopia
Performance of Frequency Doubling Technology Perimetry (FDT) in diagnosing Glaucoma

Ajit K Thakur, Dr. Purushottam Joshi
Mechi Eye Hospital

Background: Humphrey automated perimetry has become an accepted standard of measuring visual field loss in glaucoma. However, this device has several drawbacks as a screening tool. It is designed for clinic use, as it is not easily portable and is relatively expensive. Frequency Doubling Technology (FDT) perimeter is a portable, relatively inexpensive instrument designed for fast and effective detection of visual field loss.

Methodology: Cross-sectional hospital based study was carried out in Mechi Eye Hospital Jhapa. All the patients having Glaucoma hemi field test outside normal limits in HVA were tested with FDT. The sensitivity of FDT was calculated in reference to HVA. The visual field defects were classified into mild, moderate and severe in HVA and FDT. The time required for the test in both of the procedure was also compared.

Results: 53 eyes of 37 patients were enrolled in the study. The mean age of presentation was 38.6±14.75 years. The sensitivity of screening and threshold mode of FDT was 79.24% and 100% respectively. The sensitivity of screening mode reduced to 73.3% (n=30) when the early defect in HVA was taken into account. The time required to complete test in FDT was 1.28±0.31 min and 3.94±2.15 min in screening and threshold mode as compared to that of 6.36±1.2 min with HVA.

Conclusion: FDT is a fast reliable and useful tool in glaucoma diagnosis in both screening and threshold mode. Threshold mode is superior to screening mode and has equal reliability to that of HVA. Hence, FDT can safely be used in hospital and community setting for glaucoma diagnosis.

Key-words: HVA, FDT, sensitivity

Comparison of central corneal thickness and intraocular pressure in patients of primary open angle glaucoma with those of normal population

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Introduction: When CCT is low, underestimation of IOP may occur.

Objective: To compare the central corneal thickness and intraocular pressure in patients of primary open angle glaucoma with those of normal population.
**Materials and methods:** A comparative cross-sectional study was performed including 105 newly diagnosed cases of primary open angle glaucoma and 186 age & gender matched control group using convenient sampling method.

**Results:** The mean age was 50.44 ± 13.94 years. CCT of glaucomatous eyes (533.57±26.54 μm) was higher than that of normal eyes (530.06±23.52 μm). There was a positive correlation between CCT and IOP in both the groups. CCT of eyes with primary open angle glaucoma (POAG) with raised IOP (537.98 μm) was higher than that of eyes with normal tension glaucoma (515.93 μm). The axial length of normal eyes and glaucomatous eyes was 23.19 ±0.68 mm and 23.25±0.71 mm respectively. The mean anterior chamber depth (ACD) of normal eyes was 3.59±0.25 mm and that of glaucomatous eyes was 3.25±0.27 mm. Negative correlation was found between CCT and age in glaucomatous (P=0.000, r=-0.504, r²=0.254) and normal eyes (P=0.005, r = 0.145, r² = 0.021). Females with glaucoma had thicker cornea (539.28±27.36) than men (528.38±24.77). Eyes with severe glaucomatous damage (cup: disc ratio > 0.8) had thinner cornea (518.±18.03 μm) than those with moderate glaucomatous damage (cup: disc ratio=0.5-0.8)

**Conclusion:** The CCT of glaucomatous eyes is higher than that in normal eyes. There is a positive correlation between the CCT and the IOP. The CCT of eyes with POAG with raised IOP was higher than that of eyes with NTG. Females with glaucoma have thicker cornea than men. Eyes with severe glaucomatous damage have thinner cornea than those with moderate glaucomatous damage

**Key-words:** CCT, POAG, NTG, Axial length

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**Glaucoma in a Tertiary Referral Eye Center in Nepal**

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Tilganga Institute of Ophthalmology

**Purpose:** To report the distribution of various types of glaucoma among patients presenting to a tertiary eye hospital in Nepal.

**Method:** All new patients visiting the hospital between March 2007 and February 2008 underwent a comprehensive eye examination. Whenever glaucoma was suspected, patients were referred to fellowship-trained glaucoma specialists. Patients received a comprehensive glaucoma workup including applanation tonometry, stereoscopic examination of the optic nerve head performed by the glaucoma specialists, and a Humphrey visual field analysis (SITA 24-2).

**Results:** 447 patients were newly diagnosed with glaucoma. 171 (38.2%) patients had primary open-angle glaucoma (POAG), while 143 (32%) had primary angle-closure glaucoma (PACG). The average age of presentation of patients with POAG was 65.78 ± 9.1 years, while the average age for PACG patients was 54.6±12.8 years. 30 (21%) patients with PACG had acute angle-closure on presentation, while 113 (79%) had chronic angle closure glaucoma. 107 (75%) of these patients with PACG had visual acuity of less than 3/60 (20/400) in the worse eye at presentation. The most common form of secondary glaucoma was lens-induced (5.3%), followed by neovascular (3.2%) and uveitic glaucoma (3.2%).
**Conclusion:** The most common glaucoma seen in a tertiary referral eye hospital of Nepal was primary open angle glaucoma. Among the angle closure glaucoma, chronic angle closure was the most common. Lens induced glaucoma was still the commonest cause of secondary glaucoma.

**Key-words:** glaucoma, visual field, optic nerve, neovascular, tonometry

### Pediatric cataract surgery: a review

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India

**Introduction:** Congenital cataracts are responsible for nearly 10% of all causes of visual loss in children worldwide. Aim: to sensitizing the audience towards a major cause of preventable blindness in children, and its appropriate management.

**Materials and methods:** Any lenticular opacity in patients less than 15 years is considered to be a pediatric cataract. It may be a congenital cataract (developing in children less than 1 year old) or a developmental cataract (seen in children more than a year old). Early diagnosis is a major contributory factor towards good visual prognosis in cases of pediatric cataracts. However, not all children receive early diagnosis and treatment, especially so in cases of premature infants and those with other systemic abnormalities. In a published study on pediatric cataracts, the mean age at first presentation was 5.5 years. By the time of presentation, 60% of children had a manifest squint and 44% of children had nystagmus.

**Conclusion:** These factors would preclude a good visual prognosis post cataract surgery.

**Key-words:** congenital cataract, visual prognosis

### Ocular morbidity in children with autism

**Sonisha Neupane**  
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**Background:** Autism is a disorder of neural development that is characterized by impaired social interaction and communication, and by restricted and repetitive behavior.

**Purpose:** To identify ocular and visual abnormalities in children with autism.

**Materials and methods:** Thirty-six children of various rehabilitation centres of Kathmandu valley underwent detailed ophthalmological examination. Binocularity was assessed with Hirschberg test. Cycloplegic refraction was carried out in all children. Anterior and posterior segment abnormalities were assessed by using torch light, hand-held slit lamp and direct ophthalmoscope.

**Results:** Ocular abnormalities were seen in 24 (66%) children. Significant refractive error was seen in 21 (58.33%) children. Myopia was seen in 28 (36.11%) and hyperopia was seen in 21 (22.25%) of the eyes. Astigmatism was seen in 13 (17.10%) of the total refractive error. Strabismus was present in 8 (22.22%)
children. Nystagmus was seen in only 1 patient. Amblyopia was suspected in 11 (30.55%) children.

**Conclusion:** The results suggest the need of regular eye examination of children with autism.

**Key-words:** autism, ocular morbidity, refractive error, rehabilitation centre, strabismus

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### Visual Neglect in Stroke

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**Introduction:** Stroke is a brain injury caused by sudden interruptions of blood flow. Stroke affects both sensory and motor function of the body.

**Purpose:** This study was carried out to find out visual neglect in stroke in a tertiary eye care center in Nepal.

**Materials and methods:** It was a prospective, cross-sectional hospital based study done in out-patient department of BP. Koirala Lions Center for Ophthalmic Studies and In patient department of Internal Medicine, Tribhuvan University Teaching Hospital (TUTH). Only those patients admitted in department of Neuro-medicine of TUTH diagnosed as stroke were enrolled in the study. An Informed verbal consent was taken from all the subjects. The subjects characteristics were collected on a pre-designed pro-forma. Presence of visual neglect was assessed by using star cancellation test with near correction at the patient working distance. Total right, total left and altogether total score were recorded.

**Results:** A total no of 40 subjects were enrolled in the study. The mean age of the subjects was 52.13±15.71 years with range of 29 to 76 years and most of the patient belonged to 60-70 years age group. Among these male accounted for 40 % (n=16) and rest were female 60 % (n=24). Thirty three subjects had visual field within normal limits and sensitivity for age. Six subjects (15.0%) had peripheral constriction and one subject had homonymous hemianopic visual field defect. Thirty three subjects were able to undergo star cancellation test for visual neglect. Among all (n=33) subjects 54.54% (18) had visual neglect present. Right sided visual neglect (RVN) was in 39.39% and left visual neglect (LVN) was in 54.54% where left brain damage (LBD) was in 22 and right brain damage (RBD) in 11 subjects.

**Conclusion:** Complete comprehensive eye examination is mandatory for proper rehabilitation of stroke patients.

**Key-words:** visual neglect, visual field, stroke
A profile of low vision clinic in Mechi Eye Hospital

Digjen Sujakhu
Mechi Eye Hospital

**Aim:** To study the causes of low vision and provision of low vision services in Mechi Eye Hospital.

**Materials and methods:** It was a retrospective study carried out in low vision clinic in Mechi Eye Hospital. All clinical records of low vision patients seen between 2009 and 2010 were reviewed.

**Results:** A total of 249 low vision patients were assessed over that period of which 82.33% were from rural areas and 70.28% were male. Mean age of the patients was 32.12±19.28 years while majority (61.04%) of them was in the age group 15-60 years. About 18.87% were bilaterally blind whereas 65.86% were severely visually impaired. The common causes of low vision were refractive error and amblyopia (18.87%), retinitis pigmentosa (17.27%), macular diseases except age related macular degeneration (10.44%), and nystagmus (9.64%) and age related macular degeneration (8.43%). Mean presenting visual acuity (PVA) was 1.3 logMAR (3/60) which improved to 1.02 logMAR (6/60+) (p<0.05). When patients with PVA >3/60 were considered, the corrected VA was 0.6 logMAR (6/36) (p<0.05). Mean VA with telescope (n=14) in this group was 0.3logMAR (6/12). Mean presenting near visual acuity was 2.42±1.53 M which improved to 1.65±1.30 M (p<0.05) with magnifiers. About 64.25% of patients had significantly improved (p<0.05) VA with refractive correction only. Magnifiers were prescribed to about 25.3% of which spectacle magnifier was the most commonly prescribed device. Non-optical devices were recommended to 30.45%.

**Conclusion:** Uncorrected refractive error is a major cause for visual impairment in patients with low vision.

**Key-words:** Low vision service, causes of low vision.

Out-come of school screening program at Biratnagar

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**Background:** Childhood blindness is a priority area because of the number of years of blindness. Data on the prevalence and causes of blindness and severe visual impairment in children are needed for planning and evaluating preventive and curative services for children.

**Aim:** To determine the ocular morbidity among the school children in Biratnagar.

**Materials and methods:** All the children of the schools visited were included in the study. This program was targeted at government schools, which are unable to afford this service. A complete eye examination was done in all the children including slit lamp examination, fundus evaluation and retinoscopy, and subjective refraction.
**Results:** A total of 847 children from six schools are included in this report. 12.05% of our school children had ocular morbidity. Refractive error was the commonest type of ocular morbidity. It comprised of 62% of the total ocular morbidities. Myopia was the commonest type of refractive error (71.00%) as opposed to hypermetropia (8.5%). 8.2% of children with refractive error had already developed amblyopia. Other abnormalities were conjunctivitis and conjunctival disorders (10.18%), BSV problems (9.8%) and lid disorders in 3.2%. Beside these, other disorders like chorio-retinal scars, night blindness, nystagmus, optic atrophy and glaucoma suspect were found in 6%.

**Conclusion:** Ocular morbidity is present in 12.05% of the school children. Refractive error is the commonest ocular morbidity.

**Key-words:** Childhood blindness, school screening, refractive error

### Ocular morbidity among primary school children of Dhulikhel

**Dr. Dakki Sherpa, Dr. Chet Raj Pant**

**Aim:** To gather information on ocular morbidity among the school children at Dhulikhel.

**Material & methods:** All the children of randomly selected five primary government schools of Dhulikhel were included in this study. A complete eye examination was done.
of research works and their publications has been realized to facilitate the evidence based clinical practice.

**Purpose:** To present some useful information on how to write and submit scientific papers to peer reviewed journals

**Materials and methods:** A search of literature was done on how to write a scientific paper, common problems faced by writers and peer-review process.

**Results:** By writing an article the authors translate their experience and observations into a publishable paper. Knowledge on how to write a paper and peer-review process of submitted articles can be useful to potential authors of scientific journals. The criteria for acceptability of an article generally include originality, scientific merit and contributions to the field, reproducibility and ethical issues. The articles are judged by peer-reviewers anonymously following certain guidelines and evaluated by the editorial board for acceptability.

**Conclusion:** The problems encountered by novice authors can be minimized by highlighting the general requirements and guidelines to authors for publication in a scientific journal.

**Key-words:** scientific papers, publications, peer-review process

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**An overview of ocular leprosy: a chapter of great concern for community ophthalmic practice in some of the SAARC countries**

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Indian Association of Community Ophthalmology

**Background:** January 2011 marks the beginning of WHO Enhanced Global Strategy for further reducing the disease burden due to leprosy 2011-2015. Looking back over the past 50 years and reviewing the changes that have taken place in control and elimination of leprosy particularly over the past two decades one cannot but feel highly satisfied with the extraordinary progress made despite several aspects of epidemiology of leprosy issues remaining unresolved.

**Methods:** A total number of 600 People affected with Leprosy (PAL) from different parts of India, Bangladesh & Sri Lanka were examined on spot by the same group of investigators between 2007-2010 on a specific protocol in search of ocular leprosy with management.
Result: In Indian sub-continent though Cataract Surgical Coverage rate amongst the PAL is 50% but the same in case of lagophthalmos (only 19%) is lagging far behind the necessity. All eye surgeries can be performed when needed, irrespective of deformities and bacteriological status, by latest microsurgical techniques with good visual outcome as well as better rehabilitation measures.

Conclusion: Following the great success in eliminating leprosy as a public health problem, the epidemiological situation in leprosy has greatly changed. Integration of management of Ocular Leprosy with Community Eye Health Care Service under VISION 2020 as a chapter of great concern is the talk of the day along with other health care facilities delivered to PAL to detect and treat high risk eyes in time.

Key-words: leprosy, cataract, lagophthalmos

Gender Equity in Eye Care in Nepal

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Background: Gender inequity is a major issue not only in health care but also in other areas of social development in most developing countries, including South Asia. Nearly two thirds of the blind people in the world are women. The reason being not just they live longer but also they seek medical care less frequently than men, due to various societal barriers.

Materials and Methods: Nepal Blindness Survey (1981) reported a disproportionately high burden of blindness in women (60:40). This finding was noted but hardly acted upon, eye care providers remained unaware of this fact and very few hospitals track gender report of the patients attending hospitals. More recent data from National Census indicate that women constituted 67 percent of all blind people in Nepal. Alarmed by this finding, the recently constituted Nepal Gender and Eye Health Group undertook a nationwide survey of eye care services utilization across the nation’s 16 eye hospitals, eye camps and supplemented by additional data from Rapid Assessment of Avoidable Blindness (RAAB).

Results: It revealed that for every woman utilizing eye care service one woman was missed out by eye care system. The gap was even more marked for accessing surgical care. This disparity has persisted over the last 30 years, a period of rapid organized development in eye care in Nepal. This inequity was found to be pervasive occurring in the hills and planes, West to East, North to South and among children and adults.

Conclusion: Gender equity is an integral part of an eye care program.

Key-words: Gender, Inequity, Eye care seeking behavior
Comparison of surgical outcome of conjunctival autograft versus amniotic membrane graft in surgical management of pterygium

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Introduction: Pterygium is a common ophthalmic condition. Recurrence is quite common following pterygium surgery.

Purpose: To compare the surgical outcome of conjunctival autograft versus amniotic membrane graft in surgical management of pterygium.

Material and Methods: This was a randomized clinical trial conducted among sixty four eyes with either primary or recurrent pterygium. All eyes were randomized to undergo amniotic membrane graft (group 1) or conjunctival autograft (group 2) after pterygium excision. In group 1, thirty eyes underwent excision of the pterygium followed by amniotic membrane graft and in group 2, thirty four eyes underwent excision of pterygium followed by conjunctival autograft. Patients were followed up at 1 day, 1 week, 1 month and 3 months after surgery. The main outcome measure was recurrence.

Results: There were 25 eyes with primary pterygia and 5 eyes with recurrent pterygia in group 1 and 31 eyes with primary pterygia and 3 eyes with recurrent pterygia in group 2. The proportion of patients who had true recurrence was 10.0% in group 1 and 5.9% in group 2 at the end of 3 months (p=0.54). Out of 5 recurrent pterygia, recurrence was seen in 3 in group 1 and out of 3 recurrent pterygia, recurrence was seen in 2 in group 2. Recurrence was significantly associated with recurrent pterygium. Ocular complications were similar in both the groups.

Conclusion: The efficacy of amniotic membrane graft after pterygium surgery was comparable with conjunctival autograft.

Key-words: Pterygium surgery, amniotic membrane graft, conjunctival autograft, recurrence.
Pattern of strabismus, refractive status and binocular single vision in Duane’s Retraction Syndrome

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Aim: To study the pattern of strabismus, distribution of refractive error and orthoptic characteristics in Duane’s retraction syndrome (DRS) patient in a tertiary eye care center of Nepal.

Subjects & method: A retrospective review of the medical records of forty one (78.8%) cases of Duane’s retraction syndrome was carried out. Ophthalmic evaluation included presenting and corrected visual acuity assessment, subjective and objective refraction, detailed orthoptic evaluation including associated strabismus, status of binocular vision and stereopsis. The data were analyzed using standard statistical tool.

Result: The prevalence of DRS was 0.15 in our clinical population. DRS type I was the commonest type observed in 73.2%, followed by type II (14.6%) and DRS III (12.2%). It was more common in females (58.5%) than in males (χ²=4.6, df=1, p=0.03). It was unilaterally present in 95.1% of the subjects. In primary gaze, orthotropia (41.5%) was more common than exotropia (34.1%) and esotropia (24.4%). Presenting Visual Acuity (PVA) of 6/12 or less was seen in 8 (19.5%) subjects; Best Corrected Visual Acuity (BCVA) of 6/12 or less was seen in four subjects (9.7%). Seven subjects (17.1%) had a refractive error greater than ±1.0D. In primary gaze, vertical strabismus was present in 24.4% of the subjects. Binocular single vision was present in 68.3% of subjects. Stereopsis of 3000 seconds of arc was present in 9.8% and 40-200 seconds of arc in 58.5% as presented with the Titmus stereotest.

Conclusion: DRS type I was the commonest type. More than 90% of the cases had a unilateral presentation. DRS was more common in females. Orthotropia was most common followed by exotropia and esotropia. Significant refractive error was not associated with DRS. Significant number of cases had binocular single vision with good stereopsis.

Key-words: DRS, BSV, Strabismus, Orthoptics

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