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Research Article **Published Date:-2017-12-29 00:00:00**

Prospective Clinical Study to Find out Epidemiology of Xerophthalmia in Children in a Tertiary Care Centre in India

Objective: To study the epidemiology of xerophthalmia in children 2-6 years of age in North India.

Methods: A prospective clinical study was done at two tertiary care centers of North India between 2010 to 2016, Cases were selected from routine OPD and children less than 6 years of age were examined by an ophthalmologist. Diagnosis and classification of Xerophthalmia was done according to WHO classification. All the data recording demographic profile, socioeconomic status, other health problems etc were recorded in a fixed proforma. Data was analyzed by SPSS version 16.

Findings: Two thousand nine hundred forty six cases were included in the study after satisfying inclusion and exclusion criteria. The prevalence of night blindness was estimated to be 2.93% (95% Confidence Interval [CI]: 2.53-3.33) among children between 2 and 6 years of age. Xerophthalmia prevalence was 4.43% (95% CI: 4.19-4.67). Prevalence was more in girls than boys and higher in low socioeconomic status.

Conclusion: Vitamin A deficiency is recognized to be a severe public health problem leading to corneal opacity and childhood blindness in most of the areas of North India

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Mini Review **Published Date:-2017-12-27 00:00:00**

Neuro-ophthalmological emergency disorders: A general view

Neuro-ophthalmological emergency disorders usually occur with symptoms of visual loss, diplopia, ocular motility impairment and anisocoria. In this mini-review, we aim to take look the common neuro-ophthalmological emergency disorders. The delayed diagnosis of the neuro-ophthalmological emergencies puts the patient at risk of death or blindness. If these are well-known, the discrimination and management of these emergency conditions will be easier.
Introduction

Review Article **Published Date:-2017-12-22 00:00:00**

The Role of Omega-3 Essential Fatty Acids in Dry Eye Disease

One of every four visits to eye care professionals is for dry eye disease which affects an estimated 7-34% of Americans [1]. Knowledge regarding etiology and treatments has advanced exponentially in the last 20 years.

Research Article **Published Date:-2017-11-24 00:00:00**

Intravitreal ranibizumab in the management of acute central serous Chorioretinopathy

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Purpose: To evaluate the efficacy of ranibizumab in hastening the recovery of acute CSCR when given immediately at time of diagnosis.

Methods: In This retrospective case series, a total of 72 patients diagnosed with acute CSCR where reviewed, of which 63 received Ranibizumab at presentation. The patients were evaluated using Best corrected visual acuity, Ophthalmic examination, Optical coherence tomography (OCT) and fluorescein angiography, in addition to indocyanine green angiography and OCT angiography in some cases, at presentation, one week, one month and two months' post injection.

Results: From the total 72 patients diagnosed with acute CSCR, 63 of them received intravitreal ranibizumab and the remaining 9 patients preferred to go for observation. The mean age of patients was 41.2 year old. The ratio of male to female was 8:1. The mean BCVA at presentation was 6/15 on Snellen chart. All patients who received ranibizumab injection showed an improvement after 1 week, with a mean improvement in BCVA of two lines. Of them, 43 patients were back to BCVA of 6/6 after 2 months and showed complete resolution of sub retinal fluid. The remaining 20 patients showed an additional mean of improvement of one line (over the previous two lines) after the 2 months.

Conclusion: Intravitreal ranibizumab hasten the recovery of both the BCVA and central macular thickness on OCT in acute CSCR when given immediately at presentation.

Research Article **Published Date:-2017-10-24 00:00:00**

Detection of Ganglion Cell Loss in Preperimetric Glaucoma by Fourier-Domain Optical Coherence Tomography

Background: Glaucoma is a multi-factorial optic neuropathy characterized by a loss of retinal ganglion cells with subsequent loss of the retinal nerve fibers ultimately resulting in visual impairment. The macula region has a high density of retinal ganglion cells thereby being a likely region to detect early cell loss .Since glaucoma affects mainly the inner layers of the retina, Ganglion Cell Complex (GCC) mapping can help to detect glaucomatous damage early as compared to the total retinal thickness.

Purpose: To map GCC thickness and average Macular Retinal (MR) thickness with high-speed Fourier-Domain Optical Coherence Tomography (FD-OCT) and correlate it with the Retinal Nerve fiber layer (RNFL) thickness in preperimetric glaucoma.

Design: Observational cross-sectional study.

Methods: Forty four eyes diagnosed as preperimetric glaucoma were studied. GCC, MR thickness and RNFL thickness was mapped using the RTVue FD-OCT system. The GCC thickness map, the deviation map and the significance map were obtained in all cases. Average GCC thickness and MR thickness were correlated with the RNFL thickness.

Results: Average GCC of patients was 85.99±6.9 µm. There was GCC loss in 35 (87.5%) eyes which correlated well with areas of RNFL loss ($r=0.408$, $p<0.001$). Nine (22.5%) eyes were seen to have decreased MR thickness. GCC loss correlated well with the loss of average RNFL thickness and MR thickness. Further GCC loss was also seen in 23 (74.19 %) eyes with a normal MR thickness.

Conclusion: GCC analysis may prove to be a robust diagnostic parameter and is complementary to RNFL analysis in preperimetric glaucoma.

Research Article **Published Date:-2017-09-20 00:00:00**

Intravitreal Ranibizumab/ Lucentis (IVTL) injections in Glaucoma patients-Intraocular Pressure (IOP) elevation and the use of Anterior Chamber Paracentesis (ACP)

Purpose

• To assess the short term effects of intravitreal Lucentis (IVTL) on intraocular pressure in patients with ocular hypertension and glaucoma

• To determine rate of anterior chamber paracentesis (ACP) required post-injection according to departmental protocol

Methods

This was a prospective, observational study carried out between August 2011 and February 2012 in the Department of Ophthalmology, Maidstone Hospital. 24 participants (13 female, 11 male) with established ocular hypertension (OHT) or glaucoma were chosen from a cohort of patients receiving intravitreal (IVTL) Ranibizumab (Lucentis) treatment for wet age related macular degeneration (wARMD). Apraclonidine 1% was given pre-injection, and baseline IOP was measured 30 min. after this, just before IVTL. IOP was measured at baseline, within 1 min of injection, 5 min, 15 min, 30 min up to 60min following a single IVTL treatment.

Anterior paracentesis was performed if:

• Immediate post injection IOP > 50mm Hg and OHT

• Immediate post injection IOP > 40 mm Hg and there was evidence of disc damage only

• Immediate post injection IOP > 30mm Hg with evidence of disc damage and visual field loss

Results

79.2% had diagnosed disc damage and visual field loss (glaucoma); 12.5% had disc damage only (pre-perimetric glaucoma), whereas the remaining 8.3% had no evidence of disc damage or visual field loss i.e. ocular hypertension (OHT).

Administration of Apraclonidine 1% prior to IVTL did not cause a statistically significant IOP reduction in patients with OHT and glaucoma (paired Student's t-test P = 0.368). Immediately post injection, mean IOP was 41.54mm Hg (SD 14.1, 95% CI 37.20 to 45.88; Paired T test results P <0.0001,) which confirmed a statistically significant difference between baseline and immediate post injection IOP.

13 out of 24 (58%) of the study patients required anterior chamber paracentesis (ACP) post IVTL according to our devised protocol. There was no statistically significant difference in baseline IOP between the paracentesis and non-paracentesis groups (p=0.4). The presence of a bleb post injection had no statistically significant bearing on immediate post intravitreal IOP (p=0.3).

ACP performed at 1min restored IOP to a safer level at 5min in all cases thus treated.

Conclusions

IVTL appears to cause a significant but transient rise in IOP which is reduced after a mean time of 5 minutes. Although the clinical significance of this IOP spike is still unknown, extreme care must be taken in patients with ocular hypertension and glaucoma particularly those with established disc damage and visual field loss. Apraclonidine 1% appears to have a limited role in the prophylactic lowering of IOP pre-injection. The authors propose the use of the formulated anterior chamber paracentesis protocol for IOP management in patients with OHT and glaucoma receiving intravitreal anti-VEGF treatment.

Review Article **Published Date:-2017-06-28 00:00:00**

Mitomycin-C Use and Complications in Ophthalmology

Mitomycin-C, first found its way into ophthalmic use in 1969, in Japan, where recurrent pterygia were successfully treated with the drug which is an antineoplastic / antibiotic agent isolated from the soil bacterium Streptomyces caespitosus [1]. It is an anti-metabolite with anti-proliferative effect on cells showing the highest rate of mitosis by inhibiting DNA synthesis and interferes with RNA transcription and protein synthesis [2].
CLINICAL USES

Case Report **Published Date:-2017-06-20 00:00:00**

Efficacy of early Hyperbaric Oxygen Therapy in Central Retinal Artery Occlusion

A 60-year-old woman had central retinal artery occlusion (CRAO) presented to the ophthalmology department with a sudden, painless loss of vision. Her initial visual acuity was light perception and she treated with hyperbaric oxygen therapy (HBOT) 4 hours after the development of visual symptoms. Systemic risk factors were not found so she was diagnosed as having idiopathic CRAO. Her vision improved from light perception to 20/50 after the HBOT. Any complications such as neovascularization were not developed until the last follow up visit of 8th months.

Research Article **Published Date:-2017-02-20 00:00:00**

Theory and Experiments. (+) Add Reading Glasses to Prevent Myopia

Basic control theory equations are developed showing conventional exponential system response of refraction vs. time R (t) with a characteristic system time constant, in response to a step change of near work environmental conditions. Details from preliminary experimental design using reading glasses at the U.S. Naval Academy at Annapolis are discussed. The conclusion is that (+) add lenses, used as reading glasses during study, can prevent the development of myopia for college students in pilot training.

Case Report **Published Date:-2017-02-17 00:00:00**

A Comparative Study of Anatomic and Functional Outcomes of Two Surgical Techniques of Cataract at Lome

Aim: To compare the anatomical and functional outcomes of cataract surgery with manual small incision cataract surgery (MSICS) to those of extracapsular cataract extraction (ECCE) in Lome.

Patients and Methods: A prospective study involved two groups of patients who underwent ECCE (group 1) and MSICS (group 2) by the same surgeon in the same conditions in different periods. Complications and visual results to the 45th postoperative day were compared.

Results: At the 45th postoperative day, 60% of operated eyes of the ECCE group (G1) and 83.9% in the group of MSICS (G2) had uncorrected visual acuity greater than or equal to 3/10. Through the pinhole, these proportions increased to 73.3% for G1 and 92.2% for G2. Visual acuity was less than 1/10 in 4.4% for G1 and 1.1% for G2. The vitreous loss was observed in proportions of 3.8% for G1 and 3.3% for G2. During follow-up, the three main early postoperative complications were inflammation (13.9%), corneal edema (13.3%), and the pigment dispersion (7.2%) in G1 and corneal edema (9.4%), pigment dispersion (8.3%) and hypertonia (6.6%) in G 2.

Conclusion: Two cataract extraction techniques offer the same level of safety in intraoperative period. However, MSICS has certain advantages over the ECCE and would be an alternative technique in developing countries.
