OP1: IXTQ And AS-20 Questionnaires In HRQoL Assessment of Malay Children With Strabismus And Their Parent Proxy

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Purpose:
Strabismus is associated with functional and psychosocial circumstances. However, not many strabismus-specific health related quality of life (HRQoL) questionnaires for children are available and no Malay translation. We translated two strabismus-specific HRQoL questionnaires, Intermittent Exotropia Questionnaires (IXTQ) and Adult Strabismus-20 (AS-20) questionnaire, into Malay and tested and compared these questionnaires in Malay strabismic children and parent proxy.

Methods:
This is a comparative cross sectional study. The questionnaires were translated forward and backward to Malay before administered to 30 Malay children, aged 5 to 17 years, with strabismus and their parent proxy. Cronbach's alpha was performed to determine internal consistency reliability. Independent t-test was performed to compare total mean, functional and psychosocial mean scores between these children with 30 controls. Then, comparison of all mean scores of 57 Malay strabismic children and proxy between both questionnaires were performed using paired t-test.

Results:
Internal consistency evaluation revealed acceptable to good reliability. There was a significantly lower subjects mean scores compared to the controls (p value <0.05). Total and functional mean scores in Malay Child IXTQ were significantly lower than Malay Child AS-20 (p-value < 0.001). Malay Proxy IXTQ had significant lower total, functional and psychosocial mean scores (p-value < 0.05). Child and proxy mean scores were significantly different in total and functional mean scores (p < 0.05).

Conclusion:
The Malay IXTQ and AS-20 questionnaire are reliable in detecting HRQoL scores reduction in Malay children with strabismus. There was reduced HRQoL in our children. IXTQ detects psychosocial effects more than functional effects, Parents overestimated children's strabimus HRQoL effects.

OP2: Post Operative Cataract Surgery With Monofocal IOL Implant: Do We Achieve The Targeted Power?

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Purpose:
To evaluate refractive outcome after phacoemulsification and to assess the magnitude and contributing factors for post operative astigmatism.

Methods:
A cross sectional study conducted between January to December 2013 involving 218 patients. All eyes had monofocal IOL implantation with targeted postoperative refraction ranging from -0.09 to -2.00 D. Data on post-operative visual acuity and refraction were collected at 8 weeks post-operatively. The refractive outcome was analyzed using the mean absolute error (MAE). Bivariate analysis were use to look for association between post operative astigmatism and contributing factors.

Results:
The mean age was 63.5 with female predominance. The mean target power was -0.35, whereas the mean achieved target power post operatively was -0.54. The mean absolute error (MAE) was 0.22, 88.1% achieved within +/- 0.50D of targeted refraction. The preoperative mean cylindrical power was 0.52D and postoperative mean cylindrical power was 1.04D. Post operatively 67.9% had less than 1.0D of astigmatism and only 32.1% had more than 1.0D. Significant associations noted between post-operative astigmatism and the number of sutures at entrance wound (p value 0.001) and side port (p value 0.002). Significant correlation between post operative astigmatism and age of the patient (p value 0.02) as well as A scan formula (p value 0.039) was observed. 91.3% achieved good post op vision. Only 3.2% had low vision due to post-operative astigmatism.

Conclusion:
The refractive outcome post phacoemulsification with monofocal IOL implant achieved the targeted power among the majority of the patients and sutures at the wound site are the main contributors for post-operative astigmatism.
OP3: Limbal Mesenchymal Stem Cells
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Purpose: Ex vivo expanded limbal stem cell (LSC) transplantation using amniotic membrane as a carrier system for ocular surface regeneration. The aim of this project is to isolate and characterise mesenchymal stem cells from the limbal region as an alternative cell population for cellular-based therapies.

Methods: Cells were isolated from cadaveric corneo-scleral rims and the cells were resuspended in a MSC-growth promotion medium. Phenotypic immunolabelling was performed to define the cell population as human MSCs followed by tri-lineage cellular differentiation. Chemotaxis transwell assays were performed to study CXCL12-mediated cell migration. Cells were also plated onto cryopreserved amniotic membrane to determine if they would adhere, and proliferate on this biological scaffold.

Results: Limbal MSC were adherent, rapidly proliferated on plastics and were positive for antibodies specific to human MSC, and negative for markers of lineage committed haematopoietic cells, expressed HLA Class I molecule and low/no expression to HLA-DR. They also demonstrated adipogenic, chondrogenic and osteogenic commitment. LMSC in an optimised culture conditions maintained expression of common limbal markers ABCG2, p63 and ABCBS. It demonstrated high expression of chemokine receptor CXCR4 and directed to ligand CXCL12-mediated cellular migration. LMSC were also able to grow and proliferate on cryopreserved amniotic membrane.

Conclusion: LMSC can be successfully isolated from cadaveric corneo-scleral rings using our tissue culture protocols. The potential of these cells to contribute to improved outcomes in LSC transplantation bears further investigation.

OP4: Changes In Macular Thickness And Contour Post Macular Surgery
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Purpose: To evaluate visual acuity outcome, changes in macular thickness and contour post macular surgery in patients with epiretinal membrane or vitreomacular traction.

Methods: A retrospective study of 52 eyes diagnosed with epiretinal membrane or vitreomacular traction who underwent macular surgery, between March 2009 and February 2014 at Pusat Perubatan Universiti Kebangsaan Malaysia was carried out. Vision pre and post operation at 6 months was evaluated. The macular changes prior to operation and at one, three and six months post operation were based on findings obtained from either the time or spectral domain optical coherence topography (OCT). The type of surgery, use of gas tamponade and type of vitrectomy gauge size were also evaluated.

Results: There were 34 cases of epiretinal membrane (65.4%), 10 cases of vitreomacular traction (19.2%), 7 cases of combined epiretinal membrane with vitreomacular traction (13.5%) and one case of macular pucker (1.9%). 24 of the cases (46.2%) were combined macular surgery with cataract extraction, while the remaining 28 cases were pure macular surgery (53.8%). Intraocular tamponade was used in 28 of the cases. 23G size vitrectomy cutter was used in the majority of the cases (81%). Most patients (67.7%) had an improvement in visual acuity after surgery with 7 patients (20%) achieved 6/12 or better vision. However, 5 cases (14.7%) had worsening in visual acuity after the surgery. The improvement of OCT macula thickness was seen as early as 1 month post operation in 60% of cases.

Conclusions: Macular pathology can cause central visual impairment with metamorphopsia. Epiretinal membrane surgery was the most common macular surgery performed. Most patients benefitted from the surgery as evidenced by the improvement in vision and the OCT changes of the central macular thickness post operatively.
OP5: Outcome Of Eyelids, Canaliculi, Medial Canthus Injuries In Hospital Serdang, National Oculoplastic Referral Centre
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Purpose:
To describe demographics, clinical characteristics and outcome of eyelids, canaliculi and medial canthal injuries managed by Hospital Serdang, a tertiary oculoplastic referral centre.

Methods:
This is a 3 ½ years retrospective study on all the eyelids, canaliculi and medial canthus injuries managed in Hospital Serdang from January 2012 to June 2015. Demographic data, nature and location of injuries, types of procedure performed and clinical outcome were evaluated.

Results:
In total, there are 42 patients who underwent 49 surgical correction procedures in Hospital Serdang. The mean age of patients was 33.7 years old, with 86% of patients were male and 88% patients were Malay. 14 patients (33.3%) patients had eyelid injuries primarily repaired by doctors who subspecialise in Oculoplastics. All except two achieved successful outcome in one surgical setting. 30 patients who were referred by other hospitals after failed primary repairs had secondary repairs. 7 patients had lateral canthal deformity successfully repaired in one setting. 7 patients had persistent epiphora post failed primary canicular repair only achieved success rate of 50%. 16 patients with cicatrical lower eyelid ectropion or lagophthalmos post primary repair were successfully repaired in one setting in 75%.

Conclusions:
While most primary eyelid repair can be performed successfully by general ophthalmologists, complex eyelid injuries involving lateral or medial canthus, contiguous upper and lower eyelid margin, canaliculus or lacrimal system should be referred to oculoplastic surgeons. Attempted primary repair or delayed referral will lead to more than one reconstructive surgery and reduced success rate as illustrated by this study.

OP6: Comparison Of Effectiveness And Adherence Of Fixed Combination And Non-Fixed Combination Dorzolamide And Timolol In Open Angle Glaucoma
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Purpose:
To compare the pressure lowering effect and adherence score of fixed combination dorzolamide/timolol maleate (FCDT) and non-fixed combination dorzolamide and timolol XE (NFDT) in open angle glaucoma.

Methods:
This randomised controlled trial, parallel groups study involved 55 patients of OAG. Patients were randomised to FCDT group who received fixed combination dorzolamide/ timolol maleate and NFDT group that received concomitant dorzolamide and timolol XE for 3 months. Pre-study run-in timolol was given for 2 weeks. IOP, adherence score and safety of medication were assessed during follow-up. The adherence score consists of percentage of eye drops used based on bottle weight measurement, Glaucoma Medication Adherence Self-Efficacy Scale and Subjective Drug Adherence Score. All data were analysed.

Results:
The demographic data were similar between the groups. FCDT and NFDT were statistically significant reduced the IOP at month 1 and month 3 with mean IOP reduction at month 1, 4.9 mmHg with 95% confidence interval (4.0 to 5.9) in FCDT, 4.9 (95% CI 4.0 to 5.8) mmHg in NFDT, at month 3 were 5.2 (95% CI 4.2 to 6.2) mmHg in FCDT and 4.9 (95% CI 3.9 to 5.8) mmHg in NFDT. There was no significant difference of mean percentage of IOP difference and mean total adherence score between treatments groups.

Conclusion:
The pressure lowering effects of FCDT and NFDT was comparable. Both provide a significant reduction of IOP at one month and three months treatment. The total adherence score was high in both treatment groups and comparable.