DILEMMAS IN GLAUCOMA

This lecture was delivered by Dr Parvez Siddique on 23 May 2010 at a JDOS CME in Hotel Narmada Jackson 5 PM. It was a JDOS self sponsored session.

Why is the incidence of glaucoma (in india or world) rising ?

In general, longevity of people is increasing across the globe resulting in increase in number of old people in the world. Glaucoma being an age-related disease is also increasing correspondingly.

For the general ophthalmologist, how do you know whether optic nerve and RNFL damage is controlled or not ?

A base line optic disc stereo photograph should be taken and should be compared with the patient's current status to see if change in optic nerve hand and nerve fiber layer are occurring. One look for increase thinning of the neuro retinal rim, disc hemorrhages and increase in the angular extent or area of parapapillary atrophy to assess the optic disc for change. The nerve fiber layer can also be examined with red free illumination to look for appearance of new defect is pathological only if it extends all the way to the disc margin.

If disc photography is not possible, detailed drawing of the disc appearance will help.

What do edge points in the evaluation of visual fields mean ?

The edge point refer to those points on the visual field that are at edge of the field (the most peripheral points).

They are of significance because we usually do not include the edge points in a 30-2 printout since they could be artifact. The nasal edge point about and below the horizontal midline are included since the nasal step in glaucoma affects these points.

How reliable is the anderson criteria ?

The Anderson criteria is not a measure of how reliable a visual field is. It describes a defect, which is significant and likely to be due to glaucoma. The Glaucoma hemi field test is reported to have a specificity of 94% for glaucoma affects these points.

Due to heavy patient attendance and being unable to screen patients for glaucoma how should one proced so that no glaucoma ?

Glaucoma being an asymptomatic disease, the chances of missing it are very high. At present we do not have any single test with specificity and sensitivity. The idea way will be to do a comprehensive eye examination for all people who seek ophthalmic check up.

Will you treat a non-progressing field defect in the absence of any clinical optic nerve head cupping ?

If we detect a visual field defect which is consistent on repeated testing and the optic disc appears normal it is important to rule out other pathology on drug available clinically for neuroprotection of the optic nerve hand in glaucoma.

At present we do not have any medication with proven neuroprotection. However theoretically speaking, we need to assess whether visual function and structural damage remain stable as an effect of neuroprotection.

Is there any difference in therapeutic effect amongst the various brands of antiglaucoma drugs, for instance, travatan versus travoprost ?

The scientific evaluation of such a difference requires a randomized clinical trial with cross over, which has not been performed for travatan varsus Travoprost. Any drug can be used provided the clinician notes the baseline IOP and checks that there is a drop in IOP by at least 20% for a first-line drug such as a prostaglandin. Since cost is a major issue affecting compliance to therapy in our population, generic brands can be prescribed as monotherapy with a cheak on IOP lowering efficacy and how long a bottle of the drug lasts (the number of drops in a bottle).

What should be the line of treatment for a patient having almost total glaucomatous cupping ?

Such a patient requires a target IOP of around 12 mm Hg and should be treated medically with a prostagladin-betablocker combination OD (provided there are no contra-indications to beta-blockers) and brimonidine 0.1% or dorzolamide BD. Three drugs give as three drops provide maximal IOP lowering with potential for maintaining long-term compliance without compromising the quality of life of the patient. If target IOP is not achieved medically (evaluated by doing a diurnal IOP curve on medications) or there is evidence of progression of optic neuropathy on visual fields, the patient should be subjected to trabeculectomy with Mitomycin c and use of releasable sutures.

What is the safest drug in juvenile glaucoma and congenital glaucoma ?

Timolol BD 0.25% with occlusion of tear duct performed by the mother is the safest drug for congenital glaucoma. Medical therapy for juvenile glaucoma is not different from adult POAG and can be treated with any the drugs.

In manipulative gonioscopy is the true angle before or after manipulation? If before, then why manipulate at all ?

The true angle is before manipulation If this is open, there is no need to manipulate (indentation with 4 mirror lens is better). However, if the angle is narrow or closed, indentation will tell us if the closure is appositional (opens with indentation) or synechial. When the angle opens, one will be able to visualize giniosynechiae and blotchy pigments that are diagnostic of primary closure.

How do you interpret a visual field change due to glaucoma in a patient with moderate-to-advanced cataract as well ?

The visual field analysis software is robust enough to filter out the effect of most cataracts and the Pattern Deviation plot display the defect after adjusting for this generalized depression. What is important is to assess whether the visual field defect corresponds to the optic disc changes. If it does not, and there is a localized defect that corresponds to a localized dense posterior subcapsular or cortical cataract we could attribute the defect to the cataractous change.

Which antiglaucoma drug should be used if you have a patient who has silicone oil in his eyes

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For early postoperative glaucoma, you could use beta-blockers, alpha agonists and/ systemic carbonic anhydrase inhibitors. If high IOP is due to an overfill, some silicone oil should be removed. For late post-operative gloucoma, prostagladins can be used.

How would you manage a trabeculectomy-failed case who is not responding medically ?

Failed trabeculectomy not responding to medical therapy. In the early postoperation period, do a gonioscopy to check internal ostium. If ostium is patent, laser suturolysis and needling of the bleb under the scleral flap (with 5 FU) can be attempted.

In the late postoperative periods, If conjunctiva is fibrosed, a glaucoma drainage device should be implanted.

If Visual potential is poor (inaccurate projection) a 180/270 degree diode laser cyclophotocoagulation can be performed leaving the superior quadrant (operated area)

When Should Viscoannulostomy Be preferred over a trabeculectomy ?

Long-term IOP control with trabeculectomy is much better then viscocannlostomy. Trabeculectoy is more likely to achieve target IOP in eyes with moderate to advanced glaucoma. In addition the surgical procedure is technically much easier and takes less surgical time so at present there is no condition where I would prefer viscocannlostomy over trabeculectomy.

In case of acute angle closure glaucoma do you intervene with SLT laser ?

SLT is contraindicated in angle closure glaucoma since SLT selectively target the pigmented cells of the trabecular meshwork which gets obsured in angle closure cases.

THANK YOU