



Some vital aspects in Glaucoma management

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Glaucoma is the main cause of irreversible blindness and is the second leading cause of blindness worldwide.⁽¹⁾ This is a fact that more number of glaucoma patients are being treated by comprehensive ophthalmologists as compared to the glaucoma specialists however, the complicated cases are managed by glaucomatologist more often. This is alarming to note that about 50-90% of glaucoma patients remain undiagnosed in the population.⁽²⁻⁴⁾ The problem of under diagnosis and over treatment is a reality and has been discussed appropriately in an editorial earlier.⁽⁵⁾

The purpose of present editorial is to highlight some important aspect which are often ignored by most of us leading to mismanagement.

We should always be reminded of the following facts in relation to glaucoma, so that appropriate management can be planned.

- i. Glaucoma is a chronic disease.
- ii. It is asymptomatic in majority.
- iii. It needs life long treatment and follow up.
- iv. It cannot be cured but can be controlled just like diabetes / hypertension.
- v. The effect of treatment is difficult to be appreciated by the patients.
- vi. It is a mainly a disease of old age, the patients may be having some comorbidity as well.
- vii. We always overestimate the benefit of therapy and underestimate the associated risk of therapy.
- viii. The diagnosis of glaucoma and its treatment affects Quality of life negatively.
- ix. There is no single test which can diagnose glaucoma, hence one has to integrate various examinations /tests to make a diagnosis.

Before starting any treatment the diagnosis of glaucoma should be well established. Diagnosis of glaucoma is not straight forward in early stages. The various examinations, required for proper diagnosis include proper history, comprehensive eye examination, Slit lamp examination, intra ocular pressure (IOL) recording reading by applanation tonometer, gonioscopy, stereoscopic optic disc evaluation with dilated pupil and perimetry. If imaging modalities are available, the help of optical coherence tomography (OCT) of posterior segmented also can be incorporated with its limitation in mind. The OCT examination cannot replace perimetry. Before starting treatment, except in acute stages, we must establish a good baseline of IOP, Perimetry and optic disc evaluation. Repeated measurements of IOP on many occasions will provide a good baseline of IOP. Glaucoma is not a malignant disease, hence a delay in starting treatment by couple of days is not harmful in majority. The perimetric defect to be considered as genuine, we must get two consecutive fields with repeatable defect.

While putting patients on medical therapy, we should make sure that least amount of medication which is necessary should be given. To achieve this we must start monotherapy first and based on the efficacy and target IOP we can add another medication if required. If a patient is on two medication and both are efficacious, we can substitute it with the fixed dose combination if available. We should never start fixed dose combinations to begin with as we will not be able to ascertain which medication is effective and which is not. Also in case of allergic reaction, we will not know which medicine is causing allergic reaction. There are two class of antiglaucoma medication, one which reduces the aqueous secretion and the other enhances the outflow facility. The first combination should always be from the two different class of drug to have maximum effect. It has been noticed that the compliance by the patient goes on decreasing as the number of medications are increased. That is why we should aim at prescribing the minimum medication required to control the IOP.

In the beginning before starting medication, we should have a mental calculation regarding the target pressure of the patient. We should remember that target pressure has to be readjusted in due course of time based on the findings of the follow up examination. Three parameters should be looked at the various follow up examination,

IOP, optic disc and Perimetry. IOP and optic disc should be evaluated at each visit. IOP guides us about the efficacy of treatment but disc and Perimetry help us in knowing the sufficiency of treatment. Disc should be evaluated in all visits whereas perimetry is repeated at longer durations based on the condition of the patient. To detect deterioration on perimetry, the two consecutive fields should show similar deterioration from the baseline.

Quality of life consideration is always neglected by treating ophthalmologists. We should make the patient an informed partner before deciding the future management. We also have to take into account the patient's perspective to make the patient more compliant. Patients always want to know about the disease, the treatment options, the side-effects of medication and how to tackle them, the long term outcome and the cost of treatment. As the patients require frequent visits, we should try not to make them wait for long in the clinic and some of the follow ups can even be recommended in nearby clinic of the patient.

If the patient belongs to the group of angle closure disease, the first step is always LASER peripheral iridotomy (LPI) if indicated followed by medication if required. After performing LPI the patient is treated just as open angle glaucoma.

When the patient still deteriorates with seemingly well control of IOP, we must consider diurnal variation and central corneal thickness if not considered earlier. We should also keep in mind that we may not be dealing with glaucoma case at all and actually it may be a neuro ophthalmological case or some other disease may be associated with glaucoma.

Glaucoma has certain characteristics. The central visual acuity is usually not affected in glaucoma unless there is advanced glaucoma. The glaucoma is usually symptomless and the visual field progresses very slowly. Glaucomatous field defects respect the horizontal meridian whereas the visual pathway disorder from optic chiasm and beyond will always respect vertical meridian causing hemianopic defect.

If the visual acuity is affected and we are unable to explain the cause for it, visual field is rapidly progressing, or there are some other symptoms, there are hemianopic field defect, the optic disc is showing band shaped optic atrophy, presence of shunt vessels on the disc, we should suspect that either we may not be dealing with glaucoma or there is some other condition also associated with glaucoma. Neuro imaging in the form of Magnetic Resonance Imaging (MRI) or Computed Tomography (CT) scan can be ordered.⁽⁶⁾

I am sure the points mentioned above will definitely be helpful in proper and better management of glaucoma.

References

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