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Glaucoma Burden: Indian Scenario

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Dear Friends

Season's Greeting!!

Glaucoma is a complex, neurodegenerative disorder characterized by loss of retinal ganglion cells and their axon, leading to optic neuropathy and visual field defect. Recently it has been identified as the second leading cause of preventive blindness among the global population. It is also the leading cause of irreversible visual loss worldwide, affecting 70 million people, which will be 79.6 million by 2020 and 111.8 million by 2040, majority will have open angle glaucoma (74%). Bilateral blindness from glaucoma is projected to affect > 11 million individual worldwide. Glaucoma disproportionately affects women, Asian and African population.[1,2] Visual impairment from glaucoma weighs a heavier economic burden in under developed and developing countries. In US the annual total direct medical cost for glaucoma was estimated to be 16.2 billion dollar.[3] In India the monthly cost of glaucoma medications represented 13%-123% of monthly income for the patients in the lowest socioeconomic groups. In India it is estimated that glaucoma affects 12 million people and causes 12.8% of the total blindness in the country and around one fifth of the global burden of glaucoma. With rapidly growing ageing population, this figure will reach 16 million by 2020.[4-5]

The prevalence, demographics and clinical pattern differ in urban and rural India. The prevalence of POAG has been found to be higher in the urban population in the Hoogly River Glaucoma Study (HRGS) as well as in Chennai Glaucoma Study (CGS).This could be attributed to genetic difference between the two study groups.[6-8] PACG caused two times the proportion of bilateral blindness than that of POAG.[5] In India low case detection rate is a major health issue. In HRGS 95% of the subjects in the urban population and 98% in rural population were unaware of their disease.[7] Population based study revealed that 90% of glaucoma cases in India remain undiagnosed while in developed countries rate of undiagnosed cases is 40-60 %. These higher rates of undiagnosed cases are responsible for significant rise of glaucoma blindness in our country.[6] Often clear-cut cases of glaucoma remain undiagnosed in most of the ophthalmic clinic due to lack of comprehensive examination including slit lamp examination, tonometry, gonioscopy, pachymetry, perimetry and detailed fundus examination. Large number of OPD patients and lack of time may be the reason of not performing a routine comprehensive ophthalmic examination. To reduce the rate of undiagnosed glaucoma there is a need to increase awareness about glaucoma both in public as well as among the health care providers. There is also a need for quality eye examination and cost effective population screening in the country.

Glaucoma management is another issue in our country. Medical and surgical overtreatment is a common practice in India. More than 50% patients take antiglaucoma medications although they do not need them (overtreatment).[9] The reasons for over-treatment could be improper workup, lack of infrastructure in ophthalmic clinic, fear of glaucoma blindness, overestimation of benefit of therapy and unavailability of glaucoma specialist. Glaucoma has to be managed by every ophthalmologist, only challenging and more difficult cases should be referred to subspecialist.

To tackle the above glaucoma related problem our country needs more public awareness, creation of proper infrastructure & specialty clinic, short term glaucoma training/ fellowship and comprehensive eye examination. There is a desperate need of further advanced glaucoma research to help in decision making in cost effective disease screening and management.

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