

Socioeconomic Impact of Primary Open Angle Glaucoma in Mexico

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Abstract

By means of a transversal study we have estimated the yearly cost for each patient with primary open angle glaucoma and the economic effects on Mexican society and in the family of the patients. The direct costs (diagnosis and treatment) and indirect costs (productivity losses) were calculated with an exploratory study that involved the biggest 30 population areas in Mexico. The total costs are \$1,144,611,537 USD during the first year for an estimated prevalence of primary open angle glaucoma with visual disability in our country reported previously. An appropriate detecting method for primary open angle glaucoma that is time and cost saving is yet to be planned and implemented in Mexico.

Keywords: Open angle glaucoma; Mexico

Short Communication

The authors of this work are a university ophthalmology research group from Monterrey, Nuevo Leon, Mexico. Our purpose is to bring new knowledge in the areas of General and Subspecialized Ophthalmology. We work besides Universidad de Monterrey, one of the most important universities in our country in the search of better ocular diseases understanding in Mexico and in the world.

In a transversal study we collected data about costs of primary angle glaucoma for the Mexican society and for patients and the patients' family altogether [1]. Direct and indirect costs for the disease were calculated. Direct costs were defined as the costs that are absorbed by the health social institutions and those included were first evaluation ophthalmological consult, diagnostic tests, follow-up and treatment (surgical procedures not taken into account). The prices for each of these elements were obtained through a telephonic survey and the calculation of a mean price in the 30 most populated areas in the country. Indirect costs were calculated with the mean base salary per day lost and the price of caretaking services with a prevalence of glaucoma previously reported by the LALES [2] study and the expected blind population estimated for primary open angle glaucoma bearers reported by Quigley [3].

The total direct cost for each patient ascends to \$887 USD each year and up to \$3,540 USD in 5 years. These numbers multiplied with the quantity of disabled patients by primary open angle glaucoma sums up to \$626,367,505 USD of yearly direct cost. The indirect costs include the productivity losses produced by the non-capable working disabled patient and the caretaking costs that these patients need. The calculated yearly indirect cost of all the disabled primary open angle glaucoma bearers is \$518,244,032 USD. The total amount spent each year by the Mexican society is \$1,144,611,537 USD for all the visually

limited primary angle glaucoma patients. In 5 years this quantity goes up to \$5,723,057,685 USD.

In our not yet published work "Primary open angle glaucoma prevalence in patients over 40 years in a diagnostic campaign simulacrum" we find the same limitations in the actual work-up for glaucoma diagnosis and treatment. In the present time there is no cost and time effective method for detecting glaucoma in a large-scale manner inside a population, a fast and low-cost technology is extremely needed to diagnose open angle glaucoma patients in an early stage and at the same time prevent disease complications. None of the found primary open angle glaucoma patients in our study had an elevated intraocular pressure. Pharmacological glaucoma treatment is also unreliable and it has been demonstrated that optic nerve damage can progress even when intraocular pressure is within normal range, thus we believe that future open angle glaucoma research should be focused in a neurological origin of the disease. An appropriate management for primary open angle glaucoma is yet to be found mainly in developing countries in the world. This management needs to be sustainable for the health care institutions for each of those countries.

In conclusion, primary open angle glaucoma is an expensive disease for Mexican society and healthcare providers in behalf of the still costly diagnosis and treatment methods that actually exist.

Conflict of Interests

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