Glaucoma an Ophthalmologic Disease

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Abstract

This research was to understand the genetics of the Glaucoma disease and also how it affects humans. Glaucoma is a disease that affects the optic nerve. The cause of this disease is the mutation of MYOC in which is locate in chromosome 1 at the position 1q23-q24. Also there are two more types of glaucoma: the open angle glaucoma and the closure angle. The symptoms are blurred vision, severe eye pain, and headache, rainbow haloes around light, nausea and vomiting. This disease has treatments which are eye drops, pills, laser or surgery. PUB MED was used to find the basic information of the disease. Later NCBI was used to understand the molecular, genetic and make the analysis. Then MEGA5 was used to find the similarities and differences of any species in which the phylogenetic tree is represented. Finally, the Grantham Distance Table was used to represent the chemical properties and the disease-associated with the amino acid change. An observation was made the amino acid variation on species and humans that carry the gene.

Introduction

Glaucoma is a disease that affects the optic nerve. The function of the optic nerves is it visualizes the image that we see and send it to the brain. The cause of this disease is the mutation of MYOC. Some of the characteristic are the following: clear liquid called the aqueous humor circulates inside the eye. A small amount of this fluid is produced constantly, and an equal amount flows out of the eye through a microscopic drainage system. Also there are two more types of glaucoma the open angle glaucoma and the closure angle. The symptoms: blurred vision severe eye pain headache rainbow haloes around light nausea and vomiting. The treatment of glaucoma can usually be normal and therefore prevent or retard further never damage and visual loss. The way that this can help to prevent vision loss or damaging the eye is by using: eye drops, pills, laser or surgery. Any type of treatment that is use to this disease is very benefit and potential complications.

Methodology

To find information about the disease.

Phylogenetic Tree

To find the genetic analysis.

Results

Discussion/Conclusion

There was more Dams in the conserved sites. The reason of these is because of the position where the sites was indicating. Also the change were unlikely to be tolerate and have been eliminated by natural selection. The amino acid are disease-associated that are overabundant at conserved residues. This change are more radical in the encountered of polymorphic amino acid variation. However are found on human or natural selection throughout the evolutionary history.

Future Work

• Study more about the causes of the disease.
• Find other species that can transport this disease.

References

http://www.glaucoma.org/glaucoma/
http://www.medicinenet.com/glaucoma/article.htm

Acknowledgments

Dr. Alan Filipski
Dr. Sudhir Kumar
Dr. Juan Arratia
Dr. Luis de la Torre
Universidad Metropolitana
AGMUS Institute of Mathematics
Wanda Rodriguez