Abstract

Glaucoma harms the optic nerve cells that transmit graphic information to the brain. Though IOP is the most considerable reason to extend glaucoma, optic disc parameters are mainly used to find out early stage of glaucoma damage. Glaucoma is nick name as "silent thief of eyesight", as the nickname suggests there are no previous symptoms, but due to this, Glaucoma patient can blind without any previous intimation. For glaucoma diagnosis there are multiple methods are available like CDR, i.e. optic cup to disc ratio calculation, NRR i.e. Neuro Retinal Rim Ratio. Here we are using NRR to diagnose the glaucoma. For that we use our proposed algorithm on 300 colored retinal fundus images. These are MESSIDORE 100 images, and RIM-One 100 of Glaucomatous and 100 of Normal. Over all we got 68% result
Primary Open Angle Glaucoma Diagnosis using Neuro Retinal Rim Ratio

from MESSIDORE fundus image dataset. And 100% result from Rim-One normal images and 66% result from Rim-One Glaucomatous dataset.

References

- Gangadevi C. Bedke, Dr. Ramesh R. Manza, Dnyaneshwari D. Patil, Yogesh M. Rajput; Secondary Glaucoma Diagnosis Technique Using Retinal Nerve Fiber Layer Arteries; Dept. of cs&It Dr. B. A. M. U. Aurangabad, India (ICPC IEEE pune chapter2014).

- M. Lakshmi, Glaucoma Detection from Color Fundus Images Using Multithresholding Method with Median Filter; ISSN 2278 – 0211
- Dnyaneshwari D. Patil, Ramesh R. Manza, Gangadevi C. Bedke; Diagnose Glaucoma by Proposed Image Processing Methods; Dept of CS and IT, Dr. B. A. M. University, Aurangabad (MS) (India), International Journal of Computer Applications (0975 – 8887) Volume 106 – No. 8, November 2014
- Rim-one dataset available on URL: http://WWW. researchgate.
Index Terms

Computer Science  
Image Processing

Keywords

Cdr (cup To Disc Ratio); Nrr (neuro Retinal Rim); rdr (rim To Disc Ratio); Multithresholding; Iop(intra Occular Pressure).