Abstract

The purpose of this paper is to provide the information regarding Diabetic retinopathy, its imaging methods and data base in systematic manner. In this paper we Introduce the terms related to Diabetic Retinopathy along with the characteristic and features of appearance in the images. In this paper we also discuss the various image acquisition techniques of retina from fundus photography to 3D OCT Imaging. Last we also provide the list of the current data base available with the ground truth. In Diabetic retinopathy the blood vessel becomes weak and due to this vessel leaks blood and fluid of lipoproteins, this creates abnormalities in retina. Abnormal retinal images form four different classes namely non-proliferative diabetic retinopathy (NPDR), Central retinal vein occlusion (CRVO), Choroidal neovascularisation membrane (CNVM) and central serous retinopathy (CSR). There may exist different kinds of abnormal lesions caused by diabetic retinopathy in a diabetic's eye. The lesion types are Microaneurysm, Hard Exudate, Soft Exudate, Hemorrhage, and Neovascularization.
Review on Fundus Image Acquisition Techniques with Data base Reference to Retinal Abnormalities in Diabetic Retinopathy

2002.
- Michael D. Abràmoff, , Mona K. Garvin, Milan Sonka, Fellow Retinal Imaging and Image Analysis Clinical Applications Review ieee reviews in biomedical engineering, VOL. 3, 2010
- C. S. Flick, &quot;Centenary of Babbage's ophthalmoscope,&quot; Optician, vol. 113, p. 246, 1947.
- H. L. F. von Helmholtz, Beschreibung eines Augen-Spiegels. :A. Farstnerische
Verlagsbuchhandlung, 1851.
  - O. Gerloff, &quot;Uber die Photographie des Augenmikrogrundes,&quot; KlinMonatsblätter Augenheilkunde, vol. 29, pp. 397–403, 1891
  - M. E. J. van Velthoven, D. J. Faber, F. D. Verbraak, T. G. van Leeuwen, and M. D. de Smet, &quot;Recent developments in optical coherence tomography for imaging the retina,&quot; Prog. Retina Eye Res. , vol. 26, no. 1, pp. 57–77, Jan. 2007.

Index Terms

Computer Science
Image Processing

Keywords
DiabeticRetinopathy  Ground truth  Fundus