Detection of Cotton Wool Spots from Retinal Images using Fuzzy C Means

Abstract

Diabetic Retinopathy is a common disease among those who are suffering from Diabetes for a long period. Several abnormalities are related to Diabetic Retinopathy. Cotton Wool Spot is one among them. It causes from nerve fiber layer breaking from occlusion of pre-capillary arterioles. It occurs in retina as whitish spots causing blindness in some cases. Early detection of CWS can prevent severe damage of retina which may lead to permanent vision loss. In this paper an algorithm is developed which can detect these spots automatically from a retinal image affected by Diabetic Retinopathy. The automatic detection can help the doctors for accurate detection of Cotton Wool Spots and also for the longitudinal study of a retinal image damaged by Diabetic Retinopathy.

References

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Index Terms

Computer Science  Fuzzy Systems

Keywords

Diabetic Retinopathy (DR)  Cotton Wool Spot (CWS)  Fuzzy C Means (FCM)  Optic Disc (OD)