Chapter 73

Early Stage Diagnosis of Eye Herpes (NAGIN) by Machine Learning and Image Processing Technique:
Detection and Recognition of Eye Herpes (NAGIN) by Using CAD System Analysis

Kakasaheb Rangnarh Nikam

HPT Arts & RYK Science College Nashik MH India, Nashik, India

ABSTRACT

Eyes are very important parts of the body. Automatic eye detection is must to diagnose various eye disease including Herpes (Nagin) in early stages. Type 1 Herpes Simplex Virus (HSV) may damaging the eye and causing permanent eyesight problems. Herpes keratitis, commonly known as eye herpes, is an inflammation of the cornea, the clear dome that covers the front part of the eye. The proposed method potentially reduce workload on eye doctors and increase the efficiency of limited healthcare resources.

INTRODUCTION

Whenever we visit Ophthalmologist (eye doctor) he/she examine our eyes with a magnifier. He may put stain on the front of our eye. It shows any irregular areas on the transparent front part of the eye (Figure 1). Due to Herpes (Nagin) Simplex infection, shows small scratch on the cornea. There is ulcer develop which called as dendritic ulcer. Dendritic means Branching.

As shown in Figure 2, ulcer is not round with a smooth edge, but like a tree with many finger-like branches. We must urgently referred to an ophthalmologist (eye specialist). They immediately start appropriate treatment.
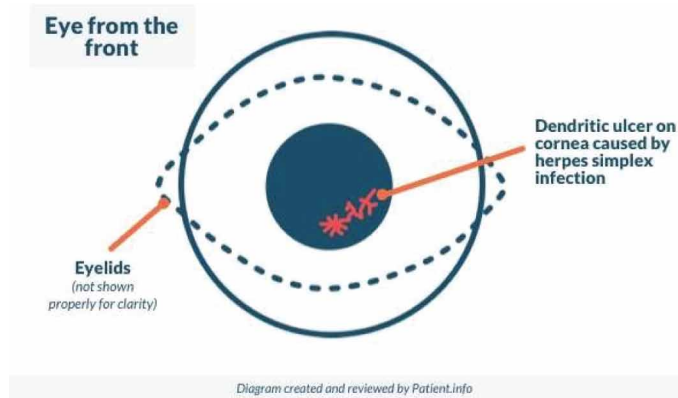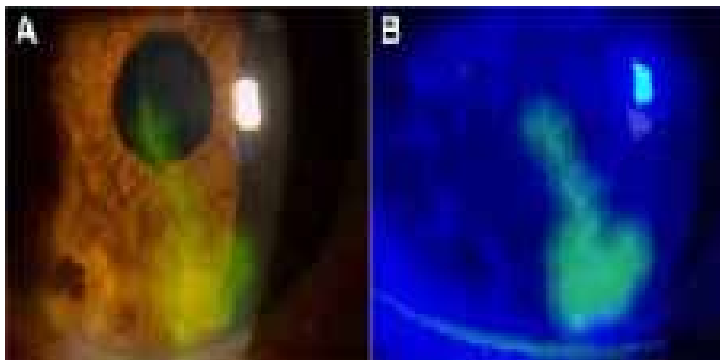
Figure 1. Eye from the front

Figure 2. Levels of herpes simplex infections

The eye is one of the most important sensory organs in the human body. Eye disease is a common health issues around the world.

If ophthalmic data is properly collected and analysis is done, it provides a way to detect Herpes (Nagin) in early stages.

Research shows "the findings in the left eye are generally likely to be more similar to those in the right eye of the same individual".

Type 1 Herpes Simplex Virus (HSV-1), eye herpes (ocular herpes) is a common, recurrent viral infection affecting the eyes. This type of herpes virus can cause inflammation and scarring of the cornea that sometimes is referred to as a cold sore on the eye.

Herpes (Nagin) "is a virus that causes cold sores, that also causes eye infections. This virus lives inside the nerves in your face and can travel down the nerves to your eye." It may damage your eye and causing permanent eyesight problems.

The purpose of paper is to study the ways available to detect Herpes (Nagin) in early stages by applying image processing techniques.

The Herpes Simplex Virus enters the body through the nose or mouth and travels into the nerves, where it may be inactive. The virus can remain dormant for years and may never wake up.

Related Content

Autoencoder Based Anomaly Detection for SCADA Networks

Sajid Nazir, Shushma Pateland Dilip Patel (2021). *International Journal of Artificial Intelligence and Machine Learning (pp. 83-99).*

www.irma-international.org/article/autoencoder-based-anomaly-detection-for-scada-networks/277436

Sensor Fusion of Odometer, Compass and Beacon Distance for Mobile Robots

Rufus Fraanje, René Beltman, Fidelis Theinert, Michiel van Osch, Teade Punterand John Bolte (2020). *International Journal of Artificial Intelligence and Machine Learning (pp. 1-17).*

www.irma-international.org/article/sensor-fusion-of-odometer-compass-and-beacon-distance-for-mobile-robots/249249

Autonomous Navigation Using Deep Reinforcement Learning in ROS

Ganesh Khekareand Shahrukh Sheikh (2021). *International Journal of Artificial Intelligence and Machine Learning (pp. 63-70).*

www.irma-international.org/article/autonomous-navigation-using-deep-reinforcement-learning-in-ros/277434

Multi-Criteria Decision Making in Healthcare: A Bibliometric Review

Beena John Jiby, Sachin Sakhare, Mandeep Kaurand Gaurav Dhiman (2022). *Demystifying Federated Learning for Blockchain and Industrial Internet of Things (pp. 186-213).*

www.irma-international.org/chapter/multi-criteria-decision-making-in-healthcare/308119

Integrated Regression Approach for Prediction of Solar Irradiance Based on Multiple Weather Factors

Megha Kambleand Sudeshna Ghosh (2021). *International Journal of Artificial Intelligence and Machine Learning (pp. 1-12).*

www.irma-international.org/article/integrated-regression-approach-for-prediction-of-solar-irradiance-based-on-multiple-weather-factors/294105