

PROBLEM SOLUTION FIT ON DEEP LEARNING FUNDUS IMAGE ANALYSIS FOR EARLY DETECTION OF DIABETIC RETINOPATHY:

In this study, we present a diabetic retinopathy detection system based on ultra-wide-field fundus photography and deep learning. In experiments, we show that the use of early treatment diabetic retinopathy study 7-standard field image extracted from ultra-wide-field fundus photography outperforms that of the optic disc and macula centered image in a statistical sense.

PATIENT IN RETINOTHERAPY:

People with diabetes can have an eye disease called diabetic retinopathy. This is when high blood sugar levels cause damage to blood vessels in the retina. These blood vessels can swell and leak. Or they can close, stopping blood from passing through. Sometimes abnormal new blood vessels grow on the retina. All of these changes can steal your vision.

The abnormal blood vessels associated with diabetic retinopathy stimulate the growth of scar tissue, which can pull the retina away from the back of the eye. This can cause **spots floating in your vision, flashes of light or severe vision loss.**

JOBS TO BE DONE :

Diabetic eye screening is so important because you may not realise you have a problem with your eyes, and if a problem with your eyes is picked up early, taking the right steps can stop it getting worse.

Whatever the result, whatever the result, managing your diabetes is really important. In the early stages of **diabetic retinopathy**, controlling your diabetes can help prevent eye problems developing. In the more advanced stages, when your vision is affected or at risk, keeping your diabetes well managed can help stop the condition getting worse. Your healthcare team will talk to you about the different treatment options.

Eye injections

If you have diabetic maculopathy, in some cases, injections of a medicine called anti-VEGF may be given into your eye. The main medicines used are called ranibizumab (Lucentis) and aflibercept (Eylea). These can help stop the problems in your eyes getting worse, and may also lead to an improvement in your vision.

Eye surgery

If you have very advanced proliferative diabetic retinopathy, you may require surgery, known as vitreoretinal surgery, refers to any operation to treat eye problems involving the retina, macula and vitreous fluid. These include complications related to diabetic retinopathy. Vitreoretinal surgery is usually carried out under local anaesthetic and sedation. This means you will not experience any pain or have any awareness of the surgery being performed

Causes:

Retinopathy is usually a sign of another medical condition. Although several medical conditions (e.g., sickle cell disease, lupus) can cause retinopathy, the most common causes are diabetes and hypertension (high blood pressure).

Diabetic retinopathy is a complication of diabetes. Diabetes causes high blood sugar levels, which can damage blood vessels. The damaged vessels in the retina can leak fluid, protein, and fats, forming deposits that can interfere with vision. The damaged blood vessels are not as effective at carrying oxygen to the retina, which can also cause damage.

EMOTIONS:

Emotional support can be defined as the expression of empathy and understanding toward an individual living with a problem. For people living with diabetes, the provision of emotional support may allow them to communicate their health-related fears and anxieties, provide positive feedback from friends and family, and help to sustain their self-care abilities.

Diabetes requires lifelong self-care and discipline, and many people with diabetes self-manage the disease in the absence of any day-to-day positive feedback. However, emotional support and encouragement from health care providers and others is essential to strengthening patients' motivation to perform routine self-care tasks and thereby improving their self-management of diabetes.