Anemia Prediction Based on Pulbria Conjunctiva Eye

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Abstract: *The World Health Organization (WHO) identifies anemia, a health hazard condition marked by the deficiency of red blood cells or hemoglobin in the bloodstream, as maligning a quarter of the total world population. Therefore, it is crucial to have an automated, quick, and accurate anaemia detection system. Preliminary detection of anemia is usually undertaken visually by the physician by examining the color of the anterior conjunctiva of the eye and confirmed with an invasive blood test. In this study, we designed a mechanism for the automated detection of anemia through a non-invasive visual method. Our process involves the detection of anemia by analyzing the anterior conjunctival pallor of the eye. We take the images of the eye used data set for analysis. Our study was aimed towards the automation of healthcare facilities in underdeveloped parts of the world lacking proper healthcare facilities like hospitals and healthcare centers. Thus we developed a computerized, noninvasive, simple, cost effective, easy to use and portable primary screening test for anemia which can provide a viable alternative to invasive methods of anemia detection and have a major humanitarian impact in the underdeveloped areas of the world.*

Keywords: Anemia detection, image processing, anterior conjunctiva, hemoglobin concentration, non-invasive method

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