FEASIBILITY STUDY OF A POINT-OF-CARE DEVICE FOR DETECTING MALARIA SPECIFIC RETINOPATHY.

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Studies on malaria have identified several changes in the retina unique to malaria infection. A device capable of automatically detecting the presence of malaria specific retinopathy would be a valuable tool for malaria diagnosis. Signs of malaria retinopathy include retinal whitening, vessel discoloration, and hemorrhaging. Due to the unique absorption spectrum of the retina in malaria patients, a device can be designed to measure the spectrum of the retina and detect the presence of malaria retinopathy. We are currently exploring methods of data acquisition to automatically differentiate between images of a healthy retina and one exhibiting malaria retinopathy. The final prototype should be able to provide a simple visual cue (i.e. red or green light) to indicate the presence of malaria retinopathy. A non-invasive, easy to use point-of-care device has the potential to combat the prevalent misdiagnosis of malaria in many parts of the world.

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