

INFRA-RED ILLUMINATION TARGETING FOR PHOTOGRAPHY OF CORNEAL CRYSTALS IN CYSTINOSIS

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Purpose:

To determine the efficacy of infra-red illumination for the alignment and focus of the photo slit lamp biomicroscope in reducing discomfort to patients with corneal crystals in cystinosis. In addition, the improvement of the photographic results was assessed.

Materials and Methods:

A Standard Zeiss Photo Slit Lamp Biomicroscope was modified so as to restrict the viewing illumination to the near infrared, in a range (940 nm). The patient's cornea was observed under infra-red light with the aid of a black and white TV camera and monitor. Positioning of the patient's head in the chin and forehead rest, and focus and framing of the biomicroscope were all conducted under IR lighting. Actual exposures were made with the instrument's electronic flash in the conventional manner.

Results:

Patient comfort and therefore compliance, were greatly improved, with a notable increase in the quality of the photographs.

Conclusions:

Preliminary results indicate that the patient's level of discomfort during slit-lamp photography stems primarily from the standard viewing illumination (even when reduced to threshold levels) which is required for the alignment and focus of the instrument. The use of IR illumination obviates that discomfort.