

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo PIBIC

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Service (sector)
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Blink Rate Analysis Using the "PISC" Tool

PURPOSE: The proposal of this study is to evaluate the effectiveness of "pisc" (a timer device designed to stimulate blink frequency in situations of visual concentration). The study will evaluate normal patients and dry eye patients.

MATERIALS AND METHODS:

A prospective study will be carried out at the External Diseases and Cornea Service of the Department of Ophthalmology, Federal University of São Paulo (UNIFESP). Thirty patients, 15 with dry eyes and 15 controls, will participate in the study. The research protocol and the consent term for the patients were approved by the Ethic and Research Committee of UNIFESP-EPM. Pisc is a 2 cm diameters device, composed by a micro electronic controller circuit and a microprocessor with a 3 volts battery. It has an on/off key, a frequency controlling crystal and a sensor that emits sonorous, luminous or vibratory signs in the human blinking frequency that aims to stimulate the blink action. In practice, it can be easily fixed to computer screens through a magnet or sticker. A webcam will be positioned in front of patient's face, at 1 meter distance to film the experiment. There will be two visits – the first visit without Pisc and at the second visit using Pisc – divided in two sections each – with and without air conditioned to refrigerate the environment. The patients will be filmed for 10 minutes by section with the request of reading a text. During the second visit the patients will be oriented to blink according Pisc signs. Patients will be submitted to specific dry eye tests (fluoresceine and green lissamina), before and after the reading exercises. The fluoresceine and green lissamina tests will indicate cornea and conjunctive suffering cells by coloring them. The test analyses will be based on the Bijsterveld's criteria: 0 - coloration absence; 1 - puntiform coloration; 2 - confluent and extense points; 3 - plates of coloration. Exclusion criteria will be: eyelids abnormalities, ocular diseases and previous ophthalmologic surgery. Consent term of all the patients will be obtained prior to the study.

RESULTS: In Progress