

8. NOVELTIES IN THE STUDY OF MICROCIRCULATION AT THE LEVEL OF THE BULBAR CONJUNCTIVA

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Introduction. The bulbar conjunctival microcirculation is a terminal vascular network of the blood vessels covered by a semi-transparent membrane, located above the white sclera. This easy-to-observe site allows real-time, in-vivo and non-invasive measurements, which can reveal indicative information about microvascular function and architecture under different conditions, both physiological and pathological.

Aim of study. The study of microcirculation in the bulbar conjunctiva is an objective and non-invasive approach, which can be complementary in patients with various pathologies (diabetes, sickle cell anemia, etc.) to assess the functional and structural adaptation of microcirculation in these pathological conditions.

Methods and materials. A search of the PubMed Central and Google Scholar engines was performed, using the keywords „microcirculation”, „bulbar”, „conjunctiva”. Only articles in English were selected. The time period covered was from January 1, 2015 to March 1, 2022.

Results. It is noteworthy that in the last decade there has been substantial progress in the options for studying and observing microcirculation. Evidence-based medicine has shown that changes in the microcirculation of the bulbar conjunctiva can be quantified, and can help to monitor systemic pathologies. It can also be stated that the study of microcirculation can be extensively applied in the investigation of multiple pathologies to highlight the link between conjunctival microcirculation and systemic pathologies.

Conclusion. Studying the microvascular changes and their correlation with evolutionary aspects of different pathologies can highlight biomarkers useful for diagnostic or stage evaluation. Taking into account the accessibility of the method, research in this field will open new perspectives given the currently limited number of conclusive studies in this field.