

THE EVOLUTION OF PURULENT ENDOPHTHALMITIS IN THE CONTEXT OF KLEBSIELLA PNEUMONIAE INFECTION

Loredana Pelevaniuc, Irina Verdeș, Olga Iasabaș, Angela Corduneanu

*Department of Ophthalmology, Nicolae Testemițanu State University of Medicine
and Pharmacy*

Chisinau, Republic of Moldova

Introduction. Endophthalmitis is a severe inflammation of the internal structures of the eyeball that can affect the vitreous body, retina and choroid, considered an ophthalmological emergency. This condition is caused by a systemic infection in 2 to 8% of cases. *Klebsiella pneumoniae* is a gram-negative, nosocomial pathogen known for its multi-drug resistance and has increasingly been implicated in cases of bacterial endophthalmitis. Objective of the Study.

This study **aims** to elucidate the clinical course of a patient with endophthalmitis, secondary to a systemic infection with *Klebsiella pneumoniae*, ultimately necessitating evisceration of the affected eyeball.

Materials and Methods. Comprehensive anamnesis and clinical data were extracted from the patient's medical records. The diagnostic workup included biomicroscopy, ocular discharge smear analysis, B-scan ultrasonography, aqueous humor sampling from the anterior chamber, blood cultures, and a thorough systemic evaluation.

Results. A 64-year-old female patient was urgently admitted to the ophthalmology department following an 11-day hospitalization in a different hospital due to a hypertonic and hyperglycemic crisis. During the previous hospitalization she developed significant ophthalmological symptoms, including left eye blindness, ocular pain, excessive tearing, and eyelid edema. Upon admission, her ocular examination revealed: left eye visual acuity of 0, hypertensive palpation, an irritated eyeball, diffuse corneal edema, hypopyon occupying less than one-third of the anterior chamber, fibrin strands in the pupillary area and a non-reactive pupil. B-scan ultrasonography identified diffuse hyperechogenicity within the vitreous body. Systemic evaluation indicated concurrent COVID-19 infection, pneumonia, fever and decompensated diabetes mellitus and hypertension. Aqueous humor was extracted from the anterior chamber, followed by intravitreal administration of Cefuroxime. Despite combined local and systemic antibacterial therapies, the patient's condition deteriorated, necessitating transfer to the septic ICU for stabilization and preoperative preparation for left eye evisceration. Bacteriological assays confirmed the presence of *Klebsiella pneumoniae* in both blood cultures and ocular tissue.

Conclusions. The case presented illustrates a rapid progression of endophthalmitis attributed to *Klebsiella pneumoniae* and underscores the interplay of significant risk factors such as decompensated diabetes mellitus and systemic hypertension, SARS-CoV-2-associated pneumonia, immunocompromised status, and nosocomial infections.