

Identification of Keratitis Factors by PCR and Culture Method and Determination of Drug- Resistance in the East of Mazandaran, Iran

Nasrollahi Omran, A. (PhD)

Associate Professor of
Microbiology, Faculty of Biology
Sciences, Islamic Azad University,
Tonekabon Branch, Tonekabon, Iran

Nikpour, Sh. (Msc)

Master of Microbiology, Faculty of
Biology Sciences, Islamic Azad
University, Tonekabon Branch,
Tonekabon, Iran

Mahdavi Omran, S. (PhD)

PhD of Medical Mycology, Faculty
of Medicine, Babol University of
Medical Sciences, Babol, Iran

Corresponding Author: Nikpour,
Sh.

Email:sh.nikpour@yahoo.com

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Abstract

Background and Objective: Fungal keratitis, one of the most common and most severe infectious corneal ulcers, may lead to decreased vision and in severe cases to blindness. The most common predisposing factor for fungal keratitis has been, eye trauma or entering a foreign body in the eye followed subsequent damage to the cornea. This study aimed to identify fungal keratitis factors isolated from cornea.

Material and Methods: PCR assay was developed to amplify a portion of the fungal 18s ribosome gene by using of ITS1-ITS4 primers as well as by culture technique.

Results: of 30 samples, PCR assay were positive in 22(73.3%) and negative in eight. fungal culture were positive in 16(53.3%) of 30 samples and 15 of them were PCR positive, too. Seven (23%) specimens were both PCR and culture negative. Bacterial growth was found in four cases.

Conclusion: PCR is a promising diagnostic method for fungal keratitis. It offers some advantages over culture methods, including rapid analysis and analysis of the specimens far from their collection.

Keywords: Fungal Keratit Infection, Polymerase Chain Reaction(PCR), Culture Test, East Of Mazandaran