Bridging the Gap: Umbilical Cord Blood Serum Therapy in Managing Epithelial Defect Secondary to Neurotropic Keratitis.

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Abstract

Statement of the Problem: Neurotrophic keratitis (NK) is a degenerative corneal disease caused by damage to the trigeminal nerve. One of the causes is following surgical procedure to the cornea. As corneal nerves surface, loss of sensitivity can impair corneal wound healing, leading to epithelial changes including punctate epithelial keratopathy, persistent epithelial defects, and corneal ulcer. Umbilical cord blood serum (CBS) eye drops have been reported to be beneficial in the treatment of persistent epithelial defect recalcitrant to conventional therapy. The purpose of this study is to describe our experience in managing persistent epithelial defect in neurotropic keratitis by using umbilical cord blood serum. Methodology: This is a retrospective case report. Findings: A 68-year-old Chinese man with underlying hypertension and ischaemic heart disease developed a large corneal epithelial defect (6.5 mm horizontally x 7.5 mm vertically) in the right eye three weeks after a complicated cataract surgery. He was diagnosed with right eye neurotrophic keratitis stage II, according to Mackie classification. We initially instituted conventional treatment involving preservative-free artificial tears and soft bandage contact lens. Intensive therapy using umbilical cord blood serum eye drops was then commenced in view of the patient's poor response to the conventional treatment. The epithelial defect improved markedly with the administration of CBS eye drops. Conclusion & Significance: This case highlights the remarkable of a persistent epithelial defect with the use of CBS eye drops for the treatment of neurotrophic keratitis.

Image

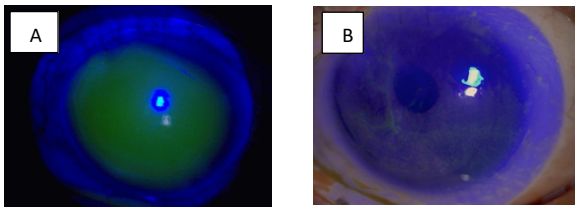


Figure A : Persistent subtotal epithelial defect prior to commencement of cord blood serum eye drop
Figure B: Improvement of epithelial defect a month after.

Recent Publications

1. Vajpayee RB, Mukerji N, Tandon R, Sharma N, Pandey RM, Biswas NR, Malhotra N, Melki SA. (2003) Evaluation of umbilical cord serum therapy for persistent corneal epithelial defects. Br J Ophthalmol;87(11):1312-6.
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3. Yoon KC, You IC, Im SK, Jeong TS, Park YG, Choi J. (2007) Application of umbilical cord serum eyedrops for the treatment of neurotrophic keratitis. Ophthalmology;114(9):1637-42.
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Biography

Nur Nadia bt Ahmad Tarmizi received her medical degree from International Medical School, Bangalore in 2012 and underwent housemanship training in Hospital Sultanah Nur Zahirah Kuala Terengganu. Following that she has worked as a medical officer in Kuala Terengganu. Currently she is a 4th year ophthalmology resident.

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