

Letter to the Editor

Comment on: The Healing Power of Amniotic Membrane Extract Eye Drops

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This correspondence comments on the case report by Vargas Lopez et al., describing the successful use of amniotic membrane extract eye drops (AMEED) in preventing ocular perforation in a centenarian patient. The case highlights AMEED's role as a non-invasive therapy that delivers regenerative cytokines and growth factors to the ocular surface. Emerging prospective and real-world studies show high success rates in refractory corneal ulcers, neurotrophic disease, and severe dry eye. The preclinical models confirm better outcomes compared with amniotic membrane transplantation, while immunological studies support anti-inflammatory and pro-regenerative mechanisms. We emphasise that AMEED should be considered beyond anecdotal rescue therapy, with further trials needed to define dosing, efficacy, and how it can be integrated into corneal ulcer management.

To the Editor,

The case report authored by Vargas Lopez and colleagues delineates the exceptional recovery of a centenarian patient with an imminent corneal perforation, who exhibited a remarkable response to amniotic membrane extract eye drops (AMEED).¹ In addition to its clinical significance, this case encourages contemplation regarding the developing role of AMEED as a legitimate therapeutic alternative for ocular surface disorders.

While amniotic membrane transplantation has long been established in ophthalmology, its surgical nature, cost, and sometimes unpredictable graft survival limit widespread use.² AMEED offers a non-invasive alternative that delivers a continuous supply of growth factors and cytokines to the ocular surface. This approach has already shown encouraging outcomes in prospective and real-world studies. Pérez et al. reported that AMEED achieved complete epithelialisation in patients with refractory corneal ulcers and dry eye disease, with significant improvement in symptoms and safety across 36 eyes.³ Similarly, Sabater-Cruz et al. demonstrated clinical success in 94% of patients, with notable improvements in both pain and healing, even in those who had failed autologous serum therapy.⁴

Preclinical and mechanistic investigations offer additional validation. In a recent experimental model of alkaline burn, AMEED demonstrated superior efficacy in reducing corneal opacity, inflammation, and fibrosis compared to amniotic membrane transplantation.⁵ This highlights its potential as a more conveniently applicable biologically derived therapy. Murri et al. and colleagues have reviewed how AMEED preserves the anti-inflammatory, anti-angiogenic, and regenerative properties of the amniotic membrane.² Furthermore, immunological research substantiates its capacity to modulate cytokine expression, promote

epithelial proliferation, and inhibit deleterious immune responses.^{2,6}

The case presented by Vargas Lopez et al. consequently aligns with an expanding corpus of translational and clinical evidence.¹ Importantly, it demonstrates that AMEED is not solely an experimental adjunct but may serve as a pragmatic, vision-preserving treatment for patients who are fragile or unsuitable for surgery. Its non-invasive method of administration enhances its appeal, particularly for elderly individuals, patients with comorbidities, or in resource-constrained settings where access to operating theatres is limited.

Nevertheless, considerable gaps persist. Standardisation of optimal dosing protocols, therapy duration, and long-term results remains incomplete. Comparative studies against traditional treatments such as fibrin glue, bandage lenses, and amniotic membrane grafts are imperative to establish its position within treatment protocols. Regulatory, financial, and manufacturing considerations will also influence its accessibility.

In conclusion, the case report offers more than mere anecdotal evidence. It contributes significantly to the argument that AMEED warrants systematic evaluation and potential inclusion in corneal ulcer management protocols. We commend the authors for illustrating a case that clearly demonstrates AMEED's ability to preserve ocular integrity and prevent evisceration in a context with limited remaining options.

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