



## The 65th ASH Annual Meeting Abstracts

## ORAL ABSTRACTS

## 722.ALLOGENEIC TRANSPLANTATION: ACUTE AND CHRONIC GVHD, IMMUNE RECONSTITUTION

**Safety and Efficacy of Human Amniotic Epithelial Stem Cells Eye Drop in Ocular Chronic Graft-Versus-Host Disease**

Xianjing Cheng, MPH<sup>1</sup>, Ruihao Huang, PhD student<sup>2</sup>, Wei Fan, MPH<sup>3</sup>, Yuancheng Zhao, MPH<sup>3</sup>, Shiqin Huang, MPH<sup>1</sup>, Rongdi Yuan, MD PhD<sup>3</sup>, Xiaoqi Wang, MD<sup>2</sup>, Xi Zhang, PhD<sup>2</sup>

<sup>1</sup>Medical Center of Hematology, Xinqiao Hospital, Chongqing, China

<sup>2</sup>Army medical University affiliated Xinqiao Hospital, Chongqing, China

<sup>3</sup>Department of Ophthalmology, Xinqiao Hospital, Chongqing, China

**Background**

Approximately 50% of patients with allogeneic hematopoietic stem cell transplantation (allo-HSCT) suffer from ocular chronic GVHD (ocGVHD), which causes severe dryness and visual impairment. However, current clinical treatments for ocGVHD, such as artificial tears, immunosuppression therapy, and punctal occlusion, typically offer only limited benefits. Amniotic membrane transplantation (AMT) can significantly alleviate ocular symptoms in patients with ocGVHD, but it is an invasive procedure that is not appropriate for all patients with ocGVHD. Therefore, we designed a clinical trial to demonstrate the safety and efficacy of eye drops containing human amniotic epithelial stem cells (hAESC) in ocGVHD.

**Methods**

Register Number: ChiCTR2200057857. The enrolled eyes received  $1 \times 10^6$  cells/mL of hAESC eye drops four times daily for one to three treatment cycles (A cycle was defined as two weeks of continuous administration and two weeks without hAESC eye drops). The primary outcome measure is safety following treatment with hAESC eye drops. In addition, other clinical indices, such as the ocular surface disease index (OSDI), NIH score (eye), Schirmer's test, corneal fluorescein staining (CFS) score, fluorescein tear breakup time (FTBUT), and in vivo confocal microscopy (IVCM) were essential parameters.

**Results :**

19 of the 25 patients included in the study completed at least one round of treatment. The average length of follow-up was 9.4 months. There were no adverse events associated with hAESC. After one round of treatment (n=19), there was a significant decrease in OSDI score (P=0.0003) and eye NIH score (P=0.0001), an increase in Schirmer basal secretion score (P=0.0237), and a significant improvement in CFS score (P=0.0001), corneal subbasal nerve density (P=0.006), and corneal epithelial cell density (P=0.0349). It also produced statistically significant improvements in FTBUT after two rounds of treatment (n=14) (P=0.024). After three rounds of treatment (n=11), we observed additional improvements in the OSDI (P=0.0001) and CFS (P=0.001) scores.

**Conclusion :**

The findings of this study indicated that hAESC eye drops are safe and effective at alleviating symptoms and signs in patients with ocGVHD, making them a promising therapeutic option for the treatment of ocGVHD.

**Disclosures** No relevant conflicts of interest to declare.

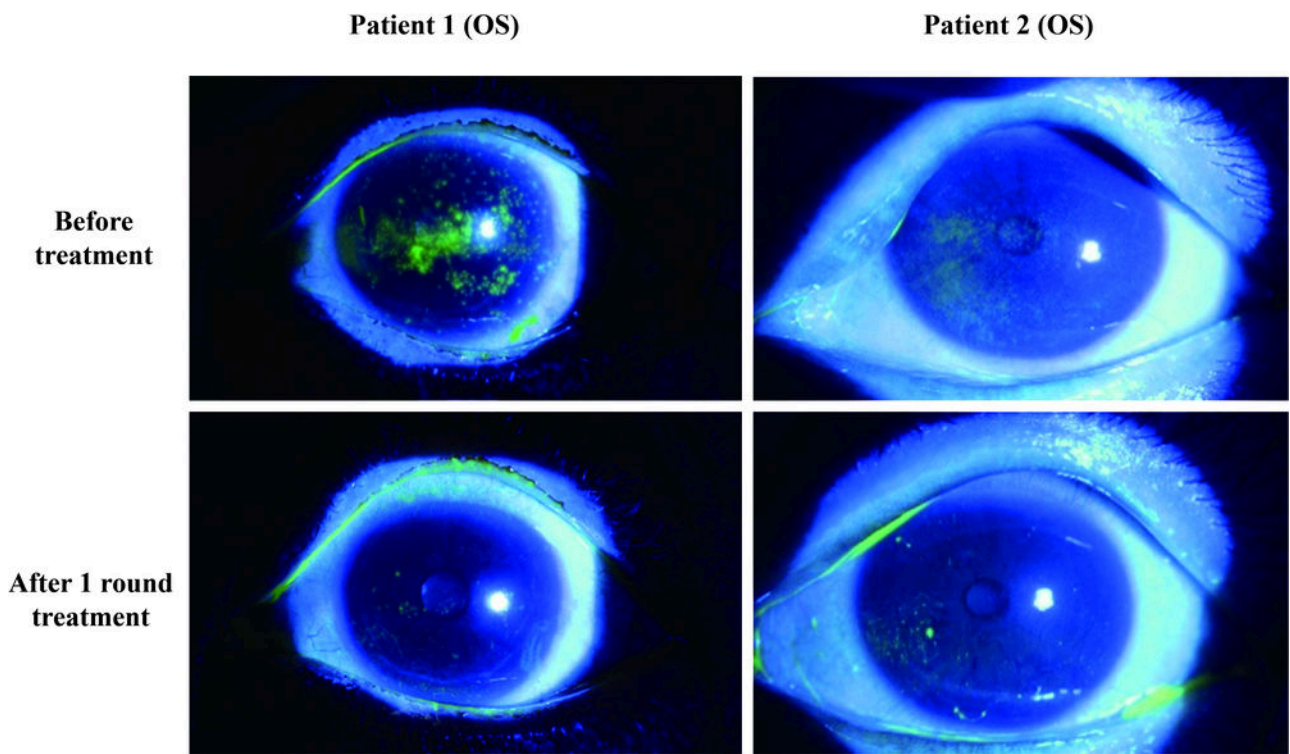


Figure 1

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