

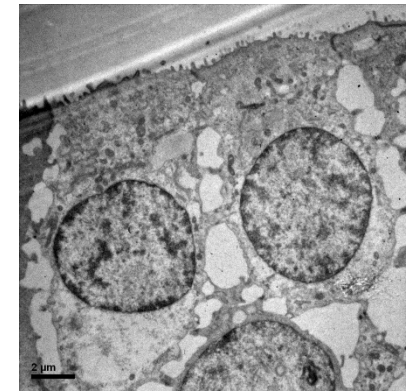
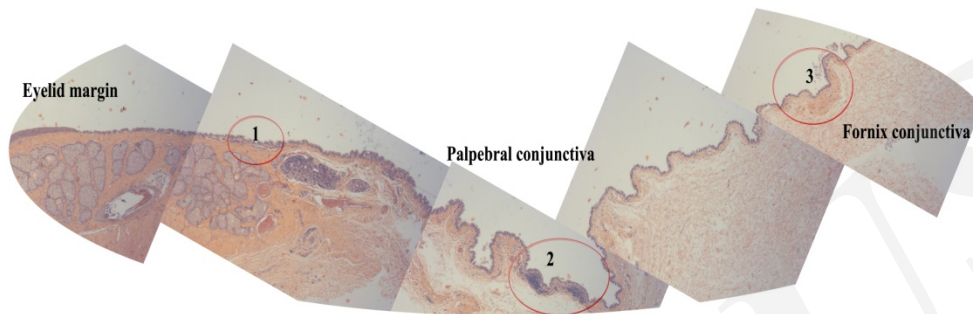
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Potential candidate cells for constructing tissue-engineered lacrimal duct epithelium: a histological and cytological study in rabbits

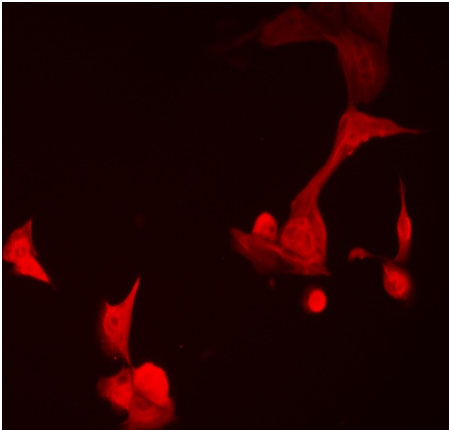
Key words: Conjunctival epithelial cells; Lacrimal duct epithelial cells; Tissue engineering; Cytokeratin; Mucin; Proliferating cell nuclear antigen

Research Summary

This study mainly focused on characterizing the potential candidate conjunctival epithelial cells in different areas for constructing tissue-engineered lacrimal duct epithelium:

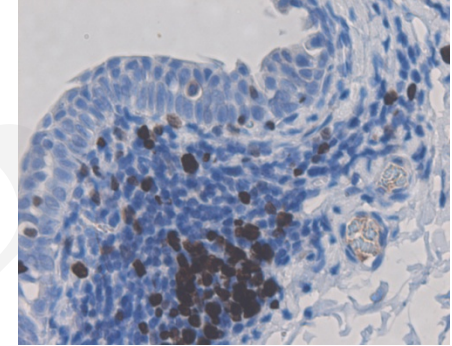


- Histological evaluation of the conjunctiva and lacrimal duct tissue
- Electron microscopy of conjunctiva and lacrimal duct tissue
- Isolated epithelial cells identification

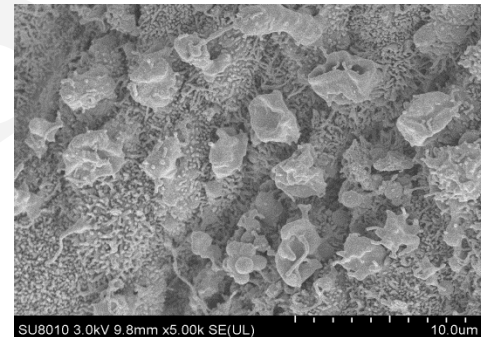


Innovation points

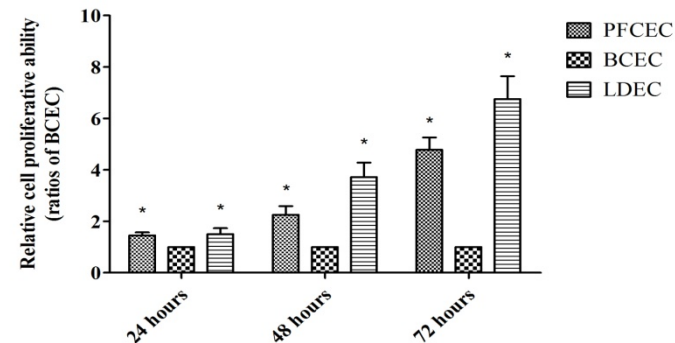
- **Highly proliferative conjunctival epithelial cells concentrated in a dome structure of the posterior palpebral conjunctiva.**



- **Typical goblet cells discharging mucin granules found in the posterior palpebral and fornix conjunctiva**



- **The epithelial cells from the palpebral conjunctiva showed similar proliferative rate with the lacrimal duct**



Innovation points

A series of figures were generated to demonstrate the core contents of this study:

Figure 1 | Histologic observation of epithelium at eyelid margin, conjunctiva and lacrimal duct with light microscopy.

Figure 2 | Observation of epithelium at eyelid margin, conjunctiva and lacrimal duct with electron microscopy.

Figure 3 | Light microscopy and immunocytochemical evaluation of isolated epithelial cells

Figure 4 | Proliferative ability and PCNA expression of cultured palpebral and fornical conjunctival epithelial cells (PFCECs), bulbar conjunctival epithelial cells (BCECs) and lacrimal duct epithelial cells (LDECs).