Corneal epithelial cells division assessed by scanning electron microscopy

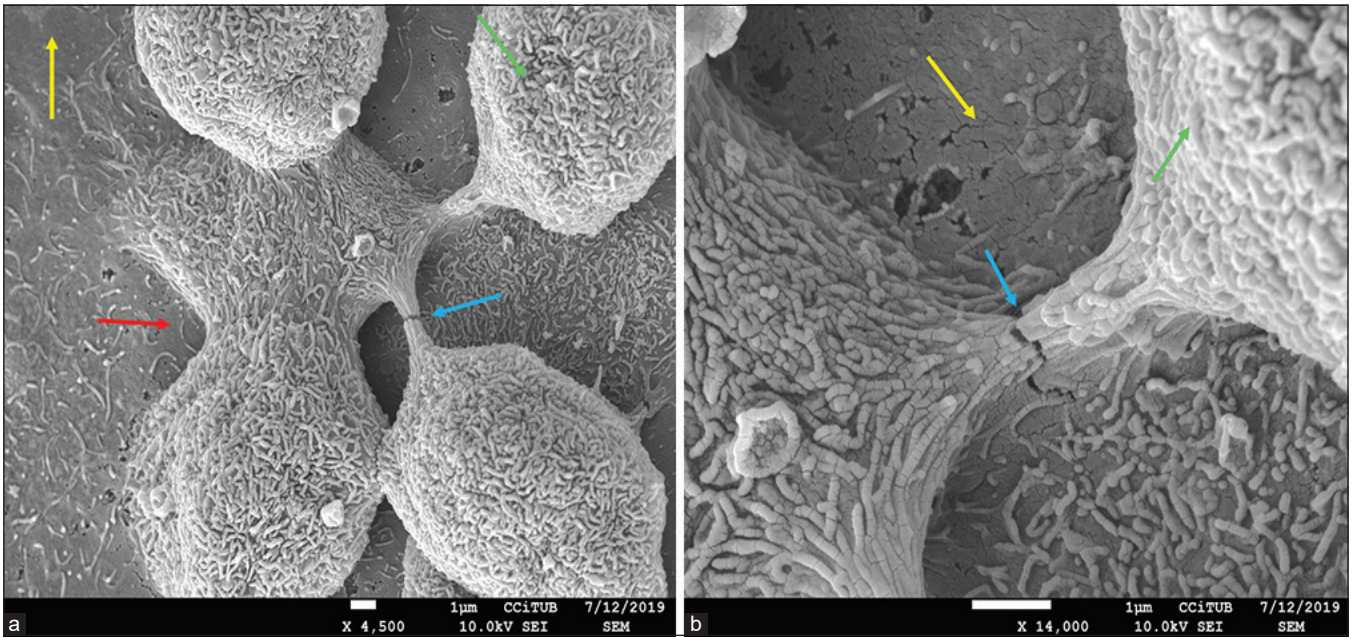

Figure 1 (a and b): Red arrow: Mitotic division. Yellow arrows: Epithelial basement membrane. Green arrows: Microvilli. Blue arrows: Lateral interdigitations

Scanning electron microscopy (SEM) is a technique for obtaining high resolution images of biological and non-biological specimens. SEM has been used in the characterization of the surface of human corneo-conjunctival anatomy.[1]

The corneal epithelial cells divide in a rapid turnover to maintain the ocular surface homeostasis. Corneal epithelial cells are constantly replenished by limbal epithelial stem cells (LESC), after differentiation, they can proliferate by mitosis and migrate centripetally. Alterations to limbal environment can result in LESC dysfunction.[2]

Our aim is to show the ultrastructure by SEM of the corneal epithelial cells during mitotic division above the epithelial basal membrane. The cells are edematous in profile and intermediate in brightness, with multiple microprojections of different shapes, sizes, and numbers (microplicae and microvilli) [Fig. 1a and b].

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Conflicts of interest

There are no conflicts of interest.

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