Minor Salivary Gland Transplantation for Severe Dry Eyes

Resumo
Dry eye is a multifactorial disease comprising a wide spectrum of ocular surface alterations and symptoms of discomfort. In most patients with aqueous-deficient dry eye, pharmaceutical tear substitutes are used to control symptoms and prevent ocular surface damage. However, in severe dry eye conditions caused by cicatricial disorders, such as Stevens-Johnson syndrome and ocular cicatricial mucous membrane pemphigoid, noninvasive treatments are insufficient, and patients are at risk of developing complications that can lead to blindness. The use of salivary glands as a source of lubrication to treat severe cases of dry eye has been proposed by different authors. The first reports proposed parotid or submandibular gland duct transplantation into the conjunctival fornix. However, complications limited the functional outcomes. Minor salivary gland autotransplantation together with labial mucosa has been used as a complex graft to the conjunctival fornix in severe dry eye with a good outcome. Our group demonstrated significant improvements in best-corrected visual acuity, Schirmer I test score, corneal transparency, and neovascularization after using this technique. A symptoms questionnaire applied to these patients revealed improvements in foreign body sensation, photophobia, and pain. Similar to tears, saliva has a complex final composition comprising electrolytes, immunoglobulins, proteins, enzymes, and mucins. We demonstrated the viability of minor salivary glands transplanted into the fornix of patients with dry eye by performing immunohistochemistry on graft biopsies with antibodies against lactoferrin, lysozyme, MUC1, and MUC16. The findings revealed the presence of functional salivary gland units, indicating local production of proteins, enzymes, and mucins. (AU)