

안구 표면 질환 치료의 최신지견

- 양막과 각막윤부 이식술에 의한 안표면 재건술 -

New Strategy of Ocular Surface Disease

- Ocular Surface Reconstruction Using Amniotic Membrane and Limbal Stem Cell Transplantation -

3가 1

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Abstract

Amniotic membrane is the innermost layer of the placenta and consists of a thick basement membrane and an avascular stromal matrix. Amniotic membrane transplantation facilitates rapid healing with recovery of a normal epithelial phenotype in the epithelium, and reduces inflammation, vascularization, and scarring in the stroma. Amniotic membrane has two major role, basement membrane and cocktail of cytokines. Amniotic membrane as a native matrix can be used as a graft to restore conjunctival surfaces and corneal surfaces suffering from intractable corneal disease or limbal stem cell deficiency. To restore limbal stem cell deficiency, the source of stem cell has been introduced the autograft transplantation, allograft transplantation, ex vivo expansion and *in vivo* expansion.

Keywords : Amniotic membrane; Limbal stem cell; Ocular surface reconstruction; Corneal surface; Conjunctival surface

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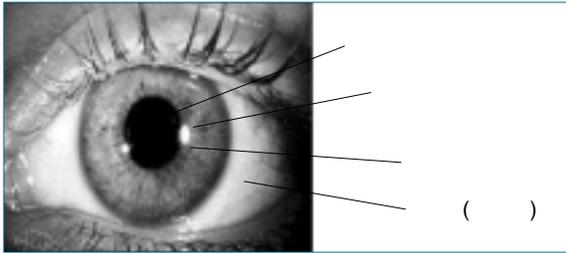
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(neurotrophic ulcer),

(persistent epithelial defect)

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 (goblet cells) . 가

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 (stem
 cell) () 가
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 (squamous metaplasia)
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가 .

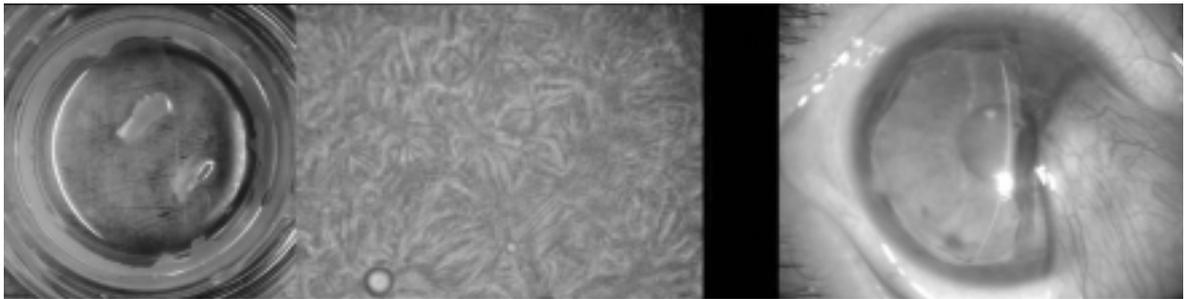
, - (Stevens Johnson syn-
 drome), (ocular pemphigoid) .
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 - (Stevens Johnson syndrome),
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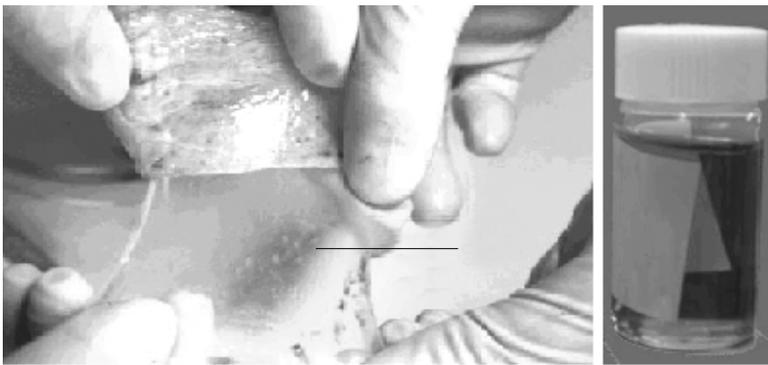
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Ex vivo expansion

In vivo expansion

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0.2~0.5mm

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1995

Bascom

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Palmer

Dr. Tseng

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ex vivo expansion

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(Trans-

plantation of limbal stem cell in vivo expansion)

nitocellulose

DMEM Gly-

cerol

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(2)

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(3)

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(Apoptosis)

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(5)

(Myofibro - blast)

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TGF - B

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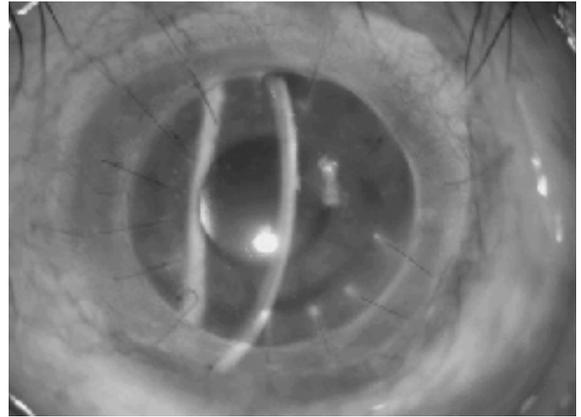
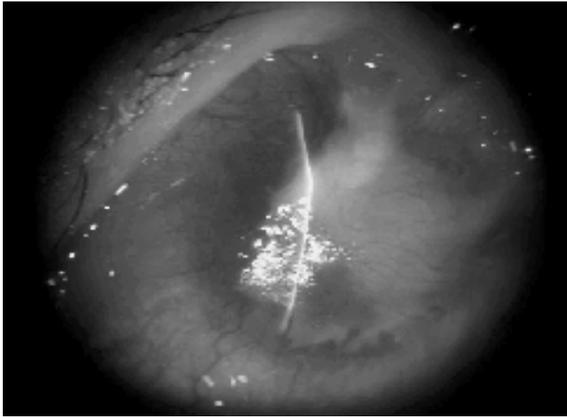
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80~90%

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cyclosporin - A

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가 (autograft limbal transplantation),

(allograft limbal transplantation), *Ex vivo*

limbal tissue expansion, *Ex vivo* limbal single stem cell expansion, *In vivo* auto limbal stem cell expansion

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Peer Reviewer Commentary

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in vivo *ex vivo*

prospective

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review article

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