

Correlation Between Dry Eye and Pterygium

Essay

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CONTENTS

List of Tables	i
List of Figures	ii-iv
List of Abbreviation	v-vii
Introduction.....	1
Aim of the work	3
Chapter 1: Conjunctiva.....	4
Chapter 2: Pteryguim.....	15
Chapter 3: Tear film.....	31
Chapter 4: Dry eye.....	49
Chapter 5: Correlation between dry eye and pterygium....	91
Recommendations.....	100
Summary.....	102
References.....	105
Arabic Summary.....	_____

List of Tables

1. Grading of corneal and conjunctival staining (Oxford scheme).....78
2. Tear Function Tests and Normal Values.....90

List of Figures

<i>Figure No.</i>	<i>Page</i>
1. Gross Anatomy of the Conjunctiva.....	5
2. Low-power view of the globe.....	6
<u>A.</u> Superior fornix.	
<u>B.</u> Superior fornix showing epithelium, substantia propria and conjunctival sac.	
<u>C.</u> High-power view of epithelium showing goblet cells on the surface.	
3. Low-power view of the globe	7
<u>A.</u> Inferior fornix.	
<u>B.</u> Inferior fornix showing epithelium, goblet cells, and a follicle.	
<u>C.</u> Inferior fornix showing Müller's muscle in the substantia propria.	
4. Medial region of the eye showing the caruncle and plica semilunaris.....	7
5. Region of the lateral fornix.....	7
6. Tarsal conjunctiva showing stratified squamous epithelium.....	9
7. Pseudoglands of Henle.....	10
8. Conjunctival histology.....	11

9.	Normal upper bulbar conjunctival goblet cells among the nongoblet epithelial cells. PAS stained.....	12
10.	Histopathological appearance of pterygium.....	17
11.	Clinical presentation of Pterygium.....	27
	(a) Stage 1, (b) Stage 2, (c) Stage 3, (d) Pterygium encroaching on visual axis	
12.	Pseudopterygium.....	28
13.	Inflamed pterygium.....	30
14.	Lacrimal Functional Unit	32
15.	Lacrimal functional unit anatomy.....	32
16.	The goblet cells in the conjunctiva that contribute to the tear film.....	33
17.	Tear Drainage System.....	35
18.	The complexity of maintaining a stable tear film. Production and secretion of tear components, redistribution of the tears through blinking, and regulated drainage of tears.....	36
19.	Structure of tear film.....	37
20.	The normal tear film.....	38
21.	The Normal Meibomian Gland.....	43
22.	Mechanisms of dry eye.....	55
23.	Classification of dry eye.....	56
24.	Tearscope.....	70
25.	Use of tearscope in combination with the slit-lamp.....	70

26.	Interference pattern of a thick globular lipid layer.....	71
27.	Reflective meniscometry.....	73
28.	Meniscometry: demonstration of the reduced size of the tear meniscus in aqueous- deficient dry eye compared to a normal tear meniscus using meniscometry.....	73
29.	Aqueous tear deficiency stained with fluorescein.....	75
30.	Lissamine green & Rose Bengal conjunctival staining..	76
31.	Schirmer test.....	80
32.	Computerized videokeratoscopy of normal eye showing regular Placido rings.....	81
33.	Distorted photokeratoscope mires in the dry eye.....	82
34.	Low power of PAS staining of normal conjunctival epithelium	85
35.	PAS staining of metaplastic human conjunctiva with 1:12 nucleus-cytoplasm ratio (left) and snake-like condensed nuclei (right, arrows).....	85
36.	The TearLab System.....	88
37.	Method of impression cytology and biopsy.....	98

List of Abbreviation

ADDE	Aqueous Deficient Dry Eye
AIDS	Acquired Immune Deficiency Syndrome
CALT	Conjunctiva-associated lymphoid tissue
CNS	Central nervous system
CS	Conjunctival sac
DED	Dry eye disease
DEWS	Dry Eye Work Shop
EDE	Evaporative dry eye
EGF	Epidermal growth factor
FGF-2	Fibroblast growth factor-2
FK	Filamentary keratitis
HIV	Human immunodeficiency virus
HPV	Human Papilloma Virus
Ig	Immunoglobulins
IL	Interleukin
KCS	Keratoconjunctivitis sicca

LASIK.....Laser-assisted in situ keratomileusis

LFULacrimal functional unit

MAP kinase...Mitogen Activated Protein Kinases

MGD.....Meibomian gland dysfunction

MMMüller's muscle

MMP-IMatrix metalloproteinase-I

mRNA.....Messenger ribonucleotide A

MUCMembrane-associated mucin

NFk β Nuclear Factor Kappa Beta

P-53.....Protein 53

PAS.....Periodic-Acid Schiff

PDParkinson's disease

PDGFPlatelet derived growth factor

TBUTTear-Film Breakup Time

TGF- βTransforming Growth Factor Beta

TGF- βTransforming growth factor beta

TNF- αTissue necrosis factor alpha

TSP-1.....Thrombospondin-1

UVA.....Ultraviolet radiation-Alpha

UVB.....Ultraviolet radiation-Beta

UVRUltraviolet radiation

VEGFVascular Endothelial Growth Factor

>.....More than

<.....Less than

%.....Percent

Introduction

Pterygium is a common external ocular disease. The prevalence of pterygium increases with age and is higher in people living in sunny climates. Although environmental factors including exposure to sunlight and in particular broad band ultraviolet radiation is thought to be most important, local tear film abnormalities are also included among the theories of etiopathogenesis of pterygium. Evidence of clinical correlation of dry eye conditions with pterygium has been accumulating during the years (*Ishioka et al., 2001 and Rajiv et al., 1991*).

Although the aetiology of pterygium is still not fully understood, prolonged exposure to ultraviolet B radiation is thought to promote its development (*Mackenzie et al., 1992 and Saw et al., 2000*), Other factors such as inherited susceptibility (*Islam and Wagoner, 2001*), chronic inflammation (*Hill and Maske, 1989*), heat (*Young, 1994*) and still others may also play a role in the formation of pterygium.

Kadayifcilar et al., and Ishioka et al., noted inadequate tear film stability in pterygia patients and suggested that abnormal tear function may be yet another risk factor related to pterygium

development. However, several other studies have shown that tear function is normal in pterygia (***Biedner et al., 1979; Taylor, 1980 & Ergin and Bozdogan, 2001***).

Thus, there is an unresolved issue concerning whether the abnormal tear function is directly associated with pterygium, or does change of the tear function cause pterygium.

Aim of the Work

The aim of this study is to find out the relation between the dry eye and pterygium.

Conjunctiva

The conjunctiva is the thin mucous membrane lining the eyelid. It is reflected at the upper and lower fornices on to the anterior surface of the eyeball. It fuses with the cornea along the conjunctival limbus forming a circular 'opening' for the cornea. The conjunctival limbus is situated about 1 mm anterior to the edge of the corneal limbus (where the transparent cornea stops and the opaque sclera starts). It is a highly vascular membrane. It is related to the cornea via the epithelium which is continuous (if slightly different in nature) between the conjunctiva and the cornea. Thus, infections, inflammatory conditions and trauma can all potentially extend from one structure to the other (***Snell and Lemp, 1998***).