Autoimmune Eye Diseases

Essay

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By

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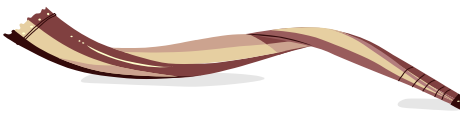

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List of Abbreviations

Abb.	Full term
ANA	Anti-nuclear antibodies
ANCAs	Antineutrophil cytoplasmic antibodies
APS	Anti-phospholipid antibody syndrome
AS	Ankylosing spondylitis
COX-2	Cyclo-oxygenase 2
EBV	Epstien Barr virus
HCV	Hebatitis C virus
HLA	Human leukocyte antigen
HTLV-1	Human T-cell leukemia virus-1
IgA	Immunoglobulin A
IgG	Immunoglobulin G
IgM	Immunoglobulin M
IL-1	Interlukin 1
IOP	Intraocular pressure
IVIG	Intravenous immunoglobulins
JCA	Juvenile chronic arthritis
JIA	Juvenile idiopathic arthritis
JRA	Juvenile rheumatoid arthritis
KCS	Keratoconjuctivitis sicca
KPs	Keratic precipitate

Abb.	Full term
MALT	Mucosa Associated Lymphoid Tissue
MHC	Major histocompatibility complex
MMP	Muocus membrane pemphegoid
MS	Multiple sclerosis
MTX	Methotrexate
NMO	Neuromyelitis optica
NSAID	Non-steroidal anti-inflammatory drug
OCP	Ocular Cicatricial Pemphegoid
ON	Optic neuritis
PUK	Peripheral ulcerative keratitis
RA	Rheumatoid arthritis
RF	Rheumatoid factor
RPE	Retinal pigmented epithelium
RRMS	Relapsing Remitting Multiple Sclerosis
SLE	Systemic lupus erythematosus
SO	Sympathetic ophthalmia
SS	Sjögren syndrome
TBUT	Tear break up time
TNF	Tumor necrosis factor
VKH	Vogt-Koyanagi-Harada
WG	Wagner granulomatosis

Introduction

Autoimmunity is the failure of an organism in recognizing its own constituent parts as self, thus leading to an immune response against its own cells and tissues. Any disease that results from such an aberrant immune response is termed an autoimmune disease ***(Patt et al., 2013).***

Although the distinction between autoimmune and immune-mediated causality can be blurry, the former is generally believed to be driven by aberrant immune recognition of self, whereas the latter is primarily an innate inflammatory reaction triggered by environmental (microbial) or autologous (tissue damage) "danger" signals. Uveitis, especially if untreated, can result in significant visual deficit and blindness. In the United States alone, uveitic diseases of noninfectious origin have an incidence of 52.4 per 100,000 and a prevalence of 115.3 per 100,000, and are believed to account for about 10% of legal blindness ***(Gritz and Wong, 2004).***

Rheumatoid arthritis, juvenile rheumatoid arthritis, Sjögren's syndrome, the seronegative spondyloarthropathies, systemic lupus erythematosus, multiple sclerosis, giant cell arteritis, and Graves' disease are common autoimmune disorders. These autoimmune disorders can have devastating systemic and ocular effects. Ocular symptoms may include dry

or red eyes, foreign-body sensation, pruritus, photophobia, pain, visual changes, and even complete loss of vision ***(Sayjal et al., 2002).***

Uveitis is a general term referring to inflammation of the uvea (the pigmented vascular coat of the eyeball, consisting of the choroid, ciliary body, and iris). Uveitis is categorized on an anatomical basis as anterior, intermediate, or posterior, or as panuveitis if it involves both the anterior and posterior parts of the eye. Noninfectious uveitis is believed to be autoimmune or immune-mediated ***(Gery et al., 2002).***

Some uveitic diseases are confined to the eye, such as sympathetic ophthalmia. Others are part of a generalized systemic syndrome in which the eye is one of several organs involved. Examples include anterior uveitis associated with juvenile idiopathic arthritis or ankylosing spondylitis, posterior uveitis in Behçet disease (which also involves skin and mucosal tissues), and Vogt-Koyanagi-Harada (VKH) disease (which also targets melanocytes of the skin) ***(Nussenblatt and Whitcup, 2004).***

SLE can induce ocular complications by immune complex deposition and other antibody-related mechanisms, vasculitis and thrombosis. Immune complex deposition has

been found in the blood vessels of the conjunctiva, retina, choroid, sclera, ciliary body and cornea ***(Sivaraj et al., 2007).***

Sjögren's syndrome is a common, chronic autoimmune disorder described as "autoimmune epithelitis" of the exocrine glands with associated lymphocytic and plasma cell infiltration of the salivary and lacrimal glands ***(Samarkos and Moutsopoulos, 2005).***

Keratoconjunctivitis sicca is the most common ocular manifestation of RA and has a reported prevalence of 15% to 25***% (Patel and Lundy, 2002).***

Aim of the Work

The aim of this essay is to study eye manifestations in some autoimmune diseases and different modalities in diagnosis and treatment.