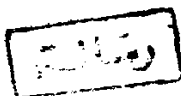




# INNER EAR AUTOIMMUNE DISEASES

## ESSAY

Submitted in Partial Fulfillment  
for Master Degree



## IN OTOLARYNGOLOGY

By

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# INTRODUCTION





## Introduction

Immunology today has become an extremely dynamic and complicated field in medicine (*Veldman, et. al., 1984*). The immune system contributes significantly to the maintenance of our integrity. Normally the immune system cannot react to self antigens due to the natural tolerance that develops during embryonic life to self antigens (*Schiff and Yoo, 1985*). However, under certain circumstances, a breakdown of self-tolerance occurs, and autoimmunity develops. Autoimmune diseases are characterized by symptoms and signs that are caused directly or indirectly by an immune response against molecular structures of the host (*Weir and Stewart, 1993*).

The immuological mechanisms can play an important role in the pathogenesis of various sensorineural hearing disorders. Immune-mediated inner ear diseases by convention is called autoimmune inner ear disease(AIED) (*Luetje, 1989*). It is an uncommon but a distirict clinical entity (*Ruckenstein and Harrison, 1991*). *McCabe* in 1979 was the first who described autoimmune sensorineural hearing loss as a separate new clinical entity.

Autoimmune inner ear disease may stand by itself as a disease entity without further clinical or pathological expression of the disease at other parts of the body. In this respect, the immunological mechenism may play an important role in the pathogenesis of idiopathic sensorineural hearing loss, Meniere`s disease and otosclerosis. Moreover, various clinical studies have demonstrated a correlation between hearing loss and systemic lupus erythematosus, Wegener`s

granulomatosis, Cogan's syndrome and ulcerative colitis (*Stephens, et. al., 1982; Veldman 1988*)

The otolaryngologist must play an important role in the early diagnosis and treatment of autoimmune inner ear disease because it is one of the few causes of sensorineural hearing loss which has a successful treatment (*Hughes, et. al., 1984*).

## **AIM OF THE WORK**



### **AIM OF THE WORK**

The aim of this essay is to revise the literature about inner ear the diseases with possible immunological features . The mechanism of autoimmune diseases in general will be discussed. The autoimmune reactions of the inner ear and the different autoimmune diseases which affect the inner ear will be also discussed in addition to the possible ways of diagnosis and treatment. The availability of such knowledgements to the otologist will help early diagnosis and treatment of such cases.

