شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالأصل

ROLE OF INTRATYMPANIC STEROID INJECTION IN TREATMENT OF OTITIS MEDIA WITH EFFUSION: A SYSTEMATIC REVIEW/ META -ANALYSIS

Thesis

Submitted for partial fulfillment of the Master Degree in Otorhinolaryngology

By

Ahmed Mohammed Abdulhakim
M.B.B.Ch. 2015-Ain Shams University
Resident of Otorhinolaryngology
Ain Shams University Hospital

Under supervision of

Prof. Dr. Ahmed Adly Mohammed

Professor of Otorhinolaryngology
Faculty of Medicine - Ain Shams University

ASST Prof. Dr. Tarek Abdel Hamid Hamdy

Assistant Professor of Otorhinolaryngology
Faculty of Medicine - Ain Shams University

ASST Prof Dr. Anas Mohammed Askoura

Assistant professor of Otorhinolaryngology
Faculty of Medicine - Ain Shams University

Faculty of Medicine
Ain Shams University
2020

سورة البقرة الآية: ٣٢

Acknowledgement

*First of all, all gratitude is due to **Allah** almighty for helping me and blessing this work until it has reached this end, as a part of generous help, throughout my life.*

*I would like to express my deepest gratitude to **Prof. Dr. Ahmed Adly Mohammed, Professor of Otorhinolaryngology, Faculty of Medicine - Ain Shams University**. I had the honor to proceed this work under his instructive supervision, and guidance to enrich my study with his experience and knowledge.*

*I would like to express my gratefulness towards my guide **ASST Prof. Dr. Tarek Abdel Hamid Hamdy, Assistant Professor of Otorhinolaryngology, Faculty of Medicine - Ain Shams University**. For his supervision of this work step by step in all its stages and for his continuous encouragement and support.*

*I would like to express my profound thanks to **ASST Prof Dr. Anas Mohammed Askoura, Lecturer of Otorhinolaryngology, Faculty of Medicine - Ain Shams University**. For the great work he has done for this study, precious guidance and unlimited faithful support.*

*I would like to express my hearty thanks to all **My Family** for their support till this work was completed*

List of Contents

List of Abbreviations

Full term	Abbr.
American Academy of Family Physicians	AAFP
American Academy of Otolaryngology – Head and Neck Surgery	AAO-HNS
American Academy of Pediatrics	AAP
Adenoidal hypertrophy	AH
Acute otitis media	AOM
Confidence interval	CI
Degree of freedom	DF
Eustachian tubes	ET
Inconsistency	I^2
Intratympanic injections of dexamethasone	ITD
Otitis media with effusion	OME
Cochran Chi Square	Q
Sensory-neural hearing loss	SNHL
Upper respiratory tract infection	URTI
Ventilation tubes	VTs

List of Tables

List of Figures

Abstract

Background: Otitis media with effusion (OME) is a worldwide major health problem for both children and adults, who have a history of chronic eustachian tube dysfunction. **Aim of the Work:** to review the effect of intratympanic injection of steroids in treatment of chronic otitis media with effusion (persistent more than 3 months after failure to medical treatment [e.g. local & systemic steroids or decongestants] or surgical ventilation tubes). **Material and Methods:** This systematic review was done as a collective analysis of 5 retrospective and prospective cohort studies done on patients with OME. Studies on Patients who were diagnosed with chronic otitis media with effusion not responding to conventional methods of treatment. **Results:** The data analysed and results showed an improvement of 41.2% of the cases treated with intratympanic injection of steroids compared to 11% improvement in cases treated by conventional medical methods with a relative improvement around 6.4 folds to intratympanic injection of steroids over medical treatment. All of these studies have shown that there are more advantages of directed ototopical steroid therapy over systemic therapy. Topical medications often have limited systemic effects due to their limited systemic uptake. It may be less expensive as compared to systemic medications. **Conclusion:** Intratympanic injection of long acting steroids has good effect in management of OME resistant to medical and surgical treatment and has superior effect and high rate of recovery on local nasal steroid spray. In children combination of ventilation tubes and intratymapnic injection of steroids is the best known modality of treatment. Further studies are needed to evaluate the best medical treatment of chronic OME.

Key words: intratympanic steroid, treatment, otitis media, effusion, resistant, injection

Introduction

INTRODUCTION

titis media with effusion (OME) or glue ear is the collection of fluid behind the tympanic membrane without inflammatory signs present for 6 weeks ***(Berkman et al., 2013).***

By the age of 4 years, around **80%** of children will have had an episode of OME, most of which resolve and **10%** of episodes last for a year or

more
(Williamson et al., 2009).

The natural history of otitis media is very favorable. Combined estimates of spontaneous resolution provide a benchmark, against which new or established interventions can be evaluated. The need for surgery in children with recurrent acute otitis media (AOM) or chronic OME should be balanced against the likelihood of timely spontaneous resolution and the potential risk for learning, language, or other adverse sequelae from persistent middle ear effusion ***(Rosenfeld et al., 2016).***

OME is the most common cause of hearing impairment (and the most common reason for elective surgery) in children, where it usually follows an episode of AOM. It is uncommon in adults, in whom Eustachian tube dysfunction is the predominant cause and suspicious aetiologies should be considered ***(Atkinson et al., 2015).***

OME is the leading cause of hearing loss in children. Prolonged or fluctuating hearing impairment in early childhood may result in long-term consequences for delayed speech & language development ***(Gates et al., 2008).***

Adenoidal hypertrophy (AH) and OME are the most frequent indications for surgery in children. The current treatment options for OME include the following: elimination of the risk factors, follow-up without treatment, use of antibiotic and/or decongestant medication, if medical treatment fails, tympanostomy tube placement with or without adenoidectomy ***(Rosenfeld et al., 2016).***

A potential role of corticosteroids in the treatment of OME has emerged. The short-term use of systemic steroids provides a temporary improvement, but long-term use of systemic steroids is not appropriate in children due to severe side effects. In contrast, topical nasal steroids without systemic side effects might be used ***(Cengel and Akyol, 2006)***.