

Prevalence of sensorineural hearing loss, with symptom of tinnitus and vertigo in type 2 diabetes mellitus in Malaysia: A cross sectional study amongst patient attending endocrine clinic at Ampang Puteri Specialist Hospital between June 2020 to December 2020

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ABSTRACT

Introduction: Diabetes mellitus is a significant risk factor for acquired hearing loss and disturbance in the vestibular system. Prevalence of Type 2 DM in Malaysia is high and increasing in trend (WHO 2016). **Methods:** This study included all patients between 20 to 60 years old diagnosed with T2DM attending an endocrine clinic in APSH who consented to be a research subject. Patients were given a set of questionnaires related to diabetic profile followed by full ear examination. Pure tone audiogram tests were performed to determine the hearing status. **Results:** Two hundred ninety three (293) subjects were included in this study. Pure tone audiometry results showed prevalence of SNHL is 66.2% (194 cases). Tinnitus and vertigo were common association symptoms with 35.4% and 14.6% respectively. Male significantly at higher risk to develop HL compared to female in long standing DM. Other significant risk factors include poor compliance to treatment, underlying comorbidities especially renal disease. There is no correlation neither Fasting blood sugar nor HBA1c in predicting the incident of HL. **Conclusion:** The prevalence of high frequency SNHL amongst T2DM in this study is high (66.2%), comparable with other worldwide studies (62%). Increasing age, duration of diabetes, gender, compliance and treatment with insulin were risk factors for SNHL. Hearing loss and vertigo are not commonly enquired symptoms by endocrinologists during diabetic clinic. Hence it remains unnoticed by patients and underdiagnosed. Pure tone audiogram should be mandatory tests for all patients with long-standing Diabetes mellitus.

The eustachian tube balloon dilatation versus conventional medical treatment in treating eustachian tube dysfunction: A pilot study

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ABSTRACT

Introduction: This study aims to determine the effectiveness of Eustachian tube balloon dilatation compared with conventional medical treatment in treating Eustachian tube dysfunction by assessing the pre- and post- treatment outcome. **Methods:** This is a prospective, randomized controlled study done in tertiary academic centre. Sixteen patients who were diagnosed with Eustachian tube dysfunction and had failed medical therapy for at least 4 weeks treatment were recruited and randomized into intervention group (n=6) who underwent Eustachian tube balloon dilatation and medical treatment group (n=10) who had medical treatment. The primary efficacy endpoints were the comparison between groups in the reduction from baseline in overall 7-item Eustachian tube dysfunction questionnaire (ETDQ-7) score, tympanic membrane appearance and tympanogram which were compared at 2 weeks, 6 weeks and 3 months after intervention. **Results:** Median in reduction of overall ETDQ-7 score at 3 months for intervention group was 2.93(2.14, 3.14), whereas for the medical treatment group was 0.43(0,0.86). Reduction in overall ETDQ-7 score showed significant improvement at 6 weeks and persistent at 3 months post balloon dilatation (p<0.05). Similarly, changes in tympanogram were reported in interventional group at 6 weeks and maintained at 3 months post balloon dilatation (p<0.05), whereas none was observed in the opposite group. Tympanic membrane appearances were similar before and after intervention in both groups. No complications were reported in both groups. **Conclusion:** The present study suggests that balloon dilatation is superior to conservative medical treatment in treating Eustachian tube dysfunction. It is a safe procedure that provides a significant symptomatic relief and tympanometry improvement.