Oral Presentations

Otorhinolaryngology

Evaluation of the impact of tinnitus on the quality of life of patients of the age group of 40 - 60 years

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Introduction: Hearing loss affects people's quality of life. If we consider that hearing loss is the triggering factor, the positive correlation with tinnitus can be justified, since damage or degeneration of the inner ear and the vestibulocochlear nerve can be the cause of tinnitus.

Objectives: To evaluate the impact on the quality of life of people with ages 40 to 60 years who present tinnitus. Evaluate if there is a higher prevalence in relation to gender.

Methods: This is an individual, analytical, observational, cross-sectional, uncontrolled study. The study was carried out in the city of Pouso Alegre, MG, at the Samuel Libânero Clinical Hospital, in the 40-60 age group. Made with 93 people randomly selected. An anamnesis was made and sent to the otology and a threshold tonal audiometry. The data were organized and tabulated in the Microsoft Excel 2013 program and analyzed using the SPSS 18 software.

Results: The Chi-square test, shows that there was statistical significance in the variables alcoholic beverage (p = 0.016) and chronic disease (p = 0.021). It was possible to correlate the tinnitus symptom and hearing loss in workers from noisy places who did not use or used ear protectors.

Conclusion: It is concluded that the tinnitus symptom, when comparing the variables gender with the use of alcoholic beverage with the presence of chronic diseases, is more prevalent. The use of the ear protector in noisy environments is associated with complaints of hearing loss and tinnitus.

Keywords: tinnitus, age group, quality of life.

Revision Cochlear Implant Surgery in Children

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Introduction: The Cochlear Implant (CI) surgery is not entirely (completely) free of risks and may present problems that will require revision surgeries.

Objective: To verify the efficacy, risks, and indications to revision the CI surgery and to identify the clinical, audiological, and device-related characteristics that predict outcome.

Method: A retrospective study of patients under 18 years undergoing to CI from 2004 to 2015, in a Brazilian public hospital. Data collected to age at the time of implantation, sex, etiology of deafness, duration of hearing loss, audiological and oral language characteristics of each patient in the pre and postoperative CI, if there was a need for surgical revision and its reasons.

Results: Two hundred and sixty surgeries were performed in 236 patients. Seven patients with bilateral CI and 10 required surgery revision. Twenty-seven surgeries were necessary for these 10 children (1 performed bilateral CI), 16 of which were revision surgeries. In 2 children, removal of the CI was necessary, without reimplantation (one with cochlear malformation, probably incomplete type I partition and another due to trauma). Regarding the etiology of the 8 children who remained with CI, 4 had cochlear calcification after meningitis followed by trauma (1), malformation of the facial nerve (1), failure of the CI device (1) and a revision surgery was necessary to a child due to twisting (Splice) of the electrode bundle.

Conclusion: The revision of the CI surgery is not frequent, and the patient must be informed of this possibility.

Use of Magnetic Resonance Imaging to Evaluate the Functionality of the Auditory Cortex in Patients with Central Auditory Processing Disorders

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Introduction: Functional magnetic resonance imaging has emerged as a new diagnostic tool to detect abnormalities in the central auditory system which may be related to cognitive dysfunction. This technique is based on changes in blood oxygenation level detected in the capillaries of brain tissue. According to “brain activation”, a local chemical change is observed, and consequently, an image is formed at this point, allowing brain mapping during the exam.

Objectives: A systematic review was made in order to elucidate the use and the clinical applicability of functional magnetic resonance in patients with central auditory processing disorders.

Data Synthesis: Functional magnetic resonance imaging is a useful tool to map brain activity in evincing topographic diagnosis of neural alteration in response to auditory-cognitive tests. Although it doesn’t allow numerical response and there isn’t a known pattern of normality, it can differ active from inactive neural response areas. It is also possible to observe an inter-hemispheric interaction, responsible for attention, initiative and generation of emotions. The mentioned technique can be applied in adults as well as in children, but needs attention and collaboration of the patient, once movement or fatigue can disturb the analysis.

Conclusion: Although it is a new technique, functional magnetic resonance has been shown to be a safe and useful auxiliary diagnostic tool for detecting changes in auditory processing.

Superior Semicircular Canal Dehiscence Syndrome: a Literature Review

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Introduction: Superior Semicircular Canal Dehiscence Syndrome is a rare disease, mainly characterized by auditory and vestibular symptoms induced by intense sound stimuli or by changes in intracranial or middle ear pressure, due to a dehiscence of the bony layer that covers the superior semicircular canal.

Objective: To perform a literature review about this syndrome, highlighting its main clinical characteristics, diagnosis and therapeutic options.

Data Synthesis: The prevalence of this condition is 0.7% in the general population and its etiopathogenesis is still unknown. However, it is believed that the defect could occur during the development of the bony layer that covers the semicircular canal, followed by a head injury or a sudden increase in intracranial pressure, leading to the rupture of
Differential Diagnosis between Migraine Associated with Auditory-Vestibular Dysfunction and Ménière’s Syndrome: A Systematic Review

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Introduction: Migraine associated with Auditory-vestibular Dysfunction or Vestibular Migraine (MV) and Ménière’s Syndrome (SM) have similar clinic and it is confused to differentiate one by another, often being a challenge to have a differential diagnosis between these entities.

Objectives: To present a systematic review on the differential diagnosis between Migraine associated with Auditory-vestibular Dysfunction and Ménière’s Syndrome.

Data Synthesis: Migraine is one of the most frequent types of headache in the population. It is characterized by a vascular syndrome caused by vasoconstriction and vasodilation of the intracranial arteries. Many patients with migraine present vestibular symptoms, with migraine-type headache with episodes of dizziness, even vertigo, aural fullness, auditory symptoms, tinnitus, and movement intolerance, which persist for hours, days or weeks, characterizing MV. MS begins between 20 and 60 years, it is usually unilateral and it is characterized by recurrent vertigo crises lasting at least 20 minutes up to 24 hours, associated with tinnitus, aural fullness and hearing fluctuation, and may be accompanied by nausea and vomiting. In the studies performed, no typical pattern appears in the vestibular tests to determine the diagnosis of MV. The differentiation between MV and MS will occur through a detailed anamnesis, the analysis of the classification criteria of the MV and progressive hearing loss, being this the best method of differentiation.

Conclusion: Vestibular Migraine has clinical characteristics very similar to MS, VM should be part of the differential diagnosis of vertigo and it also be remembered during the management of patients with migraine.

Keywords: vertigo; Ménière’s syndrome; vestibular migraine.

Usher Syndrome: A Systematic Review

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Introduction: Usher syndrome is an autosomal recessive disease characterized by sensorineural hearing loss and pigmentary retinitis. There is an association of inherited sensorineural deficiencies with total or partial hearing loss and progressive reduction of vision due to degeneration of retinal photoreceptor cells, termed retinitis pigmentosa.

Objectives: To present a systematic review of Usher Syndrome over the last ten years.

Data Synthesis: Usher syndrome is a rare condition, with an incidence of 3/100,000 people and leads to deaf-blindness, being the most common cause in adults. Among patients with retinitis pigmentosa, it is the most common cause, present in 6-10%. It was classified by Merin and colleagues into four types, according to the age of onset of the deficiencies and their severity. I is characterized by severe and congenital loss of hearing, absence of vestibular function and appearance of retinitis pigmentosa in the first decade of life; II presents moderate congenital loss of hearing, preserved vestibular function and onset of pigmentary retinitis in the second decade of life; III presents late progressive hearing loss, vestibular ataxia, onset of pigmentary retinitis at puberty, and may have psychosocial; IV, the rarest, with severe hearing loss, retinitis pigmentosa and mental retardation. Early diagnosis is essential for the oto logic therapeutic plan, which may include auditory protection with audiologic rehabilitation.

Conclusion: As a rare condition with different presentations, it can have a delayed diagnosis, compromising the patient’s early therapy, thus influencing his quality of life.

Keywords: hearing loss; Usher syndromes; deaf-blind disorders.

Heat Shock Response in Noise Induced Hearing Loss

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Introduction: The 72 kDa heat shock protein (HSP72) had cochlear cytoprotective and anti-inflammatory roles in inner ear during noise stressful challenges. On the other hand, in the extracellular milieu these proteins participate as pro-inflammatory signal.

Objectives: We argue whether noise induced hearing loss (NIHL) model promotes both intracellular (iHSP72) and extracellular (eHSP72) heat shock response.

Methods: Female Wistar rats, 90 days old, were randomly divided in Control (CON, n = 6) and NIHL group (n = 10). Auditory Brainstem Response (ABR) was evaluated before and 14 days after noise exposure (124 dB NPS for 2 h). Cochlea and plasma samples were collected to iHSP72 and eHSP72 by AMP’d® HSP70 high sensitivity ELISA kit (Analysis by Student T test).

Results: The noise exposition induced an increase in auditory threshold in NIHL group (Control = 18.3 ± 4.1 vs NIHL = 58.0 ± 9.7 dB, P < 0.0001). NIHL group showed increased levels in both iHSP72 and eHSP72 (iHSP72: Control = 4.44 ± 1.99 vs NIHL = 6.86 ± 0.94 ng/ml, P = 0.018. eHSP72: Control = 0.18 ± 0.02 vs NIHL = 4.07 ± 4.27 ng/ml, P = 0.036).

Conclusion: Our data indicates that cochlear damage induced by noise exposition is accompanied by local and systemic heat shock response. Thus, plasma levels of 72 kDa heat shock proteins can be used as biomarker of cochlear stress condition after noise exposure.

Keywords: HSP72, heat shock protein, NIHL, noise exposure.