

Keywords: Sudden hearing loss; Audibility assessment; Quality of life; Rehabilitation of hearing loss; Tinnitus.

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Quality of life assessment after septoplasty

Carolina Pontes Lima*, Ana Luiza de Bortoli de Paula, Eloa Lumi Miranda, Thaís Motta Justo, Ana Taise de Oliveira Meurer, Aldo Eden Cassol Stamm
Departamento de Otorrinolaringologia, Hospital Edmundo Vasconcelos, São Paulo, SP, Brazil

E-mail address: carol.plima@hotmail.com (C.P. Lima)

Septal deviation has high prevalence in population and it is an important cause of nasal obstruction which may decrease quality of life.

Objective: Assessing the impact of septoplasty in patients with deviated septum and nasal obstruction based on a quality-of-life questionnaire.

Methods: Prospective design. Patients undergoing septoplasty were assessed by the NOSE questionnaire before surgery, 2 months after surgery and 6 years after surgery. We evaluated the surgical improvement based on total score, the magnitude of the surgery in the disease-specific quality of life and the correlation between the preoperative score and postoperatively improvement.

Results: Twenty-six patients were included in the study. The mean age of patients undergoing surgery was 33.7 years. There was a statistically significant improvement in the preoperative NOSE score, after two months and after 6 years.

Conclusion: Septoplasty resulted in improvement in quality-of-life in adults with septal deviation and nasal obstruction.

Keywords: Septoplasty; Septal deviation; Nasal obstruction; Quality-of-life.

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Susceptibility of the Swiss model to ampicillin

Maria Luiza Queiroz Sampaio^a,
Lucieny Silva Martins Serra^{a,*},
Carla Giovanna Silva Borges^b, Natalia Lombardi Pessoa^b,
André Luiz Lopes Sampaio^b

^a *Universidade Católica de Brasília, Brasília, DF, Brazil*

^b *Universidade de Brasília, Brasília, DF, Brazil*

E-mail address: lucienyserra@gmail.com (L.S. Serra)

Ampicillin causes irreversible ototoxicity and early detection of this disease is considered a difficult task. Clinical studies of the effects of ampicillin in men have revealed that the drug can produce changes that cause tinnitus, hearing loss at high frequencies and behavioral manifestations. The anatomical–physiological equivalence of the peripheral auditory system of humans with mice causes this model of animal to be routinely used in clinical trials, as they contribute to the prevention, diagnosis and treatment of alterations caused by the use of this drug.

Objective: This study aimed to verify the susceptibility of the Murino Swiss model to external hair cell lesions caused by the use of aminoglycoside ampicillin.

Method: Experimental, prospective and intervention research, approved by CEUA/UnB no. (63/2018). The animals were divided into two groups: control group (G1) and Ototoxic Ampicillin (G2). G1 received sodium chloride (serum) solution 10 mg/kg/day and G2 received ampicillin 400 mg/kg/day. The solutions were offered daily intraperitoneally for 14 consecutive days. Otoacoustic emissions were performed by distortion product at frequencies from 6 to 12 kHz in T0 and T14 and histological study of the ympanic leaflets were performed. The analyses were carried out using the Prism[®]5 program. Differences with $p < 0.05$ were considered significant.

Results: The use of ampicillin in a dose of 400 mg/kg/day for 14 consecutive days did not cause damage to external snare cells and cochlear structures in the SWISS model.

Conclusion: Swiss mice have resistance to ototoxicity of ampicillin under treatment at the dosage of 400 mg/kg/day for 14 days intraperitoneally.

Keywords: Hearing loss; Cochlea; Ototoxicity; Inner ear; Audiology; Ampicillin.

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Melatonin as prevention in age-related hearing loss in model murino C57BL/6J

Maria Luiza Queiroz Sampaio^a,
Lucieny Silva Martins Serra^{b,*}, André Luiz Lopes Sampaio^b
^a *Universidade Católica de Brasília, Brasília, DF, Brazil*
^b *Universidade de Brasília, Brasília, DF, Brazil*

E-mail address: lucienyserra@gmail.com (L.S. Serra)

Objective: The present study aimed to perform a morphological and morphometric analysis of the cochlear structures of C57BL/6J mice receiving oral melatonin for a period of 12 months.

Methods: 32 C57BL/6J males were divided into control and melatonin groups. The control received saline and ethanol solution and the melatonin group, 50 µl of 10 mg of melatonin/kg/day orally for a period of 12 months. After the experiment, the animals were sacrificed in a concentration chamber of 40% CO₂, and the slides were analyzed morphologically and morphometrically.

Results: The melatonin group revealed higher median density of viable cells (45 ± 10.28 cells/100 µm², 31–73, versus 32 ± 7.47 cells/100 µm², 25–48). The median area of the vascular stria was 55.0 ± 12.27 cells/100 µm² (38–80) in the control group and 59.0 ± 16.13 cells/100 µm² (40–134) in the melatonin group. Morphometric analysis of the spiral ligament reveals a higher median of total viable neurons in melatonin (41 ± 7.47 cells/100 µm², 27–60) than in the control group (31 ± 5.68 cells/100 µm², 21–44).

Conclusion: Although melatonin is a potent antioxidant, it does not completely neutralize the occurrence of presbycusis; however, it may delay the appearance of this condition.

Keywords: Hearing loss; Cochlear; Inner ear; Melatonin; Presbycusis.

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