Vestibular and auditory dysfunction in patients with chronic renal failure undergoing kidney transplant

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Abstract

Klagenberg, KF. Vestibular and auditory dysfunction in patients with chronic renal failure undergoing kidney transplant [thesis]. Curitiba: Universidade Tuiuti do Paraná; 2011.

Purpose: To investigate the vestibular and auditory behavior of patients with chronic renal failure (CRF) submitted to kidney transplant. **Methods:** Thirty patients were evaluated, 10 (33.33%) female and 20 (66.67%) male, aged 13 to 26 years, average 16.97 years, standard deviation 3.60 years, diagnosed with CRF regardless of the cause, submitted to kidney transplantation. An existing control group was used to compare the high-frequency auditory thresholds. Patients underwent the following procedures: medical history, ENT (ear, nose, throat) evaluation, audiological evaluation, acoustic impedance measurements, central and vestibular auditory processing evaluation. **Results:** 1) Absence of auditory and vestibular complaints at the time of medical history. Patients reported dizziness while on dialysis; 2) There was a similar number of vestibular alterations (50.00%) and auditory system alterations (46.67%): a) in relation to pure tone audiometry, there was a predominance of normal results; b) in relation to the vestibular exam, there was prevalence of peripheral vestibular system alteration and peripheral vestibular syndrome; 3) Presence of central auditory processing alteration (46.67%) in the Staggered Spondaic Word Test (SSW); 4) There was significant difference between the age variable and the result of the pure tone audiometry, i.e., hearing sensitivity in thresholds of 250 Hz to 8 kHz decreased with age, in patients with transplanted kidney; 5) The relationship between the type of donor, living or dead, and the SSW test result was significant. When the donor was dead, altered result were higher when compared to living donor; 6) The patients had worse hearing in the high-frequency audiometry when compared to the control group; a significant difference was found between control and experimental groups: in frequencies of 11.2 kHz and 16 kHz in the right ear, and frequencies of 11.2 kHz and 9 kHz in the left ear; in males, in the frequency of 16 kHz in the right ear; in females, in the frequencies of 10 kHz and 11.2 kHz in the right ear, and 9 kHz in the left ear. **Conclusion:** It was concluded that there is a need of explaining to the professionals involved with CRF patients undergoing kidney transplantation about care, prevention and early identification of otoneurological deficits. Professionals must be aware of the consequences of ototoxic medications, secondary diseases, exposure to noise that can cause or worsen hearing loss and vestibular alterations.

Study carried out at the Graduate Program in Communication Disorders, Universidade Tuiuti do Paraná – UTP – Curitiba (PR), Brazil, for obtention of PhD in Communication Disorders, under supervision of Professor Bianca Simone Zeigelboim, PhD.

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