ISSN: 3029-0872

Short Communications

Journal of Medical and Clinical Nursing Studies

Sensorineural Hearing Loss in Hemodialysis Patients in Third Central Hospital of Chronic Renal Failure

Enkhbayar D[1*], Khongorzul TS[1], Galsanjav D[1], Dolgorjav M[2], Munkhzul D[1] and Battsetseg R[1]

[1]*Department of Renal, Hemodialysis, Endocrinology - Third State Central Hospital, Mongolia*

[2]*Mongolian National University of Medical Sciences, Mongolia*

[*]**Corresponding author**

Enkhbayar D, Department of Renal, Hemodialysis, Endocrinology - Third State Central Hospital, Mongolia.

Received: July 23, 2025; **Accepted:** July 29, 2025; **Published:** August 07, 2025

Introduction

Sensorineural hearing loss is considerably more prevalent in patients with chronic renal failure (CRF) than in the general population. Although all frequencies can be affected by CRF, hearing impairment at high frequencies is most common.

In addition to antigenic similarity, the cochlea and kidney have similar physiological mechanisms, namely, the active transport of fluid and electrolytes achieved by the stria vascularis in the cochlea and the glomeruli in the kidney. It was previously confirmed that the cochlea is affected by the systemic metabolic, hydroelectrolytic, and hormonal alterations that are associated with CRF.

Several variables may contribute to the etiopathogenetic mechanisms of hearing loss in CRF including factors related to the severity and duration of the disease, electrolyte disturbances, ototoxic drugs, age, comorbid conditions such as diabetes mellitus and hypertension, and hemodialysis.

Despite the abundance of early and recent studies on the role of hemodialysis in hearing loss, the results are still debated. Some have reported that hemodialysis treatment has no effect on auditory function at least in the first 5 years of treatment while others indicated a deleterious effect of hemodialysis on hearing acuity.

Aim: This study was aimed at determining the relationship between the degrees of hearing loss caused by chronic kidney failure, age, sex, and duration of hemodialysis treatment.

1. Hearing loss after diagnosis of chronic renal failure (Oliguria, uremia).
2. Underlying diseases leading to renal failure and gender ratio.
3. Determining the degree of hearing loss.
4. Duration of hemodialysis treatment by years.
5. Symptoms of hearing loss in patients.

Materials and Methods

We used retrospective study design and audiometric examination included 52 patients undergoing hemodialysis and peritoneal dialysis in hemodialysis center of TSCH. The data were analyzed using the SPSS.

Results: Total of 52 patients, 59,6% (n=31) were men, 40,4% (n=21) were women. Study patient's mean age was 52.19±11,08 years. All patients cause of chronic kidney disease, 67.3% (35) were glomerulonephritis, 25% (13) were diabetes, 7.7% (4) were hypertension.

According to symptoms by number of duplicates, there were 34 (65.3%) tinnitus, 9 (17.3%) ear pressure, and 18 (34.6%) dizziness.

Hearing loss evaluated by audiometric examination, 5.7% (n=3) had normal, 55.8% (n=29) had mild, 25% (n=13) had moderate, and 13.5% (n=7) had severe hearing loss.

Hearing loss among patients with type 2 diabetes mellitus 45% had moderate loss, 27% severe loss. Among patients with

Citation: Enkhbayar D, Khongorzul TS, Galsanjav D, Dolgorjav M, Munkhzul D, et al. Sensorineural Hearing Loss in Hemodialysis Patients in Third Central Hospital of Chronic Renal Failure. J Med Clin Nurs Stud. 2025. 3(4): 1-2. DOI: doi.org/10.61440/JMCNS.2025.v3.79

glomerulonephritis 26% had moderate loss, 9.09% severe loss. And. Among patients with hypertension in CKD 12.5% had moderate loss, 25% severe loss. As well as among patients with hemodialysis in CKD 38.5% had moderate-severe hearing loss.

A study of the correlation ratio between duration of hemodialysis and the degree of hearing loss showed an increase in the degree of hearing loss.

Conclusion

1. Determining hearing loss and audiometric examination among all patients undergoing in dialysis treatment in Ulaanbaatar city
2. In 4 and 5 stages of chronic kidney disease, hearing loss should be identified, control should be improved, and hearing treatment should be start early.
3. Collaborate with other dialysis units.