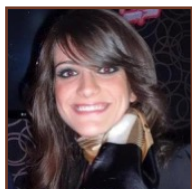


Kidney transplant recipients show a better psychological well-being than dialysis patients.



P. Pignataro¹, S. Simone², F. Cassone², G. Caggiano², R. Guido², F. Piancone², C. Sivo², A. Dipalma², R. Russo², M. Spilotros³, P. Di Tonno³, M. Dicarolo⁴, G. Colaianni⁴, S. Colucci¹, M. Grano⁴, P. Pontrelli⁴, L. Gesualdo².

¹Department of Translational Biomedicine and Neuroscience (DiBrain), University of Bari "A. Moro", Bari, Italy.

²Department of Precision and Regenerative Medicine and Ionian Area (DiMePre-J)-Nephrology, Dialysis and Transplantation Unit, University of Bari "Aldo Moro", Bari, Italy.

³Department of Precision and Regenerative Medicine and Ionian Area (DiMePre-J)-Urology, Andrology and Kidney Transplantation Unit, University of Bari "Aldo Moro", Bari, Italy.

⁴Department of Precision and Regenerative Medicine and Ionian Area (DiMePre-J), University of Bari "A. Moro", Bari, Italy.

Chronic kidney disease (CKD) significantly impacts psychological well-being, indeed, depression, and anxiety disorders are common among patients. We performed psychological characterization of CKD and kidney transplant patients and measured by ELISA Assay the serum levels of irisin, a molecule with anxiolytic and antidepressant effects in mice.

Non-dialysis patients (preemptive, N=31), dialysis patients (N=56), and kidney transplant recipients (N= 33) were enrolled. Patients underwent psychometric tests including State-Trait Anxiety Inventory, Form Y 1 and 2 (STAI- Y 1 and 2), Beck's Depression Inventory (BDI), Psychological General Well-Being Index (PGWBI), and Toronto Alexithymia Scale (TAS-20).

Dialysis patients showed a significant reduction in the PGWBI score and an increase in the BDI and in TAS-20 scores compared with other groups. Kidney transplant patients showed a significant reduction in STAI-Y 1 and 2 compared with dialysis patients. Furthermore, in dialysis patients, we observed that the PGWBI score was significantly lower than preemptive and transplant patients, but only in the subgroup with low irisin levels. Additionally, this latter group of patients also showed higher scores of STAI-Y 1 than preemptive and kidney transplant patients, whereas the BDI scores were higher in dialysis patients than other patients regardless of irisin levels.

Moreover, in older adult patients, we found that kidney transplantation significantly increased PGWBI score, as well as decreased STAY 1-2 and BDI scores, compared with dialysis patients. Overall, our findings demonstrate that kidney transplantation improves psychological well-being and reduces anxiety and depressive symptoms, especially in older adults and those with low serum irisin levels.

Biography:

Dr.Pignataro is a Postdoctoral Researcher and Adjunct Professor at the University of Bari. In 2024, she received PhD degree in "Tissue and Organ Transplantation and Cellular Therapies" from University of Bari. She specialized in 2022 in Cognitive-Behavioral Psychotherapy. She graduated in Clinical Psychology from the University of Chieti in 2014.

For the past 5 years, Dr.Pignataro has been studying the effect of irisin administration on animal models and its involvement in patients with psychiatric, neurodegenerative, and chronic kidney diseases. Study results showed that irisin plays a neuroprotective role with a positive effect on cognition (in mice and in humans).