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## Is losartan 50 mg effective in reducing blood pressure among post dialysis euvolemic hypertension and survival trend; findings from a randomized control trial

Amer Hayat Khan<sup>1</sup>, Raja Ahsan Aftab<sup>1</sup>, Azreen Syazril Adnan<sup>1</sup>, Syed Azhar Syed Sulaiman<sup>1</sup> and Tahir Mehmood Khan<sup>2</sup><sup>1</sup>Universiti Sains Malaysia, Malaysia<sup>2</sup>Monash University, Malaysia

The aim of current study was to assess the effectiveness of losartan 50 mg (OD) in reducing blood pressure among post-dialysis euvolemic hypertensive patients, observing their survival trends and adverse events during the course of study. A multicentre, prospective, randomised, single-blind trial was conducted to assess the effect of losartan 50 mg every other day (EOD), once a morning (OM) among post-dialysis euvolemic hypertensive patients. Post-dialysis euvolemic assessment was done by a body composition monitor (BCM). Covariate adaptive randomization was used for allocation of participants to the standard or intervention arm, and these participants were followed up for twelve months. Pre-, intra- and post-dialysis session blood-pressure (BP) measurements were recorded, and any adverse events were confirmed using Naranjo scale. Survival trends were analysed using Kaplan-Meier analysis. Of the total 229 patients, 96 (41.9%) were identified as post-dialysis euvolemic hypertensive. A final sample of 88 (40.1%) patients was randomized into standard and intervention arms. A total of 44 [21 (47.7%) male] were randomized to the standard arm, compared to 44 [24 (54.5%) male and 20 (45.4%) females] to the intervention arm. After follow-up of 12 months' pre-dialysis systolic ( $p < 0.001$ ) and diastolic ( $p = 0.01$ ), intradialysis diastolic ( $p = 0.02$ ), post-dialysis systolic ( $p < 0.001$ ) and diastolic ( $p < 0.001$ ) blood pressure was reduced from the baseline among intervention-arm patients. However, a significant decline in pre-dialysis systolic blood pressure ( $p = 0.003$ ) after 12 months of follow-up was observed for standard-arm patients. A total of six deaths were reported among standard-arm patients compared to 2 deaths among the intervention arm. Among the intervention arm, two patients suffered hyperkalemia. Losartan 50 mg achieves an overall significant decline in blood pressure among post-dialysis euvolemic hypertensive patients and these patients also had lower mortality rates.

### Recent Publications

1. Raja Ahsan Aftab, Amer Hayat Khan, Azreen Syazril Adnan and Nurul Jannah (2016) A systematic review on randomized control trials on rennin angiotensin aldosterone system inhibitors role in managing hypertension among hemodialysis patients. *Renal Failure* 38(3):474-80.
2. Raja Ahsan Aftab, Amer Hayat Khan, Syed Azhar Syed Sulaiman, Tahir Mehmood Khan and Azreen Syazril Adnan (2017) Protocol of randomized control trial for effectiveness of angiotensin receptor blockers on blood pressure control among euvolemic hypertensive haemodialysis patients. *Medicine* 96(14):e6198.
3. Raja Ahsan Aftab, Amer Hayat Khan, Azreen Syazril Adnan, Syed Azhar Syed Sulaiman and Tahir Mehmood Khan (2016) Efficacy of losartan in the management of post dialysis euvolemic hypertension; findings from a randomized control trial. *Journal of Scientific Reports* DOI: 10.1038/srep36592.
4. Raja Ahsan Aftab, Amer Hayat Khan, Azreen Syazril Adnan, Syed Azhar Syed Sulaiman and Tahir Mehmood Khan (2017) Safety and efficacy of losartan 50 mg in reducing blood pressure among patients with post-dialysis euvolemic hypertension: a randomized control trial. *Scientific Report* DOI: 10.1038/s41598-017-17437-4.

### Biography

Amer Hayat Khan joined Discipline of Clinical Pharmacy, School of Pharmaceutical Sciences, Universiti Sains Malaysia, as a Senior Lecturer. He is involved in teaching (Undergraduate Pharmacy & Master in Clinical Pharmacy i.e. M.Pharm) and hospital visits regarding pharmacy students clerkships. He is also involved in research supervision of PhD's, Master's either in Pharmacy and/or Medical students' research project, community activities, university services etc. He is a Journal Editor and a Reviewer. He shared his skill and research on international platform as a resource person for workshop or as an invited speaker in a conference. In addition to this, he is a Visiting Staff for Chronic Kidney Disease & Resource Center, Hospital USM. Furthermore, he is also acting as a Program Consultant and Visiting Staff for Pharmacy Department at Quaid-e-Azam University, Islamabad, Pakistan. He has supervised 5 PhD's and 19 Master's students by research and/or course work research project, while 6 researchers are reaching to defence, whereas 5 are under active supervision. All research projects are published and or publishing in indexed journal.

amerhayat@gmail.com