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The Long-Term Effectiveness Of Tolvaptan For Treatment Of ADPKD

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Objectives : Tolvaptan is a drug for the treatment of Autosomal Dominant Polycystic Kidney Disease (ADPKD). The aim of this study was to evaluate the long-term effectiveness of this drug in treating patients with ADPKD in Taiwan.

Methods : Forty eight ADPKD patients (30 males, 62.5%; 18 females, 37.5%) who had been taking tolvaptan for 12 to 60 months were included. Using linear regression model, the slopes of decrement of estimated glomerular filtration rate (eGFR) before and after tolvaptan use were measured and compared among different chronic kidney disease (CKD) stages. Tolvaptan was considered effective if the average changes of the slopes were below -0.41.

Results : The changes of the slopes after tolvaptan use for CKD stages 1 (3 patients) and 2 (5 patients) were between -0.26 and -0.29. For CKD 3a (12 patients) and 4 (8 patients), the changes of the slopes were between -0.31 to -0.36. For CKD stage 5 patients (4 patients), the average change of the slopes was -0.04. Although the average change of the slope of CKD 3b (16 patients) was -0.44, which showed an unsatisfactory tolvaptan effect, 43.7% of the CKD 3b patients had an average slope between -0.4 and 0.

Conclusions : The long-term effect of tolvaptan was satisfactory in most ADPKD patients in Taiwan.