

# 5<sup>th</sup> World Congress on Diabetes & Metabolism

November 03-05, 2014 Embassy Suites Las Vegas, USA

## Pentoxifylline as a novel renoprotective approach for diabetic patients with chronic kidney disease

Juan F Navarro Gonzalez

University Hospital Nuestra Señora de Candelaria, Spain

Diabetic kidney disease (DKD) is the leading cause of end-stage renal failure. Pentoxifylline (PTF) reduces clinical markers of glomerular and tubulo-interstitial injury, but its effects on DKD progression remain uncertain. We conducted an open-label, prospective, randomized trial to determine whether PTF in addition to renin-angiotensin system (RAS) blockade can slow progression of renal disease in type 2 diabetics with stages 3-4 CKD. Participants were randomly assigned to receive PTF (1200 mg/day) (n=82) or to a control group (n=87) for 2 years. At the end of the study, the eGFR decreased by a mean (SE) of 2.1 (0.4) ml/min/1.73m<sup>2</sup> in the PTF group compared with 6.5 (0.4) ml/min/1.73m<sup>2</sup> in the control group, with a between-group difference of 4.3 ml/min/1.73m<sup>2</sup> (95% CI, 3.1 to 5.5; P<0.0001) in favor of PTF. This difference reached statistical significance at the first year, and was sustained thereafter. The proportion of patients with a reduction of the eGFR higher than the median rate of decline (0.16 ml/min/1.73m<sup>2</sup> per month) was significantly lower in the PTF group respect to the control group (33.3% versus 68.2%; P<0.0001). Percent change in UAE was +5.7% (95% CI, -0.3 to +11.1) in the control group and -14.9% (95% CI, -20.4 to -9.4) in the PTF group (P=0.0001). In conclusion, among type 2 diabetic patients with advanced CKD, addition of PTF to RAS inhibitors for 2 years resulted in a lower decrease in eGFR and a greater reduction of residual albuminuria, and could be a novel renoprotective approach to reduce renal risk.

### Biography

Juan F Navarro Gonzalez is Director of the Research Division at the University Hospital Nuestra Señora de Candelaria (Santa Cruz de Tenerife, Spain), Assistant Professor of Nephrology at the University of La Laguna (Santa Cruz de Tenerife, Spain), Teaching and Research Coordinator of the Spanish Society of Nephrology, and National Coordinators of the GEENDIAB (Spanish Study Group for the study of Diabetic Nephropathy). He got his M.D. at University of La Laguna in 1989, and completed his residency in Nephrology at the University Hospital Ramón y Cajal (Madrid, Spain) in 1994. He got his PhD at the University of La Laguna in 2007. Dr. Navarro is an International Fellow of the American Society of Nephrology since 2005. He has over 80 peer-reviewed publications in high impact journals, and has authored several book chapters. Research interest include chronic kidney disease and its complications and treatment; especially diabetic nephropathy, mineral bone metabolism, and cardiovascular complications.