Impact of Type D Personality on Quality of Life in CAPD Patients

Jianying Li, Quyin Guo, Xiaofeng Wu, Jianxiong Lin, Xiao Yang, Xueqing Yu
Department of Nephrology, The First Affiliated Hospital, Sun Yat-sen University, Guangzhou, China

Objective: Type D personality is a stable and powerful predictor of impaired quality of life and poor health outcomes in various patient groups and healthy individuals. We attempted to assess the relationships among Type D personality, illness perception, social support and depression, and investigate the impact of Type D personality on quality of life (QOL) in continuous ambulatory peritoneal dialysis (CAPD) patients.

Methods: The demographic information, clinical data and laboratory findings in CAPD patients in our PD center from September, 2012 to September, 2013 were collected. Type D personality was assessed by the Chinese 14-item Type D Personality Scale (DS14). Patients’ illness perception, social support, depression, and QOL were assessed by using the Brief Illness Perception Questionnaire (Brief IPQ), social support rating scale (SSRS), Beck Depression Inventory (BDI), and Short Form 36 (SF-36), respectively.

Results: Of the 385 CAPD patients investigated, 137 (35.6%) patients had a Type D Personality (Type Ds). Type Ds believed their illness had much more serious consequences (7.67 ± 2.64 vs. 6.27 ± 3.45, P < 0.001), and experience much more symptoms that they attributed to their illness (7.11 ± 3.58 vs. 5.93 ± 2.59, P = 0.023). Significant differences were found between Type Ds and non-Type Ds in QOL (395.2 ± 130.34 vs. 489.6 ± 148.38, P < 0.001), social support (21.7 ± 5.42 vs. 24.93 ± 5.83, P < 0.001), and depression (22.9% vs. 20.4%, P < 0.001). The correlation analysis demonstrated that Type D was positively associated with depression (r = 0.384, P < 0.01), while negatively associated with SF-36 score (r = −0.301, P < 0.01), and social support (r = −0.254, P < 0.01). Using multiple linear regression analysis, we found that Type D personality (β = −82.554, P < 0.001) was independently associated with SF-36 score.

Conclusion: Type D personality was a predictor of poor QOL in PD patients. Our results suggest that intervention for Type Ds may benefit CAPD patients in terms of QOL improvement.

Expression of miRNA200a in Peritoneal Dialysis-associated Peritoneal Fibrosis

Xin Wei, Guojun Hao, Qinkai Chen
The First Affiliated Hospital of Nan Chang University, Nan Chang, China

Background: Peritoneal fibrosis (PF) is an almost invariable consequence of peritoneal dialysis (PD), which is an established alternative for the replacement therapy of end-stage renal disease. We know that miR-200a belong to miR-200 family, which is closely related to a variety of fibrotic diseases. However, the role of miR-200a in peritoneal fibrosis is largely unknown.

Methods: Human peritoneal mesothelial cell line (HMrSV5) was cultured in the presence or absence of TGF-β. The protein expression levels of EMT index and E-box-binding homeobox (ZEB) 1/2 were determined by western blot. The level of miR-200a was determined by real-time PCR. miR-200a mimic or inhibitor and it negative control RNA, were transfected into HMrSV5 cells using Lipofectamine 2000.

Results: We found that miR-200a mimic can attenuated TGF-β1 induced peritoneal mesothelial cell EMT and synthesis of extracellular matrix. It was also demonstrated that the miR-200a was responsible for protecting peritoneal mesothelial cells from mesenchymal transition by targeting suppression of ZEB1/2.

Conclusion: The results suggested that miR-200a may not only be a useful biomarker of EMT in ovarian cancer, but also of potential therapeutic value in peritoneal fibrosis.