with patients in the late-start group, those in the early-start group were significantly more likely to die during the follow-up period (unadjusted HR 1.87, 95% CI, 1.44—2.43, p < 0.001). However, after adjusting for age, sex, BMI, diastolic blood pressure, serum albumin, primary diagnosis, Charlson comorbidity score, hemoglobin and total serum cholesterol, the predictability of early-stage dialysis on mortality was not statistically significant (HR 1.08, 95% CI, 0.79—1.46, p = 0.662).

Conclusion: The initiation timing of peritoneal dialysis therapy was not independently associated with increased mortality. Aging and more comorbidity may account for the higher mortality rate in early-start PD patients.

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Objective: To explore the influence of follow-up rate for patients undergoing continuous ambulatory peritoneal dialysis (CAPD).

Methods: A total of 172 patients on CAPD for at least 6 months from January 1st 2011 to January 1st 2014 were included in this study. The follow-up rate for each patient was calculated. All the participants were divided into two groups according to the median follow-up rate of all patients, namely high follow-up group and low follow-up group. The demographic information, physical examination measurements and biochemistry data were collected. The nutritional status by SGA, residual renal function assessed by residual glomerular filtration rate (eGFR) and the anxiety/depression status evaluated by Hamilton Questionair were also evaluated.

Results: At baseline, no significant differences were shown in all the items between the two groups. After a median follow-up time of 15 months, patients in low follow-up group had a longer PD duration (20.1 ± 8.4 months vs. 15.9 ± 8.4 months, P = 0.001), higher systolic blood pressure (143.8 ± 36.3 mmHg vs. 137.9 ± 20.6 mmHg, P = 0.014), and higher diastolic blood pressure (90.9 ± 17 mmHg vs. 84.7 ± 12.9 mmHg, P = 0.008). The level of hemoglobin (103.8 ± 17.4 g/L vs. 111.5 ± 16.3 g/L, P = 0.004), serum albumin (29.4 ± 5 g/L vs. 31.1 ± 5.5 g/L, P = 0.033) were lower in the low follow-up patients than the high follow-up patients. Furthermore, the incidence of malnutrition (65.5% vs. 40.7%, P = 0.001), anxiety (45.3% vs. 29.1%, P = 0.028) and depression (47% vs. 31.8%, P = 0.03) were significantly higher in low follow-up patients than the high follow-up patients. Multivariate Cox regression analysis showed that residual renal function (RR = 0.669, P = 0.004), serum albumin (RR = 0.864, P = 0.001) and age (RR = 1.045, P = 0.006) were independently associated with patients’ survival, while the follow-up rate was not an independent risk factor.

Conclusion: Lower follow-up rate in CAPD patients was associated with hypoalbuminemia, anemia and malnutrition which were independently associated with worse survival of patients. Therefore, improving the outpatient clinic follow-up rate is very important to improve outcomes of CAPD patients.

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Objective: Visit-to-visit blood pressure variability (BPV) has been demonstrated to be a predictor of all-cause mortality and cardiovascular events in common people and hemodialysis patients. This study was aimed to investigate the effect of visit-to-visit BPV on all cause mortality and cardiovascular events in patients undergoing peritoneal dialysis.

Methods: Visit-to-visit BPV of PD patients during the first 6 months were measured in incident PD patients from January 1st, 2006 to December 31st, 2009. The patients were followed up for all causes mortality and cardiovascular events through December 31st, 2012.

Results: A total of 675 incident PD patients (43.6% female, mean age 47.9 ± 15.5 years) were enrolled, with a median duration of follow-up for 41.3 (6.1—83.0) months. The mean of standard deviation of systolic blood pressure (SDSBP), coefficient of variation of SBP (CVSBP), SD of diastolic blood pressure (SDDBP) and CVDBP in the PD patients were 12.40 mmHg, 8.99%, 8.02 mmHg and 9.52%, respectively. Patients with higher SDDBP presented higher baseline of mean arterial blood pressure (MAP, 107.24 vs. 102.38 mmHg, p = 0.003), higher percentage of diabetes (29.5% vs. 21.8%, P = 0.013), and cardiovascular disease (CVD) history (14.7% vs. 8.4%, P = 0.010). By multivariate logistic regression, higher MAP (OR = 1.018, p = 0.003) and CVD history (OR = 1.979, P = 0.017) were independent associated risk factors of higher SDDBP. Cox regression analysis showed that both SDDBP (HR = 1.918, p = 0.002) and CVSBP (HR = 1.798, P = 0.008) were independent risk factors for all-cause mortality, while SDSBP (HR = 1.864, p = 1.066—3.258) and SDBBP (HR = 1.785, P = 1.041—3.601) were independently associated with CVD mortality. Moreover, SDDBP (HR = 2.020, p = 0.001), CVSBP (HR = 1.926, P = 0.005), and SDBBP (HR = 1.986, p = 0.030) were also independently associated with composite cardiovascular events after adjustment for confounders.

Conclusion: Visit-to-visit BPV is an independent risk factor for all-cause mortality, CVD mortality, and cardiovascular events in PD patients, independent of blood pressure level.

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Objective: To explore the clinical characteristics and prognosis of relapsing, recurrent and repeated peritonitis in peritoneal dialysis patients.

Methods: All the peritonitis episodes from January 2000 to December 2013 at PD center of The First Affiliated Hospital of Sun Yat-Sen University were retrospectively reviewed. The patients were divided into four groups as recurrent group (different organism occurs within 4 weeks of completion of therapy for a prior episode), relapsing group (same organism or culture negative episode occurring within 4 weeks of completion of therapy), and the Control group (first peritonitis episode without relapse, recurrence, or repeat). Clinical data, pathogenesis, and outcome were compared among the four groups.

Results: One thousand and sixty-one episodes happened in 638 PD patients, with 38 in the recurrent group, 52 in the relapsing, 21 in the repeat and 528 in the control group respectively. The most common bacteria spectrum of recurrent peritonitis were coagulase-negative Staphylococcus (7.7%) and Viridans streptococci (17.9%). Escherichia coli (21.2%) was the most common bacteria of relapsing episodes. The complete cure rate in the recurrent group and relapsing group was significantly lower than that of the control group (50.0% vs. 65.4% vs. 85.8%). Lower serum albumin and hypokalemia were independently associated with occurrence of recurrent, relapsing, and repeat peritonia. Old age, diabetes, fungal infection and long vintage were risk factors for peritonitis treatment failure. Relapsing (HR = 1.50, 95% CI 1.03—2.16, P = 0.030) and repeat peritonitis (HR = 1.89, 95% CI 1.12—3.21, P = 0.016) were independent risk factors for long-term technical failure.

Conclusion: Recurrent, relapsing, and repeat peritonitis were different in spectra of bacteria and prognosis. Relapsing and repeat peritonitis were risk factors for long-term PD technical failure.

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Objective: Low serum Klotho levels are related to the prevalence of cardiovascular diseases in community-dwelling adults. However, it is unclear whether the serum Klotho levels are associated with vascular calcification in peritoneal dialysis patients.

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