intravenously for 2 weeks, then switched over to ceftriaxone 400 mg orally two times daily for another 2 weeks. Catheter locking solutions with ceftazolin was administered till the negative blood culture. He became apyrexial with antibiotic treatment and blood culture did not yield any growth after 28 days of therapy. 

**Conclusion:** Here we report the first case of catheter-related infection (CRI) in a man on HD caused by *A. pyogenes* without a clear exposure to animals or farm setting. This case provides further evidence that *A. pyogenes* can be a pathogen in humans, especially in those with history of immunosuppression or with a CVC in place.

http://dx.doi.org/10.1016/j.hkjn.2015.09.206

---

**0219**

**Correlation Between Quality of Life and Mineral Metabolism In Maintenance Hemodialysis Patients**

R. C. Ren, Y. L. Yao

*First Affiliated Hospital of China Medical University, Shenyang, China*

**Objective:** This study designed to assess the life qualities of the patients in Liaoning Province maintained hemodialysis (MHD) and to explore the relationship between the mineral metabolism and MHD patients quality of life.

**Methods:** Kidney HRQOL version 1.3 was used to evaluate the MHD patients (disease quality of life-Short form KDQOL-SFTM).

**Results:** When serum calcium value ranged from 2.1 to 2.5 mmol/l, KDCS, MCS and PCS and SF-36+KDCS corresponded to a higher value. KDCCS and SF-36-KDCS were statistically significant corresponding to different serum phosphorus values grouping (P < 0.05). When serum phosphorus value ranged from 1.13–1.78 mmol/l, KDCS and SF-36+KDCS corresponded to a higher value; MCS was statistically significant corresponding to different calcium-phosphorus product grouping (P < 0.05). When the calcium-phosphorus product ranged from 40.68 to 49.94, MCS corresponded to a higher value. KDCCS showed a linear correlation with age (P < 0.001), and dialysis, serum calcium (less than or equal to 2.0–2.5 mmol/l) (P < 0.05); PCS showed a linear correlation with age (P < 0.001) and the duration of dialysis (P < 0.05); SF-36-KDCS showed a linear correlation with age (P < 0.001), and serum calcium (≤2.5 mmol/l) (P < 0.05), which age and duration of dialysis were negatively correlated. The different groups of total hospitalization days in three years between the different groups of age, duration of hemodialysis, serum calcium, serum phosphorus, calcium-phosphorus product and quality of life values were all statistically significant (P < 0.05).

**Conclusion:** The final stage renal disease maintained hemodialysis patients’ quality of life and was correlated with the level of serum calcium, serum phosphorus, calcium-phosphorus product and quality of life in patients who suffered from ESRD.

http://dx.doi.org/10.1016/j.hkjn.2015.09.207

---

**0222**

**Diagnosis and Treatment In a Peritoneal Dialysis Patient with Abdominal Pain, Nausea, Vomiting and Subdiaphragmatic Free Air**

Boyi Song, Wei Zuo

*Nephrology Department, People’s Liberation Army No. 463 Hospital, Shenyang, Liaoning Province, China*

**Case Report:** A 64-year-old female patient was examined as uremia due to renal damage caused by hypertension and took peritoneal dialysis in March, 2011. In January, 2013, the patient took prednisone acetate tablets 30 mg/day due to Sjogren’s syndrome and withdrew soon after having nausea and vomiting, difficult in eating 3 days ago. Examination: body temperature: 36 C; pulse: 76 times/min; blood pressure: 80/50 mmHg, with chronic facies, mild anemia, normal heart and lung, epigastic tenderness (+), no abdominal muscle tension, and rebound tenderness. ECG: sinus rhythm, ST slight change.

**Diagnosis:** (1) Uremia; (2) renal anemia; (3) ischemic heart disease; (4) abdominal pain to diagnose. The patient took peritoneal dialysis after admission, with Shenmai injection to boost the pressure, lansoprazole to suppress the acid, bromide meters procaine to arrest the vomiting, Rebani-pide Tablets to protect the gastric mucosa, sodium bicarbonate to maintain acid-base balance, isosorbide mono-nitrate sustained release tablets to prevent CHD, and erythropoietin to prevent anemia.

**Discussion:** Diagnostic supportive points of gastrointestinal perforation:

1. taking prednisone for almost 3 months before the onset;
2. abdominal pain, nausea and vomiting;
3. epigastric tenderness (+);
4. subdiaphragmatic free air under radio-graph. Non-supportive points: (1) no signs of peritonitis; (2) transparent dialysate, with no leucocytes inspected under routine inspection; (3) no fever; (4) normal blood test. After dynamic observation, the diagnosis of gastrointestinal perforation could be excluded. The presence of subdiaphragmatic free air was caused by a small amount of air reaching into abdominal cavity during the exchange of peritoneal dialysis fluid. Therefore, the patient suffered from abdominal pain, nausea, vomiting. Laboratory tests and auxiliary examinations were taken according to the symptoms, signs after X-ray examination revealing sub-diaphragmatic free air. The patient was treated under comprehensive analysis and close observation to avoid misdiagnosis or missed diagnosis.

http://dx.doi.org/10.1016/j.hkjn.2015.09.208

---

**0224**

**Analysis of Factors Affecting Quality of Life in Maintenance Hemodialysis Patients**

Xing Fan, Li Yao

*Department of Internal Medicine, The First Affiliated Hospital of China Medical University, Shenyang, China*

**Objective:** To study the effects of renal anemia, blood pressure, marital status, length of hospital stay, duration of hospitalization, and other related factors on the quality of life of maintenance hemodialysis patients.

**Methods:** 1192 cases of chronic renal failure patients with maintenance hemodialysis. Patients with general information (marital status, education level, work, dialysis adequacy, length of hospital stay), laboratory related indexes (Hb, HCT, Fer) and before and after dialysis blood pressure and overall quality of life score SF36+KDCS were; influence factors; logistic analysis to for. The grouping of Hb, HCT, Fer and TS respectively with physical health (PCS), mental health ( MCS), nephropathy related indexes KDCS the score and the table overall score was used to analyze the influencing factors clearly influence the laboratory markers of maintenance hemodialysis (MHD) a patient’s quality of life.

**Results:** There were significant differences in the quality of life (including KDCS, SF-12PC, SF-36-KDC, SF-12MC) in the moderate and severe anemia (P < 0.05). Predialysis blood: there was significant difference in the score of SF-12PC 140/90 mmHg and BP > 140/90 mmHg (P < 0.05).

**Conclusion:** (1) Hemoglobin level and maintenance hemodialysis patients quality of life is positively related, with the aggravation of the degree of anemia, the quality of life of patients. (2) Pre-dialysis blood pressure < 140/90 mmHg with its spiritual health score higher, post dialysis blood pressure < 140/90 mmHg patients often less affected by uremia and other related symptoms of distress, the overall quality of life is higher. (3) Dialysis age, marital status, education level, hospitalization days, dialysis adequacy, hemoglobin, red blood cell hematocrit were independent factors for quality of life, and working conditions, ferritin, before and after dialysis blood pressure were and maintenance hemodialysis patients quality of life.

http://dx.doi.org/10.1016/j.hkjn.2015.09.209

---

**0234**

**Role of Two-way Referral in Primary Health Care Institutions to Promote Peritoneal Dialysis**

X. Z. Zhang, X. J. Wang, H. J. Chen

*Pingdingshan First Peope's Hospital, Pingdingshan, Henan, China*

**Objective:** The use of Two-way Referral System in primary health care institutions were to promote peritoneal dialysis (PD), and improve survival and quality of life in patients who suffered from ESRD.
0242
Influences of Different Induction Hemodialysis Patterns on Dialysis Disequilibrium Syndrome In End-stage Renal Disease
W. Liu, J. Q. Wang, W. G. Wang, Y. Wang
Lanzhou University Second Hospital, Lanzhou, China

Objective: In this study, we investigated the influences of different induction hemodialysis pattern on dialysis disequilibrium syndrome (DDS) in end-stage renal disease. Moreover, the present study aimed at discussing the feasibility and advantages of daily hemodialysis (DHD) by comparing the application of DHD and conventional hemodialysis (CHD) in induction period.

Methods: We analyzed 44 patients from beginning of accepting hemodialysis treatment until a certain degree of peritoneal fibrosis has occurred halted peritoneal fibrosis. Administration of gefitinib, a specific EGFR inhibitor, immediately after injury prevented the onset of peritoneal fibrosis, and delayed treatment until a certain degree of peritoneal fibrosis has occurred halted the progression of peritoneal fibrosis. Gefitinib treatment abrogated increased phosphorylation of EGFR, Smad3, STAT3 and nuclear factor (NF)-κB during peritoneal fibrosis. Gefitinib also inhibited overproduction of transforming growth factor-β1 and multiple proinflammatory cytokines as well as infiltration of macrophages to the injured peritoneum. Moreover, gefitinib significantly reduced peritoneal increase of CD31 (+) blood vessels and vascular endothelial growth factor (+) cells after injury.

Conclusion: DDS is an important side effect of peritoneal dialysis treatment in patients with end-stage renal disease. DHD instead of CHD could reduce the occurrence of DDS in induction period.

http://dx.doi.org/10.1016/j.hkjn.2015.09.211

0243
Sleep Quality, Anxiety and Quality of Life in Stable Hemodialysis Patients
Quanguan Shen, Qiang He
Nephrology Department, Zhejiang Provincial People’s Hospital, Hangzhou, Zhejiang, China

Objective: To assess the relationships between sleep quality, anxiety and quality of life of stable haemodialysis (HD) patients in East of China.

Methods: This was a cross-sectional study. A total of 68 stable HD patients (mean age = 61.75 ± 16.56 years, 43 male/25 female) regularly received dialysis treatment in a state-run general tertiary hospital in East of China. The demographics and clinical correlates were collected. Self-reported sleep quality (using the Pittsburg Sleep Quality Index (PSQI)), anxiety (using the Social Anxiety Scale (SAS)) and quality of life (using the 36-item Short Form (SF-36)) were recorded for all patients.

Results: The prevalence of poor sleepers was 69.1% (47/68), and anxiety was 14.9% (10/67). Poor sleepers had a significantly lower Physical Component Scale (PCS) score, Mental Component Scale (MCS) score and total SF-36 score than good sleepers. The PSQI score correlated negatively with PCS score and MCS score and it correlated positively with age. In multivariate analysis, independent variables of total SF-36 score were dialysis vintage, SAS score, and PSQI score. Conclusion: Poor sleep quality is both common and severe issue and both sleep quality and anxiety are associated with lower HRQoL in stable hemodialysis patients in East of China.

http://dx.doi.org/10.1016/j.hkjn.2015.09.212

0279
Pharmacological Inhibition of EGFR Attenuates Peritoneal Fibrosis in Rats
L. Wang¹, N. Liu¹, A. Qiu¹,², S. Zhuang¹,³
¹Department of Nephrology, Shanghai East Hospital, Tongji University School of Medicine, Shanghai, China
²School of Life Science and Technology, Advanced Institute of Translational Medicine, Tongji University, Shanghai, China
³Department of Medicine, Rhode Island Hospital and Alpert School of Medicine, Brown University, Providence, USA

Objective: Long-term PD leads to peritoneal damage and subsequently to peritoneal fibrosis that is characterized by fibroblast activation, collagen fibril accumulation, inflammation, and angiogenesis, but there is still no available treatment for peritoneal fibrosis thus far. In the current study, we explored the therapeutic effect of gefitinib, a specific inhibitor of epidermal growth factor receptor (EGFR), on the development and progression of peritoneal fibrosis.

Methods: Peritoneal fibrosis in rats was generated by daily intraperitoneal injections of chlorhexidine gluconate or high-glucose dialysis fluid. Gefitinib was administered via I.P at 100 mg/kg. At different time points, the parietal peritoneum was harvested for further analysis.

Results: Intrapertoneal injection of chlorhexidine gluconate or high-glucose dialysis fluid induced peritoneal fibrosis as indicated by thickening of the submesothelial area with an accumulation of collagen fibrils and activation of myofibroblasts. This was accompanied by time-dependent EGFR phosphorylation. Administration of gefitinib, a specific EGFR inhibitor, immediately after injury prevented the onset of peritoneal fibrosis, and delayed treatment until a certain degree of peritoneal fibrosis has occurred halted the progression of peritoneal fibrosis. Gefitinib treatment abrogated increased phosphorylation of EGFR, Smad3, STAT3 and nuclear factor (NF)-κB during peritoneal fibrosis. Gefitinib also inhibited overproduction of transforming growth factor-β1 and multiple proinflammatory cytokines as well as infiltration of macrophages to the injured peritoneum. Moreover, gefitinib significantly reduced peritoneal increase of CD31 (+) blood vessels and vascular endothelial growth factor (+) cells after injury.

Conclusion: These results demonstrate that EGFR contributes to peritoneal fibrosis, inflammation and angiogenesis and suggest that EGFR inhibitors may have therapeutic potential in peritoneal fibrosis.

http://dx.doi.org/10.1016/j.hkjn.2015.09.215