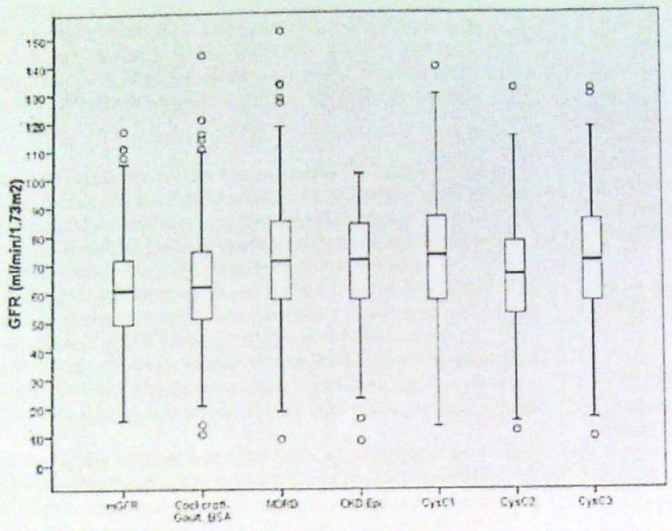


FP083 Figure 1:: Camparison of mGFR with eGFR equations in the total sample (n=570)

FP083 Table 1 Descriptive analysis of mGFR and different eGFR equations in 570 probands

	N	Mean	Median	Std. Deviation	Percentiles 25	75	GFR prevalence <60, ml/min/1.73m² (%)
mGFR	570	60.3	62.7	26.4	48.9	71.5	273 (47.9)
Cockcroft-Gault, BSA	570	62.8	61.5	18.6	50.7	74.3	257 (45.1)
MDRD*	570	70.8	70.6	19.8	57.3	84.5	158 (27.7)
CKD Epi	570	68.5	70.6	17.4	57.9	83.4	172 (30.2)
CysC1*1	570	71.8	72.4	20.5	56.6	85.8	164 (28.8)
CysC3*1	570	65.1	65.7	18.1	52.1	77.2	221 (38.8)
CysC4*1	570	70.9	70.4	19.2	56.2	84.6	171 (30.0)

Methods: In 570 participants of a population based elderly cohort exact GFR assessment was done by iohexol clearance measurement (5h). eGFR was calculated using the MDRD*, CKD-Epi. or Cockcroft-Gault (adjusted for body surface area (BSA)) as creatinine based and CysC1*1, CysC2*1 and CysC3*1 as cystatin C based equations. Descriptive analysis was done using means, medians, SD, 25th and 75th percentiles.
Results: The majority of our population is male (57.2%), mean age is 78,5 yrs, 24% are diabetic, 76% suffer from hypertension, and 28% are overweight (BMI=30). The prevalence of GFRCKD-Epi <60 ml/min/1.73m2 is 30.2%. Mean mGFR is 60 ml/min. Mean eGFRs are pictured in Fig.1 and Table 1. For the creatinine-based equations the CKD-Epi yields the best correlation with the goldstandard (r2=0,681) whereas for the cystatin C based equations the Cys3 equation showed the highest correlation (r2=0,766). Difference of mean eGFR compared to mGFR is highest in the CysC1 estimate with an overestimation of true GFR of 12Â±21 ml/min. The smallest difference of mean GFR computes the CG estimate with a mean overestimation of 3Â±19 ml/min. Prevalence of eGFR<60 ml/min is lowest for MDRD (28%) and highest for CG (45%) (Table 1).
Conclusions: Significant discrepancies of estimated and measured GFR can be observed when using different GFR equations in the elderly.Cystatin C based equations show better correlation with the gold standard than creatinine based equations. Cys3 yields the best correlation in older adults.Assessing prevalence of eGFR<60ml/min leads to considerable differences depending on the estimating equation. * Modification of Diet in Renal Disease *1 developed by the CKD-Epi group

FP084 DIALYSIS IN OCTOGENARIANS: IMPROVED SURVIVAL IN LAST DECADE

Izhar Khan[1] and Yvonne Law[1]
[1]*Renal Unit Aberdeen*

Introduction and Aims: The incidence of CKD-5 increases dramatically with age and older patients are being accepted for renal replacement therapy (RRT). Our previous research and that of others have suggested that co-morbidity rather than age alone has a significant effect on patient survival. The Scottish Renal Registry (SRR) reported a total of 546 patients over the age of 75 years out of 4278 patients receiving RRT in Scotland (population 5 million) in 2009. A study published by the SRR in 2005 showed that 213 out of 3944 patients were aged over 80 years at time of commencing RRT between the years 1994-2003. The median survival of these patients was only 328 days. The aim of our study was to determine if there has been an improvement in survival of octogenarians commencing RRT in recent years.
Methods: The Aberdeen renal Unit serves a population of 0.5 million in the North-East of Scotland. Using our renal database (Clinical Vision v4.0, CCL) we identified all patients who commenced RRT and were aged 80 years or older between the years 2001-2009. We recorded renal diagnosis, modality of treatment, presence of permanent dialysis access and date of death if applicable. Survival analysis was carried out using Kaplan-Meier method with the help of MedCalc statistical package.
Results: In the Aberdeen Renal Unit a total of 48 patients were over 80 years when commencing RRT. 37 patients had permanent access at initiation of RRT and all were commenced on haemodialysis. The median survival for all patients was 671 days in this cohort of patients compared with the earlier SRR cohort who had a median survival of 328 days. After exclusion of deaths in the first 90 days, the median survival of the Aberdeen cohort was 697 days compared with 459 days for the SRR cohort. Survival in patients with access in place was better than in those who required temporary vascular access.
Conclusions: This study shows a dramatic improved survival in octogenarians commencing dialysis in recent years in our unit compared with an earlier Scottish cohort of octogenarians. The numbers treated were not different from those in the rest of Scotland, thus excluding the likelihood of selection bias. Possible causes of improved patient survival include better pre- dialysis care with planned access, early referral and attention to comorbid conditions before RRT is commenced.

FP085 COMMUNITY-ACQUIRED HYPONATREMIA IN THE ELDERLY AND VERY ELDERLY PATIENTS: ASSESSMENT OF CLINICAL FEATURES, OUTCOMES AND COSTS.

Kenan Turgutalp[1], Onur Ozhan[2], Ebru Gok Oguz[3] and Ahmet Kiykim[4]

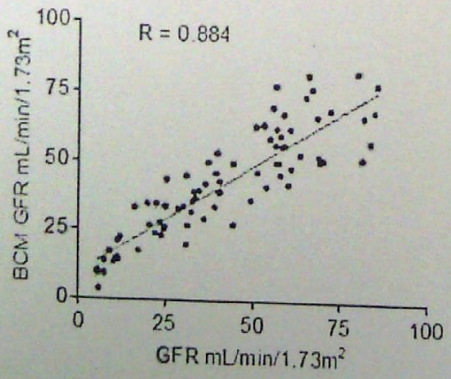
[1]Mersin University Division of Nephrology, Department of Internal Medicine Mersin/Turkey, [2]Division of Endocrinology and Metabolism, Department of Internal Medicine, School of Medicine, Mersin University, Mersin, Turkey, [3]Division of Nephrology Sanliurfa Hospital, Sanliurfa Turkey, [4]Division of Nephrology, Department of Internal Medicine, School of Medicine, Mersin University, Mersin, Turkey

Introduction and Aims: Hyponatremia is the most common electrolyte disorder hospitalized patients, particularly in the elderly patients. On the other hand, clinical features, outcomes and costs of communtiy- acquired hyponatremia (CAH) have been less studied. to assess of clinical features, causes predisposing factors, clinical outcomes and costs of the CAH in the elderly and very elderly patients.
Methods: We conducted a prospective study in our tertiary hospital. We included all the elderly and very elderly patients treated in the emergency department (ED) from January 1, 2010 to December 31, 2010. Hyponatremia was defined as a serum sodium level below 135 mEq/L. All study patients were followed till being discharged. The patients were divided into two main groups according to their age that were elderly (65-75 years) (n=150) (group 1) and very elderly (>75 years) (n=103) (group 2).
Results: Our observed prevalence of CAH was 5.1% (n=253, 253/4960). There was no significant difference between the genders in group 1 and group 2 ($p>0.05$). Nausea and vomiting, and diarrhea were the most important reasons for the coming to the ED. 111 (43.8%) patients were being treated with renin-angiotensin system (RAS) blockers. The overall mortality rate was 37.9% (n=96). The mortality, morbidity, and cost increased as the sodium level decreased, and as the age increased. Gender and cause of CAH was not related mortality and morbidity. Need of intensive care unit ($p<0.01$) and mortality ($p<0.01$) was more common, and cost was higher ($p<0.05$) in group 2 patients than those of group 1.
CONCLUSIONS: Hyponatremia is a common and mortal condition in the elderly and very elderly. Caution should be taken when prescribing RAS blockers in the elderly. The mortality, morbidity and cost are correlated with the serum sodium level, and the age.

FP086 PREDICTION OF GFR IN AGED PATIENTS FROM BODY ELECTRICAL IMPEDANCE AND SERUM CREATININE

Carlo Donadio[1]
[1]Dept Internal Medicine, Pisa, Italy

Introduction and Aims: The associate impairment of cardiac and renal functions frequently occurs in aged patients and can be strictly correlated. The gold standard for the assessment of renal function is the measurement of glomerular filtration rate (GFR), which is not feasible to clinical practice. Serum creatinine (SCr) is a simple marker of GFR impairment, unfortunately it lacks sensitivity, particularly in aged patients. Different formulas have been proposed to predict GFR from SCr, avoiding 24-hour urinary collection which is a major problem in aged patients. The aim of this study was to evaluate a new method to predict GFR in aged patients from the body cell mass (BCM) and SCr, avoiding urine collection.
Methods: Eighty adult chronic kidney disease (CKD) patients (43 males), aged 65-81 years, mean 71, with different renal function (SCr 0.7-8.8mg/dL, mean 1.98) participated in this study. GFR was measured as the renal clearance of 99mTc-DTPA. SCr was determined with a standard laboratory method. The values of BCM were obtained by means of body impedance analysis, using a single frequency impedance analyzer. Preliminarily, the relationship of GFR with Scr and BCM was examined: a very high correlation was found between GFR and the ratio BCM/SCr. Form this relationship we derived a formula to predict GFR from the values of SCr and BCM, without differences between men and women: BCMGFR(mL/min)= Patient's BCM (kg) x 2.69 / SCr (mg/dL). For comparison, GFR was predicted also according to Cockcroft and Gault formula (CGGFR), and to the simplified MDRD formula (MDRDGFR).



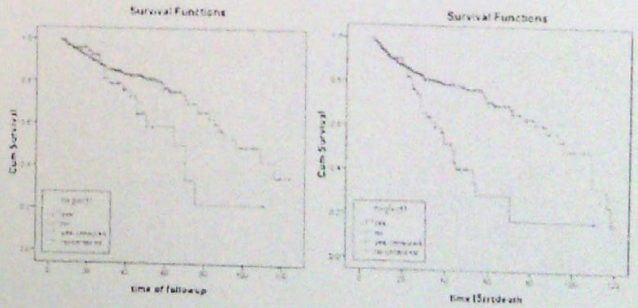
FP086

Results: BCMGFR gave the most precise estimate of GFR (Figure1). In fact, BCMGFR had the best agreement with true GFR (99mTc-DTPA). Furthermore, CGGFR and MDRDGFR significantly overestimated true GFR. The coefficients of variation of all prediction formulas, calculated on duplicate measurements, were markedly loer than that reported for 24h CCr (22.4%). Finally, the error of prediction of BCMGFR was definitely lower than that of CGGFR and MDRDGFR.
Conclusions: In aged patients, GFR can be predicted from the values of BCM and serum creatinine. This method, due to its simplicity and low variability, seems appropriate for the evaluation of renal fuction, In the mean time, the impedance analysis allows to evaluate the nutritional status and the balance of body fluids compartments, which are very relevant in aged CKD patients.

FP087 DOES MEDICAL MANAGEMENT PROGRAM FOR CKD PATIENTS POSTPONE RRT? A 5-YEAR-COHORT

Zinat Nadia Hatmi[1] and Mitra Mahdavi-Mazdeh[2]
[1]Department of Social Medicine, Tehran University of Medical Sciences, [2]Iranian Tissue Bank&research Center,Tums

Introduction and Aims: Many countries started screening and prevention programs for CKD to tackle its increasing burden. However, one of the main concerns of health authorities is its cost effectiveness . The aim of current cohort was to study if provision of an intervention program of health education, diet modification and pharmacological treatment is able to reduce mortality and need to RRT.
Methods: The study sample comprised newly diagnosed patients with chronic kidney disease(CKD)consecutively admitted to the authors' outpatient offices or clinic in Tehran between October 2000 till 2010. Patient enrolment took place if there were at least two estimated glomerular filtration rate 15<[eGFR] < 60 mL/min/1.73 m2 and chronicity as determined using clinical history or ultrasound findings. Patients who did not complete their follow up for at least 6 months were excluded from analysis. To be able to compare the impact of medical management on need to start RRT and mortality rate in those who had been followed up regularly with those who did not receive the management package, the control group was defined as those patients who did not attend the nephrology office for visiting the physician for at least of one year.
Results: The cohort included 465patients.The frequency of different CKD stages or diabetes as the cause were similar between two groups. The median follow up in two groups was 70Â±9.7(51.0-89.0) and 96.0Â±11.3(73.9-118.9)months respectively. In both groups a substantial number of patients survived similarly without RRT after one year(96%) but by passage of time the percentage of those who did not receive medical surveillance suffered more of death or need to start RRT in comparison with those who received medical advice(23.8% Vs 16%). Figure 1 shows outcomes of entire cohort, grouped according to the stage of CKD. Five patients died during the first two years of follow up.
Conclusions: It seems that by sooner intervention and aggressive control of some of predictors of CKD progression factors it is possible to decrease mortality and postpone need to RRT. figure1: Kaplan-Meier estimated survival curves for the fraction of patients who were under medical supervision over the time(389) in comparison with those who were not (76) showed higher survival or later arrival to GFR of less than 15cc/min(34 Vs84) according to the Log Rank test significance level <0.0001 and they were also better when compared for need of RRT or death(20 Vs.67) significance level0.029.



FP087

FP088 RENOPROTECTIVE EFFECTS OF SPIRONOLACTONE IN PATIENTS WITH PROTEINURIC KIDNEY DISEASES

Enrique Morales[1], Victor Gutierrez-Millet[2], Jorge Rojas-Rivera[2], Ana Huerta[2], Eduardo Gutierrez[2], Elena Gutierrez-Solis[2], Natalia Polanco[2], Jara Caro[2], Esther Gonzà¤¥z[2] and Manuel Praga[2]
[1]Nephrology Department. Hospital 12 de Octubre, [2]Instituto de Investigaciò¬ospital 12 de Octubre. Madrid. Spain