

IMPACT OF CLINICAL CHARACTERISTICS AND METABOLIC PARAMETERS ON SURVIVAL OF THE INCIDENT GERIATRIC HEMODIALYSIS PATIENTS: A SINGLE CENTER EXPERIENCE

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Objectives:

Hemodialysis (HD) have high mortality rates in geriatric end-stage renal disease patients. However, the risk factors for mortality and long-term survival in this population appear to be inconclusive. We examined the relationships between baseline metabolic parameters and clinical characteristics and mortality, prior to initiation of HD in geriatric patients

Methods:

Incident elderly patients (age >65 years) receiving HD for more than 90 days between Jan 01, 2011, and Dec 31, 2014 retrospectively analyzed in this study. Patients were hospitalized and first hemodialysis performed in our clinic. Data of patient's metabolic parameters and clinical characteristics obtained from National Dialysis Management System and hospital records.

Results:

Ninety-nine incident geriatric HD patients were recruited in this study. Mean follow-up time was 19.7±11 months and the mean age of the study sample was 75±7 years; % 42.4 was women. All patients had at least one co-morbid condition. Mean co-morbid condition number was 2.4±1.2. The rate of mortality was 47.5% for 4 years. Most of them (68.7%) had been referred to a nephrologist at least 3 months before from first hemodialysis session. Most used vascular access was temporary hemodialysis catheter in this patients (87.9%). Differences between two group were seen Table 1. Patient age and Eastern Cooperative Oncology Group (ECOG) score were found to be significantly associated with mortality between survived and non-survived patients. Other parameters were not significantly different in two group (Table-1). Multivariate analysis identified that low pH low bicarbonate level and low creatinine level were independently associated with mortality (Table-2).

Graphs and tables

BASELINE CLINICAL CHARACTERISTICS AND METABOLIC PARAMETERS	SURVIVED N: 52	NON-SURVIVED N: 47	P
AGE YEARS	77.4±7.8	73±6	.007
GENDER FEMALE %	39	47	NS
NUMBER OF CO-MORBID CONDITIONS	2.3±1.2	2.6±1.2	NS
(PRIMARY DISEASES)			NS
ISCHEMIC/ATHEROSCLEROTIC KIDNEY	4	7	
INTERSTITIAL NEPHRITIS (ACUTE/CHRONIC)	4	3	
DIABETES MELLITUS	16	12	
UNKNOWN ETIOLOGY	2	17	
OTHERS	8	8	
TEMPORARY VASCULAR ACCESS %	87	89	NS
MEAN ECOG SCORE	2.3±0.8	2.8±1	.010
SERUM CREATININE MG/DL	7±3	6.1±2.4	NS
SERUM ALBUMIN	2.7±0.5	2.6±0.6	NS
VENOUS BICARBONATE MMOL/L	16.6±6	17.3±5.2	NS
Hb GR/DL	8.7±1.3	9.2±1.3	NS
CRP MG/DL	5.1±5.7	6±7	NS
FERRITIN NG/ML	400±336	836±1855	NS
PROTEINURIA GR/DAY	3.2±3	2.6±2.5	NS
CARDIAC EJECTION FRACTION %	51	49	NS
METABOLIC ACIDOSIS %	31	43	NS
ANEMIA %	81	70	NS
ELECTROLYTE DISORDERS %	62	49	NS

Table-1. Baseline clinical characteristics and metabolic parameters analysis

DEPENDENT VARIABLE	F	SIG.	OBSERVED POWER ^U
CREATININE	6,633	,014	,707
PH	4,473	,042	,539
HCO ₃	6,633	,014	,707

Table-2. Baseline clinical characteristics and metabolic parameters multivariate analysis

Conclusions:

Evaluation of baseline metabolic parameters and clinical characteristics showed that superior performance status and younger age were favorable factors, and low pH, low bicarbonate (HCO₃) and low creatinine levels were unfavorable factors on mortality in geriatric hemodialysis patients

